

**HBLEED**  
High Bay LED luminaire

**Metalux**



**EATON**

*Powering Business Worldwide*





Open Configuration,  
Narrow Distribution

The **HBLED** delivers industry-leading performance and reliability for a variety of high-bay applications. Precision designed optics, multiple distributions, lumen outputs and color temperatures make the HBLED ideal for industrial, commercial, manufacturing, gymnasium and other applications that utilize traditional HID and linear fluorescent high bays. The proprietary low-power, low-brightness LED module assembly offers exceptional optical performance with the enhanced benefits of LED lighting, including energy savings, extended system life, and a reduced carbon footprint.

## Performance

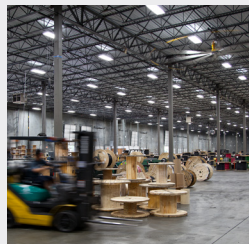
- Eight lumen packages up to 60,000 lumens
- Three Correlated Temperatures (3,500K, 4,000K and 5,000K)
- L84 @ 60,000 hours
- High performance efficacy up to 186 lm/W
- Tool-less driver access for easy maintenance
- Precision optics – narrow and wide distribution
- Optional 0-10V dimming driver (15% - 100%)
- Multiple lens and wireguard options
- Five-year warranty

## Compliance

- cULus listed for damp location
- 55° ambient rating
- RoHS compliant
- DLC qualified

## Features and benefits

- **LED platform**  
The proprietary low-power, low-brightness LED module assembly offers exceptional optical performance.
- **Controllable**  
Offers control flexibility and easy integration with optional 0-10V continuous dimming driver, providing additional energy savings when utilizing sensors. Available with native Fifth Light DALI drivers for complete digital energy management using the capable and scalable Fifth Light controllers and software. Integrated dual occupancy and daylight dimming sensor for added energy savings.
- **Connected lighting options**
  - Integrated dual occupancy and daylight dimming sensor for added savings
  - Get connected with LumaWatt Pro wireless system
- **Mounting**  
Choose from a variety of mounting methods, including pendant, chain, toggle, hook and loop.



Warehouse



Gymnasiums



Manufacturing

## Shielding options

Door frame and lens assembly are available for more demanding environments.

Clear Acrylic Doorframe and Lens



Prismatic Acrylic Doorframe and Lens



Clear Lens Inserts



## Mounting accessories

Suited for suspension mounting with optional wire hook and chain set or cable mounting. Single monopoint mounting also available with SPM tong hanger.

HBL-SPM=Single Monopoint Hanger w/Hub (Galvanized)



FH-1=2-1/2" Fixture Hook



FL-1=2-1/2" Fixture Loop



HBAYC-CHAIN/SET/U= Hook Style Mounting Chain Set



Y-Toggle=Mounting Toggle and Cable



## Energy and performance

|              | Standard Efficacy Catalog Number | Delivered Lumens | Watts | Efficacy (lm/W) | High Efficacy Catalog Number | Delivered Lumens | Watts | Efficacy (lm/W) |
|--------------|----------------------------------|------------------|-------|-----------------|------------------------------|------------------|-------|-----------------|
| 5000K, 70CRI | HBLED-LD5-12SE-W-UNV-L750        | 12,629           | 77    | 165             | HBLED-LD5-12HE-W-UNV-L750    | 13,287           | 73    | 183             |
|              | HBLED-LD5-15SE-W-UNV-L750        | 16,342           | 95    | 172             | HBLED-LD5-15HE-W-UNV-L750    | 17,035           | 92    | 186             |
|              | HBLED-LD5-18SE-W-UNV-L750        | 19,587           | 122   | 161             | HBLED-LD5-18HE-W-UNV-L750    | 19,958           | 112   | 178             |
|              | HBLED-LD5-24SE-W-UNV-L750        | 24,953           | 154   | 162             | HBLED-LD5-24HE-W-UNV-L750    | 26,231           | 146   | 179             |
|              | HBLED-LD5-30SE-W-UNV-L750        | 32,291           | 193   | 167             | HBLED-LD5-30HE-W-UNV-L750    | 33,042           | 180   | 184             |
|              | HBLED-LD5-36SE-W-UNV-L750        | 37,307           | 232   | 161             | HBLED-LD5-36HE-W-UNV-L750    | 38,589           | 211   | 183             |
|              | HBLED-LD5-48SE-W-UNV-L750        | 51,058           | 299   | 171             | HBLED-LD5-48HE-W-UNV-L750    | 50,971           | 286   | 178             |
|              | HBLED-LD5-60SE-W-UNV-L750        | 62,380           | 386   | 162             | HBLED-LD5-60HE-W-UNV-L750    | 63,643           | 369   | 172             |
| 5000K, 80CRI | HBLED-LD5-12SE-W-UNV-L850        | 12,206           | 77    | 159             | HBLED-LD5-12HE-W-UNV-L850    | 12,841           | 73    | 177             |
|              | HBLED-LD5-15SE-W-UNV-L850        | 15,794           | 95    | 166             | HBLED-LD5-15HE-W-UNV-L850    | 16,464           | 92    | 179             |
|              | HBLED-LD5-18SE-W-UNV-L850        | 18,930           | 122   | 155             | HBLED-LD5-18HE-W-UNV-L850    | 19,289           | 112   | 172             |
|              | HBLED-LD5-24SE-W-UNV-L850        | 24,116           | 154   | 157             | HBLED-LD5-24HE-W-UNV-L850    | 25,352           | 146   | 173             |
|              | HBLED-LD5-30SE-W-UNV-L850        | 31,209           | 193   | 162             | HBLED-LD5-30HE-W-UNV-L850    | 31,935           | 180   | 177             |
|              | HBLED-LD5-36SE-W-UNV-L850        | 36,057           | 232   | 155             | HBLED-LD5-36HE-W-UNV-L850    | 37,296           | 211   | 177             |
|              | HBLED-LD5-48SE-W-UNV-L850        | 49,346           | 299   | 165             | HBLED-LD5-48HE-W-UNV-L850    | 49,262           | 286   | 172             |
|              | HBLED-LD5-60SE-W-UNV-L850        | 60,289           | 386   | 156             | HBLED-LD5-60HE-W-UNV-L850    | 61,509           | 369   | 167             |

