

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P621933

Luminaire Tested: VLT-BB-M-050U-100D-940-UNV-STD-W-4

Issue Date: 9/2/2020

**Test Information**

Test Method: LM-79-2019  
Report Number: P621933  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2203-563-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/28/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: VLT-BB-M-050U-100D-940-UNV-STD-W-4  
Description: CORELITE VAULT SUSPENDED LED LUMINAIRE  
BLACK BAFFLE WITH MEDIUM OPTIC  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

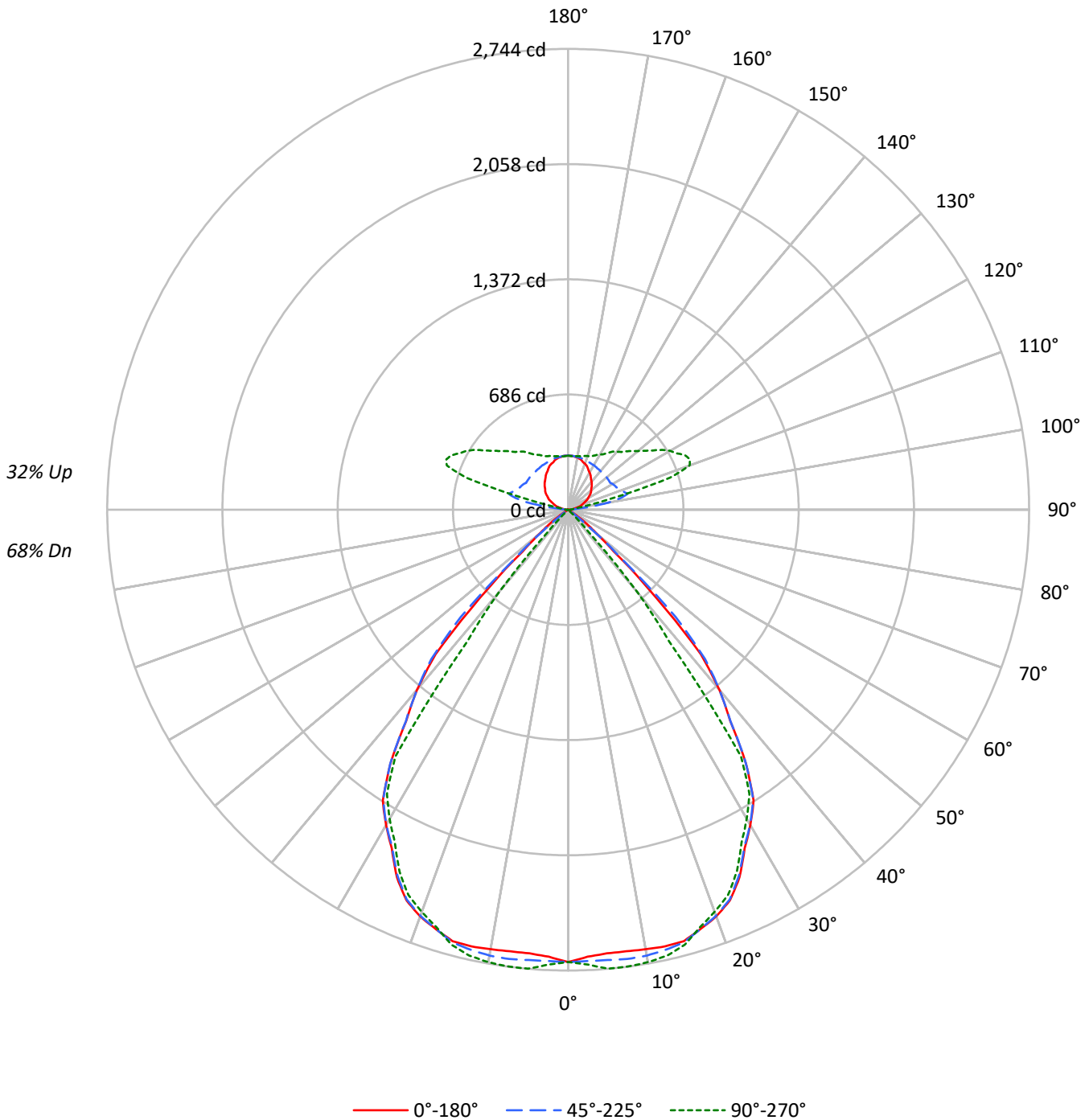
Lumens per Lamp: N/A  
Luminaire Lumens: 5437.5 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.14  
Luminous Opening: Rectangular (W 0.38' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 54.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P621933

