

**itl boulder**  
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

**NVLAP**  
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.  
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REPORT NUMBER: ITL86019

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ISSUE DATE: 11/11/15

PREPARED FOR: FINELITE, INC.

CATALOG NUMBER: HPR-LED-X-2X2-CS-V-8-35

LUMINAIRE: FABRICATED METAL HOUSING WITH WHITE PAINTED INTERIOR FINISH, FORMED WHITE PAINTED METAL REFLECTOR/LED DRIVER COVER, TWO WHITE CIRCUIT BOARDS EACH WITH 80 LEDS, FROSTED HOLOGRAPHIC PLASTIC LENS, FROSTED HOLOGRAPHIC PLASTIC LOWER MIDDLE LENS INSERT. FABRICATED WHITE PAINTED METAL FRAME. LENSES FROSTED SIDE OUT.

LAMPS: ONE HUNDRED SIXTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 58.2 WATTS, 0.486 AMPS

TOTAL REFLECTANCE OF PAINT = 93.4 %

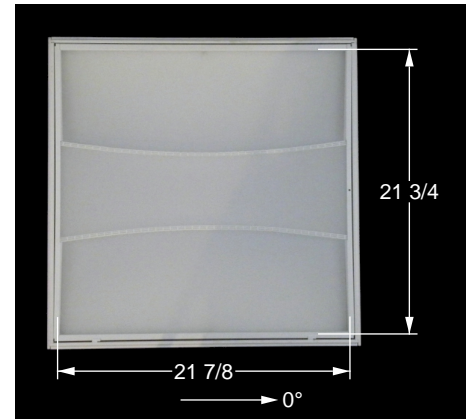
MOUNTING: RECESSED

LED DRIVER: OSRAM OT50W/PRG1400C/UNV/DIM/L, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 1050mA OUTPUT.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET



| CANDELA DISTRIBUTION |      |      |      |      |      | FLUX |
|----------------------|------|------|------|------|------|------|
|                      | 0.0  | 22.5 | 45.0 | 67.5 | 90.0 |      |
| 0                    | 2294 | 2294 | 2294 | 2294 | 2294 |      |
| 5                    | 2284 | 2284 | 2284 | 2283 | 2284 | 217  |
| 15                   | 2183 | 2184 | 2181 | 2178 | 2177 | 615  |
| 25                   | 1988 | 1987 | 1981 | 1983 | 1980 | 913  |
| 35                   | 1718 | 1718 | 1712 | 1718 | 1721 | 1074 |
| 45                   | 1410 | 1401 | 1403 | 1415 | 1419 | 1087 |
| 55                   | 1071 | 1067 | 1071 | 1083 | 1091 | 962  |
| 65                   | 723  | 717  | 730  | 742  | 751  | 724  |
| 75                   | 376  | 380  | 394  | 410  | 418  | 419  |
| 85                   | 89   | 98   | 111  | 111  | 113  | 121  |
| 90                   | 0    | 0    | 0    | 0    | 0    |      |

| ZONAL LUMEN SUMMARY |        |       |
|---------------------|--------|-------|
| ZONE                | LUMENS | %FIXT |
| 0- 30               | 1745   | 28.5  |
| 0- 40               | 2819   | 46.0  |
| 0- 60               | 4868   | 79.4  |
| 0- 90               | 6132   | 100.0 |
| 90-180              | 0      | 0.0   |
| 0-180               | 6132   | 100.0 |

EFFICACY (120V) = 105.4 lm/W

EFFICACY (277V) = 107.2 lm/W \*\*

\*\* THE EFFICACY AT 277 VOLTS IS BASED ON THE LUMENS FROM THIS REPORT AND THE WATTAGE MEASURED AT 277 VOLTS FROM ITL REPORT NUMBER ITL86019-THD.

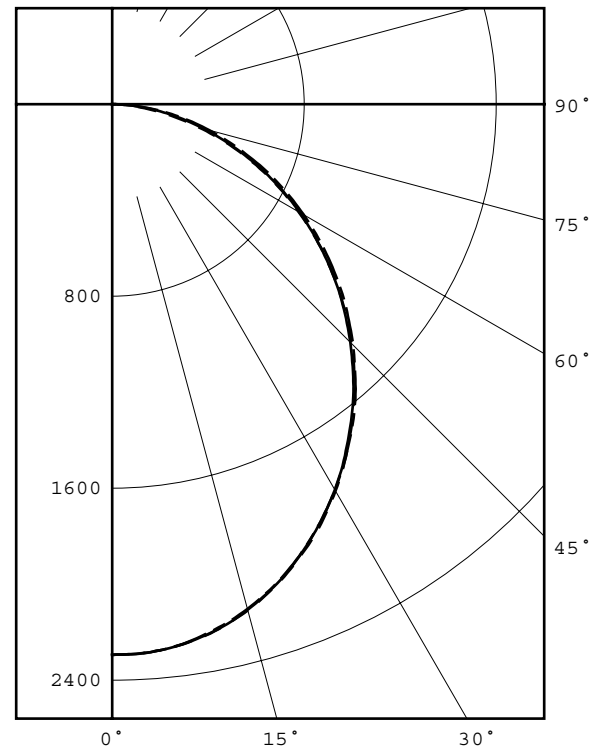
CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.21 1.21

LUMINOUS LENGTH : 21.875 21.750

| LUMINANCE DATA IN CANDELA/SQ M |         |         |         |  |
|--------------------------------|---------|---------|---------|--|
| ANGLE                          | AVERAGE | AVERAGE | AVERAGE |  |
| IN DEG                         | 0-DEG   | 45-DEG  | 90-DEG  |  |
| 45                             | 6496.   | 6464.   | 6538.   |  |
| 55                             | 6083.   | 6083.   | 6197.   |  |
| 65                             | 5573.   | 5627.   | 5789.   |  |
| 75                             | 4733.   | 4959.   | 5261.   |  |
| 85                             | 3327.   | 4149.   | 4224.   |  |



LEGEND:

0-deg - - - - -  
45-deg - - - - -  
90-deg - - - - -

Checked B. HYRE  
Approved R. BEATTIE  
Lighting Engineer



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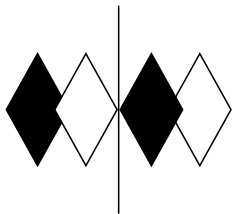
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PREPARED FOR: FINELITE, INC.