## Photometrics

| HBLED-LD5-24SE-N-UNV-L850-ED2-U   |   | HBLED-LD5-24SE-W-UNV-L850-ED2-U    |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|---|---|------------------------------------|-----|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|--|----|----|----|----|----|----|----|----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|----|----|----|----|---|-----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|------|--------|-----------|------|-------|------|------|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|
| <p>Electronic Driver<br/>Linear LED 5000K<br/>Spacing criterion: (II) 1.27 x mounting height, (L) 0.62 x mounting height<br/>Lumens = 23,224<br/>Input Watts = 154W<br/>Efficacy = 150.8 lm/W<br/>Test: HBLED-LD5-24SE-N-L850-ED2-U.IES</p> | <b>Coefficients of Utilization</b><br><table border="1"> <thead> <tr> <th rowspan="2">rc</th> <th colspan="6">Effective floor cavity reflectance</th> </tr> <tr> <th colspan="2">80%</th> <th colspan="2">50%</th> <th colspan="2">20%</th> </tr> <tr> <th>rw</th> <th>70</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> </tr> </thead> <tbody> <tr><td>0</td><td>119</td><td>119</td><td>119</td><td>119</td><td>111</td><td>111</td><td>111</td><td>106</td><td>106</td><td>106</td></tr> <tr><td>1</td><td>112</td><td>108</td><td>105</td><td>102</td><td>102</td><td>100</td><td>98</td><td>98</td><td>96</td><td>95</td></tr> <tr><td>2</td><td>105</td><td>98</td><td>93</td><td>89</td><td>93</td><td>89</td><td>86</td><td>90</td><td>87</td><td>84</td></tr> <tr><td>3</td><td>98</td><td>90</td><td>84</td><td>79</td><td>86</td><td>81</td><td>77</td><td>83</td><td>79</td><td>76</td></tr> <tr><td>4</td><td>92</td><td>82</td><td>76</td><td>70</td><td>79</td><td>73</td><td>69</td><td>77</td><td>72</td><td>68</td></tr> <tr><td>5</td><td>86</td><td>76</td><td>69</td><td>64</td><td>73</td><td>67</td><td>63</td><td>71</td><td>66</td><td>62</td></tr> <tr><td>6</td><td>81</td><td>70</td><td>63</td><td>58</td><td>68</td><td>62</td><td>58</td><td>66</td><td>61</td><td>57</td></tr> <tr><td>7</td><td>76</td><td>66</td><td>58</td><td>54</td><td>63</td><td>57</td><td>53</td><td>62</td><td>57</td><td>53</td></tr> <tr><td>8</td><td>72</td><td>61</td><td>54</td><td>49</td><td>59</td><td>53</td><td>49</td><td>58</td><td>53</td><td>49</td></tr> <tr><td>9</td><td>68</td><td>57</td><td>51</td><td>46</td><td>56</td><td>50</td><td>46</td><td>55</td><td>49</td><td>46</td></tr> <tr><td>10</td><td>65</td><td>54</td><td>47</td><td>43</td><td>53</td><td>47</td><td>43</td><td>52</td><td>46</td><td>43</td></tr> </tbody> </table> |                                    | rc  | Effective floor cavity reflectance |     |     |     |     |     | 80% |     | 50% |  | 20% |  | rw | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | 119 | 119 | 119 | 119 | 111 | 111 | 111 | 106 | 106 | 106 | 1 | 112 | 108 | 105 | 102 | 102 | 100 | 98 | 98 | 96 | 95 | 2 | 105 | 98 | 93 | 89 | 93 | 89 | 86 | 90 | 87 | 84 | 3 | 98 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 76 | 4 | 92 | 82 | 76 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 5 | 86 | 76 | 69 | 64 | 73 | 67 | 63 | 71 | 66 | 62 | 6 | 81 | 70 | 63 | 58 | 68 | 62 | 58 | 66 | 61 | 57 | 7 | 76 | 66 | 58 | 54 | 63 | 57 | 53 | 62 | 57 | 53 | 8 | 72 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 49 | 9 | 68 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 49 | 46 | 10 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 43 | <b>Zonal Lumen Summary</b><br><table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>% Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>12590</td><td>54.2</td></tr> <tr><td>0-40</td><td>16657</td><td>71.7</td></tr> <tr><td>0-60</td><td>21400</td><td>92.1</td></tr> <tr><td>0-90</td><td>23224</td><td>100.0</td></tr> <tr><td>0-180</td><td>23224</td><td>100.0</td></tr> </tbody> </table> |  | Zone | Lumens | % Fixture | 0-30 | 12590 | 54.2 | 0-40 | 16657 | 71.7 | 0-60 | 21400 | 92.1 | 0-90 | 23224 | 100.0 | 0-180 | 23224 | 100.0 |