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|----|--|--|--|--|--|--|--|--|----|---|
| RF  | 20  |     |     |     |     |     |     |     |    | 20 |    |    |    |    |    |    |    |    | 20 |    |    |    |    |   |  |  |  | 20 |  |  |  |  |  |  |  |  |    |   |
| RC  | 80  |     |     |     |     |     |     |     |    | 70 |    |    |    |    |    |    |    |    | 50 |    |    |    |    |   |  |  |  | 30 |  |  |  |  |  |  |  |  | 10 | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 0   | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 83 | 83 | 83 | 73 | 73 | 73 | 68 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 1   | 105 | 101 | 98  | 96  | 99  | 96  | 93  | 91  | 86 | 84 | 83 | 77 | 76 | 75 | 69 | 68 | 67 | 63 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 2   | 98  | 92  | 87  | 83  | 93  | 88  | 83  | 80  | 79 | 76 | 73 | 71 | 69 | 67 | 64 | 63 | 61 | 58 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 3   | 91  | 84  | 78  | 73  | 87  | 80  | 75  | 71  | 73 | 69 | 66 | 66 | 63 | 61 | 60 | 58 | 56 | 53 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 4   | 85  | 77  | 70  | 65  | 81  | 73  | 68  | 63  | 67 | 63 | 59 | 61 | 58 | 55 | 56 | 53 | 51 | 48 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 5   | 80  | 70  | 64  | 59  | 76  | 67  | 61  | 57  | 62 | 57 | 53 | 57 | 53 | 50 | 52 | 49 | 47 | 44 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 6   | 75  | 65  | 58  | 53  | 71  | 62  | 56  | 51  | 57 | 52 | 49 | 53 | 49 | 46 | 49 | 46 | 43 | 41 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 7   | 70  | 60  | 53  | 48  | 67  | 57  | 51  | 47  | 53 | 48 | 44 | 49 | 45 | 42 | 45 | 42 | 40 | 38 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 8   | 66  | 55  | 48  | 44  | 63  | 53  | 47  | 43  | 49 | 44 | 41 | 46 | 42 | 39 | 43 | 39 | 37 | 35 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 9   | 62  | 51  | 45  | 40  | 59  | 49  | 43  | 39  | 46 | 41 | 37 | 43 | 39 | 36 | 40 | 36 | 34 | 32 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 10  | 58  | 48  | 41  | 37  | 56  | 46  | 40  | 36  | 43 | 38 | 35 | 40 | 36 | 33 | 37 | 34 | 31 | 30 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 19328 | 19328 | 19328 |
| 5°  | 19098 | 19387 | 19763 |
| 10° | 19363 | 19640 | 19933 |
| 15° | 19756 | 19801 | 19920 |
| 20° | 19678 | 19648 | 19464 |
| 25° | 19115 | 19036 | 18813 |
| 30° | 17974 | 17941 | 17608 |
| 35° | 16152 | 16170 | 15712 |
| 40° | 13114 | 13114 | 6002  |
| 45° | 7541  | 9172  | 123   |
| 50° | 2377  | 2197  | 112   |
| 55° | 829   | 176   | 100   |
| 60° | 57    | 115   | 115   |
| 65° | 34    | 102   | 102   |
| 70° | 42    | 126   | 126   |
| 75° | 0     | 111   | 111   |
| 80° | 0     | 165   | 165   |
| 85° | 0     | 165   | 165   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 9172 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 257.4  | 4.7       |
| 10°-20°   | 751.0  | 13.8      |
| 20°-30°   | 1097.1 | 20.2      |