# CANDELA DISTRIBUTION LATERAL ANGLE

|      | 0.0  | 22.5 | 45.0 | 67.5 | 90.0 |
|------|------|------|------|------|------|
| 0.0  | 2294 | 2294 | 2294 | 2294 | 2294 |
| 2.5  | 2292 | 2292 | 2293 | 2292 | 2292 |
| 5.0  | 2284 | 2284 | 2284 | 2283 | 2284 |
| 7.5  | 2268 | 2269 | 2269 | 2268 | 2268 |
| 10.0 | 2248 | 2249 | 2246 | 2245 | 2242 |
| 12.5 | 2218 | 2220 | 2218 | 2214 | 2213 |
| 15.0 | 2183 | 2184 | 2181 | 2178 | 2177 |
| 17.5 | 2141 | 2143 | 2139 | 2136 | 2136 |
| 20.0 | 2095 | 2096 | 2092 | 2089 | 2089 |
| 22.5 | 2042 | 2043 | 2038 | 2038 | 2037 |
| 25.0 | 1988 | 1987 | 1981 | 1983 | 1980 |
| 27.5 | 1926 | 1925 | 1920 | 1922 | 1919 |
| 30.0 | 1861 | 1858 | 1855 | 1858 | 1856 |
| 32.5 | 1792 | 1789 | 1786 | 1789 | 1790 |
| 35.0 | 1718 | 1718 | 1712 | 1718 | 1721 |
| 37.5 | 1645 | 1643 | 1639 | 1646 | 1651 |
| 40.0 | 1568 | 1562 | 1564 | 1571 | 1577 |
| 42.5 | 1491 | 1487 | 1483 | 1494 | 1497 |
| 45.0 | 1410 | 1401 | 1403 | 1415 | 1419 |
| 47.5 | 1327 | 1322 | 1321 | 1333 | 1338 |
| 50.0 | 1243 | 1238 | 1240 | 1251 | 1259 |
| 52.5 | 1157 | 1153 | 1156 | 1167 | 1175 |
| 55.0 | 1071 | 1067 | 1071 | 1083 | 1091 |
| 57.5 | 984  | 980  | 987  | 998  | 1006 |
| 60.0 | 897  | 892  | 902  | 913  | 921  |
| 62.5 | 810  | 803  | 816  | 827  | 836  |
| 65.0 | 723  | 717  | 730  | 742  | 751  |
| 67.5 | 635  | 631  | 643  | 658  | 666  |
| 70.0 | 549  | 545  | 557  | 572  | 579  |
| 72.5 | 459  | 462  | 475  | 490  | 498  |
| 75.0 | 376  | 380  | 394  | 410  | 418  |
| 77.5 | 296  | 302  | 317  | 332  | 341  |
| 80.0 | 221  | 229  | 244  | 258  | 266  |
| 82.5 | 150  | 159  | 177  | 186  | 190  |
| 85.0 | 89   | 98   | 111  | 111  | 113  |
| 87.5 | 36   | 43   | 47   | 49   | 51   |
| 90.0 | 0    | 0    | 0    | 0    | 0    |



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5-DEGREE  
ZONAL LUMEN SUMMARY

|        |     |
|--------|-----|
| 0- 5   | 55  |
| 5- 10  | 162 |
| 10- 15 | 263 |
| 15- 20 | 352 |
| 20- 25 | 427 |
| 25- 30 | 486 |
| 30- 35 | 526 |
| 35- 40 | 548 |
| 40- 45 | 551 |
| 45- 50 | 536 |
| 50- 55 | 504 |
| 55- 60 | 457 |
| 60- 65 | 397 |
| 65- 70 | 327 |
| 70- 75 | 249 |
| 75- 80 | 170 |
| 80- 85 | 94  |
| 85- 90 | 27  |

10-DEGREE  
ZONAL LUMEN SUMMARY

|       |      |
|-------|------|
| 0- 10 | 217  |
| 0- 20 | 832  |
| 0- 30 | 1745 |
| 0- 40 | 2819 |
| 0- 50 | 3906 |
| 0- 60 | 4868 |
| 0- 70 | 5591 |
| 0- 80 | 6011 |
| 0- 90 | 6132 |



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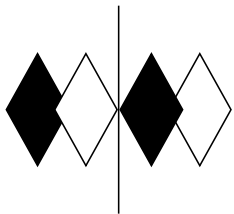
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# COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

| 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  | 0   |
| 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |
| 2  | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 75  | 82  | 78  | 74  | 79  | 75  | 72  | 70  |
| 3  | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 63  | 72  | 67  | 62  | 70  | 65  | 61  | 59  |
| 4  | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 51  |
| 5  | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 51  | 46  | 44  |
| 6  | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 38  |
| 7  | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |
| 8  | 61  | 47  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 32  | 30  |
| 9  | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |
| 10 | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 25  |

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.



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