|   | rc  | Effective floor cavity reflectance |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   |   | 80%                                |     | 50%                                |     | 20% |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | rw  | 70                                 | 50  | 30                                 | 10  | 50  | 30  | 10  |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 0   | 119                                | 119 | 119                                | 119 | 111 | 111 | 111 | 106 | 106 | 106 |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 1   | 112                                | 108 | 105                                | 102 | 102 | 100 | 98  | 98  | 96  | 95  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 2   | 105                                | 98  | 93                                 | 89  | 93  | 89  | 86  | 90  | 87  | 84  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 3   | 98                                 | 90  | 84                                 | 79  | 86  | 81  | 77  | 83  | 79  | 76  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 4   | 92                                 | 82  | 76                                 | 70  | 79  | 73  | 69  | 77  | 72  | 68  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 5   | 86                                 | 76  | 69                                 | 64  | 73  | 67  | 63  | 71  | 66  | 62  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 6   | 81  | 70                                 | 63  | 58                                 | 68  | 62  | 58  | 66  | 61  | 57  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 7   | 76  | 66                                 | 58  | 54                                 | 63  | 57  | 53  | 62  | 57  | 53  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 8   | 72  | 61                                 | 54  | 49                                 | 59  | 53  | 49  | 58  | 53  | 49  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 9   | 68  | 57                                 | 51  | 46                                 | 56  | 50  | 46  | 55  | 49  | 46  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 10  | 65  | 54                                 | 47  | 43                                 | 53  | 47  | 43  | 52  | 46  | 43  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| Zone  | Lumens  | % Fixture                          |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-30  | 12590   | 54.2                               |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-40  | 16657   | 71.7                               |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-60  | 21400   | 92.1                               |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-90  | 23224   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-180   | 23224   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| <p>Electronic Driver<br/>Linear LED 5000K<br/>Spacing criterion: (II) 1.28 x mounting height, (L) 1.29 x mounting height<br/>Lumens = 24,116<br/>Input Watts = 154W<br/>Efficacy = 156.6 lm/W<br/>Test: HBLED-LD5-24SE-W-L850-ED2-U.IES</p> | <b>Coefficients of Utilization</b><br><table border="1"> <thead> <tr> <th rowspan="2">rc</th> <th colspan="6">Effective floor cavity reflectance</th> </tr> <tr> <th colspan="2">80%</th> <th colspan="2">50%</th> <th colspan="2">20%</th> </tr> <tr> <th>rw</th> <th>70</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> </tr> </thead> <tbody> <tr><td>0</td><td>119</td><td>119</td><td>119</td><td>119</td><td>111</td><td>111</td><td>111</td><td>106</td><td>106</td><td>106</td></tr> <tr><td>1</td><td>109</td><td>105</td><td>101</td><td>97</td><td>98</td><td>95</td><td>92</td><td>94</td><td>92</td><td>89</td></tr> <tr><td>2</td><td>99</td><td>91</td><td>85</td><td>79</td><td>86</td><td>81</td><td>76</td><td>83</td><td>78</td><td>75</td></tr> <tr><td>3</td><td>91</td><td>80</td><td>72</td><td>66</td><td>76</td><td>69</td><td>64</td><td>73</td><td>68</td><td>63</td></tr> <tr><td>4</td><td>83</td><td>71</td><td>62</td><td>56</td><td>67</td><td>60</td><td>55</td><td>65</td><td>59</td><td>54</td></tr> <tr><td>5</td><td>76</td><td>63</td><td>54</td><td>48</td><td>60</td><td>53</td><td>47</td><td>58</td><td>52</td><td>47</td></tr> <tr><td>6</td><td>70</td><td>57</td><td>48</td><td>42</td><td>54</td><td>47</td><td>41</td><td>53</td><td>46</td><td>41</td></tr> <tr><td>7</td><td>65</td><td>52</td><td>43</td><td>37</td><td>49</td><td>42</td><td>36</td><td>48</td><td>41</td><td>36</td></tr> <tr><td>8</td><td>61</td><td>47</td><td>38</td><td>33</td><td>45</td><td>38</td><td>32</td><td>44</td><td>37</td><td>32</td></tr> <tr><td>9</td><td>57</td><td>43</td><td>35</td><td>29</td><td>41</td><td>34</td><td>29</td><td>40</td><td>34</td><td>29</td></tr> <tr><td>10</td><td>53</td><td>40</td><td>32</td><td>27</td><td>38</td><td>31</td><td>26</td><td>37</td><td>31</td><td>26</td></tr> </tbody> </table>     |                                    | rc  | Effective floor cavity reflectance |     |     |     |     |     | 80% |     | 50% |  | 20% |  | rw | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | 119 | 119 | 119 | 119 | 111 | 111 | 111 | 106 | 106 | 106 | 1 | 109 | 105 | 101 | 97  | 98  | 95  | 92 | 94 | 92 | 89 | 2 | 99  | 91 | 85 | 79 | 86 | 81 | 76 | 83 | 78 | 75 | 3 | 91 | 80 | 72 | 66 | 76 | 69 | 64 | 73 | 68 | 63 | 4 | 83 | 71 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 5 | 76 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 6 | 70 | 57 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 7 | 65 | 52 | 43 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 8 | 61 | 47 | 38 | 33 | 45 | 38 | 32 | 44 | 37 | 32 | 9 | 57 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 10 | 53 | 40 | 32 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | <b>Zonal Lumen Summary</b><br><table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>% Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>6586</td><td>27.3</td></tr> <tr><td>0-40</td><td>10886</td><td>45.1</td></tr> <tr><td>0-60</td><td>19623</td><td>81.4</td></tr> <tr><td>0-90</td><td>24116</td><td>100.0</td></tr> <tr><td>0-180</td><td>24116</td><td>100.0</td></tr> </tbody> </table>  |  | Zone | Lumens | % Fixture | 0-30 | 6586  | 27.3 | 0-40 | 10886 | 45.1 | 0-60 | 19623 | 81.4 | 0-90 | 24116 | 100.0 | 0-180 | 24116 | 100.0 |
|   | rc  | Effective floor cavity reflectance |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   |   | 80%                                |     | 50%                                |     | 20% |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | rw  | 70                                 | 50  | 30                                 | 10  | 50  | 30  | 10  |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 0   | 119                                | 119 | 119                                | 119 | 111 | 111 | 111 | 106 | 106 | 106 |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 1   | 109                                | 105 | 101                                | 97  | 98  | 95  | 92  | 94  | 92  | 89  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 2   | 99                                 | 91  | 85                                 | 79  | 86  | 81  | 76  | 83  | 78  | 75  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 3   | 91                                 | 80  | 72                                 | 66  | 76  | 69  | 64  | 73  | 68  | 63  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 4   | 83                                 | 71  | 62                                 | 56  | 67  | 60  | 55  | 65  | 59  | 54  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 5   | 76                                 | 63  | 54                                 | 48  | 60  | 53  | 47  | 58  | 52  | 47  |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 6   | 70  | 57                                 | 48  | 42                                 | 54  | 47  | 41  | 53  | 46  | 41  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 7   | 65  | 52                                 | 43  | 37                                 | 49  | 42  | 36  | 48  | 41  | 36  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 8   | 61  | 47                                 | 38  | 33                                 | 45  | 38  | 32  | 44  | 37  | 32  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 9   | 57  | 43                                 | 35  | 29                                 | 41  | 34  | 29  | 40  | 34  | 29  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 10  | 53  | 40                                 | 32  | 27                                 | 38  | 31  | 26  | 37  | 31  | 26  |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| Zone  | Lumens  | % Fixture                          |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-30  | 6586  | 27.3                               |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-40  | 10886   | 45.1                               |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-60  | 19623   | 81.4                               |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-90  | 24116   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-180   | 24116   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |  |     |  |    |    |    |    |    |    |    |    |   |     |     |     |     |     |     |     |     |     |     |   |     |     |     |     |     |     |    |    |    |    |   |     |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |      |        |           |      |       |      |      |       |      |      |       |      |      |       |       |       |       |       |