| 30°-40°   | 1086.6 | 20.0      |
| 40°-50°   | 454.9  | 8.4       |
| 50°-60°   | 48.7   | 0.9       |
| 60°-70°   | 6.8    | 0.1       |
| 70°-80°   | 4.1    | 0.1       |
| 80°-90°   | 2.7    | 0.0       |
| 90°-100°  | 39.6   | 0.7       |
| 100°-110° | 281.9  | 5.2       |
| 110°-120° | 382.7  | 7.0       |
| 120°-130° | 311.5  | 5.7       |
| 130°-140° | 250.5  | 4.6       |
| 140°-150° | 197.5  | 3.6       |
| 150°-160° | 144.4  | 2.7       |
| 160°-170° | 89.7   | 1.6       |
| 170°-180° | 30.6   | 0.6       |
| 0°-30°    | 2105.5 | 38.7      |
| 0°-40°    | 3192.1 | 58.7      |
| 0°-60°    | 3695.6 | 68.0      |
| 0°-90°    | 3709.2 | 68.2      |
| 90°-120°  | 704.2  | 12.9      |
| 90°-150°  | 1463.7 | 26.9      |
| 90°-180°  | 1728.0 | 31.8      |
| 0°-180°   | 5437.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2693 | 2693  | 2693 | 2693  | 2693 |      |
| 5°   | 2651 | 2698  | 2691 | 2698  | 2744 | 254  |
| 15°  | 2659 | 2714  | 2665 | 2646  | 2681 | 747  |
| 25°  | 2414 | 2456  | 2404 | 2347  | 2376 | 1102 |
| 35°  | 1844 | 1848  | 1846 | 1809  | 1794 | 1131 |
| 45°  | 743  | 883   | 904  | 18    | 12   | 583  |
| 55°  | 66   | 88    | 14   | 10    | 8    | 74   |
| 65°  | 2    | 8     | 6    | 6     | 6    | 2    |
| 75°  | 0    | 4     | 4    | 4     | 4    | 0    |
| 85°  | 0    | 2     | 2    | 2     | 2    | 0    |
| 90°  | 0    | 2     | 4    | 6     | 6    | 1    |
| 95°  | 16   | 30    | 16   | 18    | 22   | 18   |
| 105° | 63   | 96    | 366  | 468   | 310  | 66   |
| 115° | 111  | 135   | 316  | 656   | 767  | 110  |
| 125° | 160  | 182   | 298  | 520   | 615  | 142  |
| 135° | 198  | 220   | 300  | 428   | 492  | 153  |
| 145° | 235  | 254   | 302  | 373   | 413  | 147  |
| 155° | 275  | 285   | 308  | 338   | 354  | 126  |
| 165° | 306  | 310   | 316  | 324   | 330  | 86   |
| 175° | 322  | 324   | 322  | 320   | 318  | 30   |
| 180° | 322  | 322   | 322  | 322   | 322  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2693.4 | 2693.4 | 2693.4 | 2693.4 | 2693.4 |
| 2.5°   | 2664.5 | 2702.2 | 2690.2 | 2687.5 | 2711.1 |
| 5°     | 2651.2 | 2698.4 | 2691.4 | 2698.5 | 2743.6 |
| 7.5°   | 2652.4 | 2696.0 | 2698.6 | 2698.5 | 2743.6 |
| 10°    | 2657.3 | 2702.4 | 2695.4 | 2690.4 | 2735.6 |
| 12.5°  | 2663.7 | 2710.4 | 2684.2 | 2675.9 | 2719.5 |
| 15°    | 2659.3 | 2714.3 | 2665.3 | 2646.0 | 2681.4 |
| 17.5°  | 2618.7 | 2682.3 | 2617.9 | 2580.7 | 2606.6 |
| 20°    | 2576.9 | 2643.7 | 2572.9 | 2521.3 | 2548.8 |
| 22.5°  | 2517.5 | 2579.5 | 2511.8 | 2452.3 | 2484.5 |
| 25°    | 2414.2 | 2455.5 | 2404.2 | 2346.6 | 2376.1 |
| 27.5°  | 2273.6 | 2297.2 | 2268.0 | 2216.2 | 2234.3 |
| 30°    | 2169.2 | 2184.9 | 2165.2 | 2113.2 | 2125.0 |
| 32.5°  | 2053.5 | 2061.4 | 2049.5 | 2002.2 | 2007.7 |
| 35°    | 1843.8 | 1847.7 | 1845.8 | 1809.3 | 1793.6 |
| 37.5°  | 1584.7 | 1592.6 | 1587.9 | 1429.2 | 986.2  |
| 40°    | 1399.9 | 1407.8 | 1399.9 | 837.1  | 640.7  |
| 42.5°  | 1168.6 | 1218.8 | 1205.5 | 570.8  | 182.8  |