**Lighting Product Lines**

Halo  
Halo Commercial  
Portfolio  
Iris  
RSA  
Metalux  
Corelite  
Neo-Ray  
Fail-Safe  
MWS  
Ametrix  
Shaper  
io  
Lumark  
McGraw-Edison  
Invue  
Ephesus  
Lumière  
Streetworks  
AtLite  
Sure-Lites

**Controls Product Lines**

Greengate  
iLumin  
Zero 88  
Fifth Light Technology  
iLight (International Only)

**Connected Lighting Systems**

LumaWatt Pro  
WaveLinx  
Distributed Low-Voltage Power  
ConnectWorks

**Eaton**

1121 Highway 74 South  
Peachtree City, GA 30269  
P: 770-486-4800  
[www.eaton.com/lighting](http://www.eaton.com/lighting)

**Canada Sales**

5925 McLaughlin Road  
Mississauga, Ontario L5R 1B8  
P: 905-501-3000  
F: 905-501-3172

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Product availability, specifications,  
and compliances are subject to  
change without notice.



*Powering Business Worldwide*



**HBLEED**  
High Bay LED luminaire

**Metalux**



**EATON**

*Powering Business Worldwide*





Open Configuration,  
Narrow Distribution

The **HBLED** delivers industry-leading performance and reliability for a variety of high-bay applications. Precision designed optics, multiple distributions, lumen outputs and color temperatures make the HBLED ideal for industrial, commercial, manufacturing, gymnasium and other applications that utilize traditional HID and linear fluorescent high bays. The proprietary low-power, low-brightness LED module assembly offers exceptional optical performance with the enhanced benefits of LED lighting, including energy savings, extended system life, and a reduced carbon footprint.

## Performance

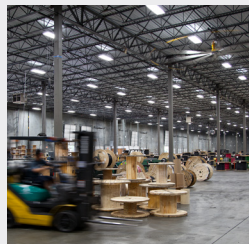
- Eight lumen packages up to 60,000 lumens
- Three Correlated Temperatures (3,500K, 4,000K and 5,000K)
- L84 @ 60,000 hours
- High performance efficacy up to 186 lm/W
- Tool-less driver access for easy maintenance
- Precision optics – narrow and wide distribution
- Optional 0-10V dimming driver (15% - 100%)
- Multiple lens and wireguard options
- Five-year warranty

## Compliance

- cULus listed for damp location
- 55° ambient rating
- RoHS compliant
- DLC qualified

## Features and benefits

- **LED platform**  
The proprietary low-power, low-brightness LED module assembly offers exceptional optical performance.
- **Controllable**  
Offers control flexibility and easy integration with optional 0-10V continuous dimming driver, providing additional energy savings when utilizing sensors. Available with native Fifth Light DALI drivers for complete digital energy management using the capable and scalable Fifth Light controllers and software. Integrated dual occupancy and daylight dimming sensor for added energy savings.
- **Connected lighting options**
  - Integrated dual occupancy and daylight dimming sensor for added savings
  - Get connected with LumaWatt Pro wireless system
- **Mounting**  
Choose from a variety of mounting methods, including pendant, chain, toggle, hook and loop.



Warehouse



Gymnasiums



Manufacturing

## Shielding options

Door frame and lens assembly are available for more demanding environments.

Clear Acrylic Doorframe and Lens



Prismatic Acrylic Doorframe and Lens



Clear Lens Inserts



## Mounting accessories

Suited for suspension mounting with optional wire hook and chain set or cable mounting. Single monopoint mounting also available with SPM tong hanger.

HBL-SPM=Single Monopoint Hanger w/Hub (Galvanized)



FH-1=2-1/2" Fixture Hook



FL-1=2-1/2" Fixture Loop



HBAYC-CHAIN/SET/U= Hook Style Mounting Chain Set



Y-Toggle=Mounting Toggle and Cable



## Energy and performance

|              | Standard Efficacy Catalog Number | Delivered Lumens | Watts | Efficacy (lm/W) | High Efficacy Catalog Number | Delivered Lumens | Watts | Efficacy (lm/W) |
|--------------|----------------------------------|------------------|-------|-----------------|------------------------------|------------------|-------|-----------------|
| 5000K, 70CRI | HBLED-LD5-12SE-W-UNV-L750        | 12,629           | 77    | 165             | HBLED-LD5-12HE-W-UNV-L750    | 13,287           | 73    | 183             |
|              | HBLED-LD5-15SE-W-UNV-L750        | 16,342           | 95    | 172             | HBLED-LD5-15HE-W-UNV-L750    | 17,035           | 92    | 186             |
|              | HBLED-LD5-18SE-W-UNV-L750        | 19,587           | 122   | 161             | HBLED-LD5-18HE-W-UNV-L750    | 19,958           | 112   | 178             |
|              | HBLED-LD5-24SE-W-UNV-L750        | 24,953           | 154   | 162             | HBLED-LD5-24HE-W-UNV-L750    | 26,231           | 146   | 179             |
|              | HBLED-LD5-30SE-W-UNV-L750        | 32,291           | 193   | 167             | HBLED-LD5-30HE-W-UNV-L750    | 33,042           | 180   | 184             |
|              | HBLED-LD5-36SE-W-UNV-L750        | 37,307           | 232   | 161             | HBLED-LD5-36HE-W-UNV-L750    | 38,589           | 211   | 183             |
|              | HBLED-LD5-48SE-W-UNV-L750        | 51,058           | 299   | 171             | HBLED-LD5-48HE-W-UNV-L750    | 50,971           | 286   | 178             |
|              | HBLED-LD5-60SE-W-UNV-L750        | 62,380           | 386   | 162             | HBLED-LD5-60HE-W-UNV-L750    | 63,643           | 369   | 172             |
| 5000K, 80CRI | HBLED-LD5-12SE-W-UNV-L850        | 12,206           | 77    | 159             | HBLED-LD5-12HE-W-UNV-L850    | 12,841           | 73    | 177             |
|              | HBLED-LD5-15SE-W-UNV-L850        | 15,794           | 95    | 166             | HBLED-LD5-15HE-W-UNV-L850    | 16,464           | 92    | 179             |
|              | HBLED-LD5-18SE-W-UNV-L850        | 18,930           | 122   | 155             | HBLED-LD5-18HE-W-UNV-L850    | 19,289           | 112   | 172             |
|              | HBLED-LD5-24SE-W-UNV-L850        | 24,116           | 154   | 157             | HBLED-LD5-24HE-W-UNV-L850    | 25,352           | 146   | 173             |
|              | HBLED-LD5-30SE-W-UNV-L850        | 31,209           | 193   | 162             | HBLED-LD5-30HE-W-UNV-L850    | 31,935           | 180   | 177             |
|              | HBLED-LD5-36SE-W-UNV-L850        | 36,057           | 232   | 155             | HBLED-LD5-36HE-W-UNV-L850    | 37,296           | 211   | 177             |
|              | HBLED-LD5-48SE-W-UNV-L850        | 49,346           | 299   | 165             | HBLED-LD5-48HE-W-UNV-L850    | 49,262           | 286   | 172             |
|              | HBLED-LD5-60SE-W-UNV-L850        | 60,289           | 386   | 156             | HBLED-LD5-60HE-W-UNV-L850    | 61,509           | 369   | 167             |

## Photometrics

| HBLED-LD5-24SE-N-UNV-L850-ED2-U   |   | HBLED-LD5-24SE-W-UNV-L850-ED2-U    |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|---|---|------------------------------------|-----|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|--|-----|--|-----|--|-----|--|-----|--|-----|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|---|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|--|---|-----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|----|------|--------|-----------|------|-------|------|------|-------|------|------|---|------|------|--------|-----------|-------|-------|-------|------|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|
| <p>Electronic Driver<br/>Linear LED 5000K<br/>Spacing criterion: (II) 1.27 x mounting height, (L) 0.62 x mounting height<br/>Lumens = 23,224<br/>Input Watts = 154W<br/>Efficacy = 150.8 lm/W<br/>Test: HBLED-LD5-24SE-N-L850-ED2-U.IES</p> | <b>Coefficients of Utilization</b><br><table border="1"> <thead> <tr> <th rowspan="2">rc</th> <th colspan="6">Effective floor cavity reflectance</th> <th colspan="6">20%</th> </tr> <tr> <th colspan="2">80%</th> <th colspan="2">50%</th> <th colspan="2">30%</th> <th colspan="2">80%</th> <th colspan="2">50%</th> <th colspan="2">30%</th> </tr> <tr> <th>rw</th> <th>70</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> </tr> </thead> <tbody> <tr><td>0</td><td>119</td><td>119</td><td>119</td><td>119</td><td>111</td><td>111</td><td>111</td><td>106</td><td>106</td><td>106</td><td></td><td></td><td></td></tr> <tr><td>1</td><td>112</td><td>108</td><td>105</td><td>102</td><td>102</td><td>100</td><td>98</td><td>98</td><td>96</td><td>95</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>105</td><td>98</td><td>93</td><td>89</td><td>93</td><td>89</td><td>86</td><td>90</td><td>87</td><td>84</td><td></td><td></td><td></td></tr> <tr><td>3</td><td>98</td><td>90</td><td>84</td><td>79</td><td>86</td><td>81</td><td>77</td><td>83</td><td>79</td><td>76</td><td></td><td></td><td></td></tr> <tr><td>4</td><td>92</td><td>82</td><td>76</td><td>70</td><td>79</td><td>73</td><td>69</td><td>77</td><td>72</td><td>68</td><td></td><td></td><td></td></tr> <tr><td>5</td><td>86</td><td>76</td><td>69</td><td>64</td><td>73</td><td>67</td><td>63</td><td>71</td><td>66</td><td>62</td><td></td><td></td><td></td></tr> <tr><td>6</td><td>81</td><td>70</td><td>63</td><td>58</td><td>68</td><td>62</td><td>58</td><td>66</td><td>61</td><td>57</td><td></td><td></td><td></td></tr> <tr><td>7</td><td>76</td><td>66</td><td>58</td><td>54</td><td>63</td><td>57</td><td>53</td><td>62</td><td>57</td><td>53</td><td></td><td></td><td></td></tr> <tr><td>8</td><td>72</td><td>61</td><td>54</td><td>49</td><td>59</td><td>53</td><td>49</td><td>58</td><td>53</td><td>49</td><td></td><td></td><td></td></tr> <tr><td>9</td><td>68</td><td>57</td><td>51</td><td>46</td><td>56</td><td>50</td><td>46</td><td>55</td><td>49</td><td>46</td><td></td><td></td><td></td></tr> <tr><td>10</td><td>65</td><td>54</td><td>47</td><td>43</td><td>53</td><td>47</td><td>43</td><td>52</td><td>46</td><td>43</td><td></td><td></td><td></td></tr> </tbody> </table>  |                                    | rc  | Effective floor cavity reflectance |     |     |     |     |     | 20% |     |     |    |    |    | 80% |  | 50% |  | 30% |  | 80% |  | 50% |  | 30% |  | rw | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  | 119 | 119 | 119 | 119 | 111 | 111 | 111 | 106 | 106 | 106 |     |  |  | 1 | 112 | 108 | 105 | 102 | 102 | 100 | 98 | 98 | 96 | 95 |    |    |  | 2 | 105 | 98 | 93 | 89 | 93 | 89 | 86 | 90 | 87 | 84 |    |    |    | 3 | 98 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 76 |    |    |    | 4  | 92 | 82 | 76 | 70 | 79 | 73 | 69 | 77 | 72 | 68 |    |    |    | 5  | 86 | 76 | 69 | 64 | 73 | 67 | 63 | 71 | 66 | 62 |    |    |    | 6  | 81 | 70 | 63 | 58 | 68 | 62 | 58 | 66 | 61 | 57 |    |    |    | 7  | 76 | 66 | 58 | 54 | 63 | 57 | 53 | 62 | 57 | 53 |    |    |    | 8  | 72 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 49 |    |    |    | 9  | 68 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 49 | 46 |    |    |    | 10 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 43 |    |    |    | <b>Zonal Lumen Summary</b><br><table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>% Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>12590</td><td>54.2</td></tr> <tr><td>0-40</td><td>16657</td><td>71.7</td></tr> <tr><td>0-60</td><td>21400</td><td>92.1</td></tr> <tr><td>0-90</td><td>23224</td><td>100.0</td></tr> <tr><td>0-180</td><td>23224</td><td>100.0</td></tr> </tbody> </table> |    | Zone | Lumens | % Fixture | 0-30 | 12590 | 54.2 | 0-40 | 16657 | 71.7 | 0-60 | 21400   | 92.1 | 0-90 | 23224  | 100.0     | 0-180 | 23224 | 100.0 |      |       |      |      |       |      |      |       |       |       |       |       |