| 45°    | 743.1  | 882.6  | 903.8  | 17.9   | 12.1   |
| 47.5°  | 367.2  | 517.6  | 425.0  | 11.6   | 11.6   |
| 50°    | 212.9  | 305.2  | 196.8  | 10.0   | 10.0   |
| 52.5°  | 142.2  | 185.8  | 57.0   | 10.0   | 10.0   |
| 55°    | 66.3   | 87.9   | 14.1   | 10.0   | 8.0    |
| 57.5°  | 23.3   | 44.1   | 9.6    | 8.0    | 8.0    |
| 60°    | 4.0    | 21.7   | 8.0    | 8.0    | 8.0    |
| 62.5°  | 2.4    | 12.2   | 8.0    | 6.5    | 8.0    |
| 65°    | 2.0    | 7.9    | 6.0    | 6.0    | 6.0    |
| 67.5°  | 2.0    | 5.9    | 6.0    | 6.0    | 6.0    |
| 70°    | 2.0    | 5.9    | 6.0    | 6.0    | 6.0    |
| 72.5°  | 0.4    | 4.3    | 4.4    | 4.5    | 6.0    |
| 75°    | 0.0    | 3.9    | 4.0    | 4.0    | 4.0    |
| 77.5°  | 0.0    | 3.9    | 4.0    | 4.0    | 4.0    |
| 80°    | 0.0    | 3.9    | 4.0    | 4.0    | 4.0    |
| 82.5°  | 0.0    | 2.4    | 2.4    | 2.4    | 4.0    |
| 85°    | 0.0    | 2.0    | 2.0    | 2.0    | 2.0    |
| 87.5°  | 0.0    | 2.0    | 2.4    | 2.8    | 2.8    |
| 90°    | 0.0    | 2.0    | 4.0    | 6.1    | 6.1    |
| 92.5°  | 4.9    | 6.8    | 8.9    | 12.6   | 14.2   |
| 95°    | 16.2   | 30.0   | 16.2   | 18.3   | 22.3   |
| 97.5°  | 28.7   | 57.6   | 119.0  | 35.1   | 30.4   |
| 100°   | 38.4   | 72.1   | 238.8  | 70.3   | 46.5   |
| 102.5° | 48.2   | 83.4   | 323.0  | 185.5  | 101.6  |
| 105°   | 62.7   | 96.4   | 366.3  | 467.9  | 309.6  |
| 107.5° | 77.3   | 102.6  | 349.7  | 681.0  | 637.8  |
| 110°   | 87.0   | 110.8  | 340.0  | 715.5  | 769.0  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 96.7  | 120.5 | 330.2 | 695.3 | 785.1 |
| 115°   | 111.3 | 135.0 | 315.7 | 656.1 | 766.9 |
| 117.5° | 126.3 | 149.6 | 312.0 | 613.7 | 727.7 |
| 120°   | 137.6 | 159.4 | 305.6 | 581.4 | 700.2 |
| 122.5° | 145.7 | 169.0 | 297.5 | 553.7 | 662.9 |
| 125°   | 159.9 | 181.6 | 297.5 | 520.2 | 615.2 |
| 127.5° | 171.6 | 193.8 | 297.9 | 481.3 | 575.1 |
| 130°   | 178.1 | 201.8 | 299.5 | 455.3 | 544.3 |
| 132.5° | 186.2 | 209.9 | 299.5 | 443.6 | 516.8 |
| 135°   | 198.3 | 220.1 | 299.5 | 428.4 | 491.7 |
| 137.5° | 208.4 | 231.8 | 299.5 | 411.6 | 465.8 |
| 140°   | 216.5 | 238.3 | 299.5 | 401.8 | 451.3 |
| 142.5° | 224.6 | 244.8 | 301.1 | 390.4 | 436.7 |
| 145°   | 234.7 | 254.5 | 301.5 | 373.2 | 412.8 |
| 147.5° | 246.9 | 264.3 | 303.9 | 360.9 | 391.4 |
| 150°   | 255.0 | 270.8 | 305.6 | 352.7 | 378.4 |
| 152.5° | 263.1 | 277.3 | 305.6 | 346.1 | 367.1 |
| 155°   | 275.2 | 285.1 | 307.6 | 338.3 | 354.1 |
| 157.5° | 284.9 | 294.4 | 310.0 | 333.3 | 344.8 |
| 160°   | 291.4 | 299.3 | 311.6 | 330.1 | 340.0 |
| 162.5° | 296.2 | 304.2 | 313.2 | 328.4 | 335.1 |
| 165°   | 305.6 | 309.5 | 315.7 | 323.9 | 329.8 |
| 167.5° | 310.8 | 314.4 | 317.7 | 321.8 | 325.4 |
| 170°   | 315.7 | 317.7 | 317.7 | 321.8 | 323.8 |
| 172.5° | 317.3 | 320.9 | 319.3 | 320.2 | 322.2 |
| 175°   | 321.7 | 323.7 | 321.7 | 319.7 | 317.7 |
| 177.5° | 321.7 | 323.3 | 321.7 | 321.7 | 320.1 |
| 180°   | 321.7 | 321.7 | 321.7 | 321.7 | 321.7 |