|   | rc  | Effective floor cavity reflectance |     |                                    |     |     |     | 20% |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   |   | 80%                                |     | 50%                                |     | 30% |     | 80% |     | 50% |     | 30% |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | rw  | 70                                 | 50  | 30                                 | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 0   | 119                                | 119 | 119                                | 119 | 111 | 111 | 111 | 106 | 106 | 106 |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 1   | 112                                | 108 | 105                                | 102 | 102 | 100 | 98  | 98  | 96  | 95  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 2   | 105                                | 98  | 93                                 | 89  | 93  | 89  | 86  | 90  | 87  | 84  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 3   | 98                                 | 90  | 84                                 | 79  | 86  | 81  | 77  | 83  | 79  | 76  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 4   | 92                                 | 82  | 76                                 | 70  | 79  | 73  | 69  | 77  | 72  | 68  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 5   | 86                                 | 76  | 69                                 | 64  | 73  | 67  | 63  | 71  | 66  | 62  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 6   | 81  | 70                                 | 63  | 58                                 | 68  | 62  | 58  | 66  | 61  | 57  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 7   | 76  | 66                                 | 58  | 54                                 | 63  | 57  | 53  | 62  | 57  | 53  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 8   | 72  | 61                                 | 54  | 49                                 | 59  | 53  | 49  | 58  | 53  | 49  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 9   | 68  | 57                                 | 51  | 46                                 | 56  | 50  | 46  | 55  | 49  | 46  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 10  | 65  | 54                                 | 47  | 43                                 | 53  | 47  | 43  | 52  | 46  | 43  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| Zone  | Lumens  | % Fixture                          |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-30  | 12590   | 54.2                               |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-40  | 16657   | 71.7                               |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-60  | 21400   | 92.1                               |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-90  | 23224   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-180   | 23224   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| <p>Electronic Driver<br/>Linear LED 5000K<br/>Spacing criterion: (II) 1.28 x mounting height, (L) 1.29 x mounting height<br/>Lumens = 24,116<br/>Input Watts = 154W<br/>Efficacy = 156.6 lm/W<br/>Test: HBLED-LD5-24SE-W-L850-ED2-U.IES</p> | <b>Coefficients of Utilization</b><br><table border="1"> <thead> <tr> <th rowspan="2">rc</th> <th colspan="6">Effective floor cavity reflectance</th> <th colspan="6">20%</th> </tr> <tr> <th colspan="2">80%</th> <th colspan="2">50%</th> <th colspan="2">30%</th> <th colspan="2">80%</th> <th colspan="2">50%</th> <th colspan="2">30%</th> </tr> <tr> <th>rw</th> <th>70</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> <th>70</th> <th>50</th> <th>30</th> <th>10</th> <th>50</th> <th>30</th> <th>10</th> </tr> </thead> <tbody> <tr><td>0</td><td>119</td><td>119</td><td>119</td><td>119</td><td>111</td><td>111</td><td>111</td><td>106</td><td>106</td><td>106</td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>109</td><td>105</td><td>101</td><td>97</td><td>98</td><td>95</td><td>92</td><td>94</td><td>92</td><td>89</td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>99</td><td>91</td><td>85</td><td>79</td><td>86</td><td>81</td><td>76</td><td>83</td><td>78</td><td>75</td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>91</td><td>80</td><td>72</td><td>66</td><td>76</td><td>69</td><td>64</td><td>73</td><td>68</td><td>63</td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>83</td><td>71</td><td>62</td><td>56</td><td>67</td><td>60</td><td>55</td><td>65</td><td>59</td><td>54</td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>76</td><td>63</td><td>54</td><td>48</td><td>60</td><td>53</td><td>47</td><td>58</td><td>52</td><td>47</td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>70</td><td>57</td><td>48</td><td>42</td><td>54</td><td>47</td><td>41</td><td>53</td><td>46</td><td>41</td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>65</td><td>52</td><td>43</td><td>37</td><td>49</td><td>42</td><td>36</td><td>48</td><td>41</td><td>36</td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>61</td><td>47</td><td>38</td><td>33</td><td>45</td><td>38</td><td>32</td><td>44</td><td>37</td><td>32</td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>57</td><td>43</td><td>35</td><td>29</td><td>41</td><td>34</td><td>29</td><td>40</td><td>34</td><td>29</td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>53</td><td>40</td><td>32</td><td>27</td><td>38</td><td>31</td><td>26</td><td>37</td><td>31</td><td>26</td><td></td><td></td><td></td><td></td></tr> </tbody> </table> |                                    | rc  | Effective floor cavity reflectance |     |     |     |     |     | 20% |     |     |    |    |    | 80% |  | 50% |  | 30% |  | 80% |  | 50% |  | 30% |  | rw | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0   | 119 | 119 | 119 | 119 | 111 | 111 | 111 | 106 | 106 | 106 |  |  |   |     | 1   | 109 | 105 | 101 | 97  | 98 | 95 | 92 | 94 | 92 | 89 |  |   |     |    | 2  | 99 | 91 | 85 | 79 | 86 | 81 | 76 | 83 | 78 | 75 |   |    |    |    | 3  | 91 | 80 | 72 | 66 | 76 | 69 | 64 | 73 | 68 | 63 |    |    |    |    | 4  | 83 | 71 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 |    |    |    |    | 5  | 76 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 |    |    |    |    | 6  | 70 | 57 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 |    |    |    |    | 7  | 65 | 52 | 43 | 37 | 49 | 42 | 36 | 48 | 41 | 36 |    |    |    |    | 8  | 61 | 47 | 38 | 33 | 45 | 38 | 32 | 44 | 37 | 32 |    |    |    |    | 9  | 57 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 |    |    |    |    | 10 | 53 | 40 | 32   | 27 | 38   | 31     | 26        | 37   | 31    | 26   |      |       |      |      | <b>Zonal Lumen Summary</b><br><table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>% Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>6586</td><td>27.3</td></tr> <tr><td>0-40</td><td>10886</td><td>45.1</td></tr> <tr><td>0-60</td><td>19623</td><td>81.4</td></tr> <tr><td>0-90</td><td>24116</td><td>100.0</td></tr> <tr><td>0-180</td><td>24116</td><td>100.0</td></tr> </tbody> </table> |      | Zone | Lumens | % Fixture | 0-30  | 6586  | 27.3  | 0-40 | 10886 | 45.1 | 0-60 | 19623 | 81.4 | 0-90 | 24116 | 100.0 | 0-180 | 24116 | 100.0 |
|   | rc  | Effective floor cavity reflectance |     |                                    |     |     |     | 20% |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   |   | 80%                                |     | 50%                                |     | 30% |     | 80% |     | 50% |     | 30% |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | rw  | 70                                 | 50  | 30                                 | 10  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 0   | 119                                | 119 | 119                                | 119 | 111 | 111 | 111 | 106 | 106 | 106 |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 1   | 109                                | 105 | 101                                | 97  | 98  | 95  | 92  | 94  | 92  | 89  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 2   | 99                                 | 91  | 85                                 | 79  | 86  | 81  | 76  | 83  | 78  | 75  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 3   | 91                                 | 80  | 72                                 | 66  | 76  | 69  | 64  | 73  | 68  | 63  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 4   | 83                                 | 71  | 62                                 | 56  | 67  | 60  | 55  | 65  | 59  | 54  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
|   | 5   | 76                                 | 63  | 54                                 | 48  | 60  | 53  | 47  | 58  | 52  | 47  |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 6   | 70  | 57                                 | 48  | 42                                 | 54  | 47  | 41  | 53  | 46  | 41  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 7   | 65  | 52                                 | 43  | 37                                 | 49  | 42  | 36  | 48  | 41  | 36  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 8   | 61  | 47                                 | 38  | 33                                 | 45  | 38  | 32  | 44  | 37  | 32  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 9   | 57  | 43                                 | 35  | 29                                 | 41  | 34  | 29  | 40  | 34  | 29  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 10  | 53  | 40                                 | 32  | 27                                 | 38  | 31  | 26  | 37  | 31  | 26  |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| Zone  | Lumens  | % Fixture                          |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-30  | 6586  | 27.3                               |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-40  | 10886   | 45.1                               |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-60  | 19623   | 81.4                               |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-90  | 24116   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |
| 0-180   | 24116   | 100.0                              |     |                                    |     |     |     |     |     |     |     |     |    |    |    |     |  |     |  |     |  |     |  |     |  |     |  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |  |  |   |     |     |     |     |     |     |    |    |    |    |    |    |  |   |     |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |      |        |           |      |       |      |      |       |      |      |   |      |      |        |           |       |       |       |      |       |      |      |       |      |      |       |       |       |       |       |

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