TEST NUMBER: P621933

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**CIE UGR TABLE:**

| Reflectances:   |      |                  |      |      |      |      |                |      |      |      |      |
|-----------------|------|------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling         |      | 0.7              | 0.7  | 0.5  | 0.5  | 0.3  | 0.7            | 0.7  | 0.5  | 0.5  | 0.3  |
| Wall            |      | 0.5              | 0.3  | 0.5  | 0.3  | 0.3  | 0.5            | 0.3  | 0.5  | 0.3  | 0.3  |
| Reference plane |      | 0.2              | 0.2  | 0.2  | 0.2  | 0.2  | 0.2            | 0.2  | 0.2  | 0.2  | 0.2  |
| Room dimensions |      | Viewed crosswise |      |      |      |      | Viewed endwise |      |      |      |      |
| X=2H            | Y=2H | 0.00             | 0.09 | 0.15 | 0.91 | 1.91 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 3H   | 0.00             | 0.00 | 0.03 | 0.70 | 1.73 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 4H   | 0.00             | 0.00 | 0.00 | 0.57 | 1.61 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.42 | 1.47 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.34 | 1.40 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 0.00             | 0.00 | 0.00 | 0.25 | 1.33 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H              | 2H   | 0.00             | 0.00 | 0.00 | 0.52 | 1.57 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 3H   | 0.00             | 0.00 | 0.00 | 0.36 | 1.42 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 4H   | 0.00             | 0.00 | 0.00 | 0.24 | 1.32 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.13 | 1.23 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.06 | 1.15 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 0.00             | 0.00 | 0.00 | 0.00 | 1.07 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H              | 4H   | 0.00             | 0.00 | 0.00 | 0.06 | 1.16 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.06 | 1.16 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.02 | 1.14 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 0.00             | 0.00 | 0.00 | 0.00 | 1.13 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H             | 4H   | 0.00             | 0.00 | 0.00 | 0.00 | 1.09 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.01 | 1.12 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.00 | 1.17 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |