



itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL59974

DATE: 02/24/08

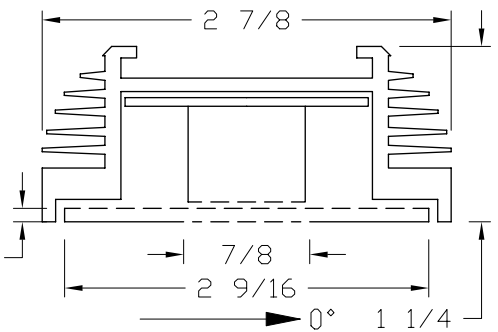
PREPARED FOR: GVA LIGHTING, INC.

CATALOG NUMBER: STR9-1200-CM-6-2.5W-5100K-NB

LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH FLAT METAL END CAPS, ONE WHITE CIRCUIT BOARD WITH TWENTY-FOUR LEDS AND OPTICAL ASSEMBLIES, CLEAR FLAT GLASS LENS WITH BLACK PAINTED PERIMETER. EXACT INTERIOR PROPERTIES UNKNOWN AS THIS IS A SEALED UNIT.

LAMP: TWENTY-FOUR 2.5-WATT WHITE LIGHT EMITTING DIODES (LEDS), CLEAR PRISMATIC LENS IN WHITE PLASTIC FRAME BELOW EACH LED, VERTICAL BASE-UP POSITION.

NOTE: THIS REPORT WAS PRORATED FROM ITL TEST NUMBER 59970, WHICH WAS A TEST OF A 1 FOOT LONG LUMINAIRE CONTAINING SIX LED'S SPACED 49.5mm APART. THIS PRORATED DATA IS INTENDED TO REPRESENT A 4 FOOT LONG LUMINAIRE CONTAINING TWENTY-FOUR LED'S SPACED 49.5mm APART. ACTUAL PERFORMANCE MAY VARY. THE DATA USED TO GENERATE THIS PRORATED REPORT IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC) TO THE POWER SUPPLY. LAMP INFORMATION PROVIDED BY CLIENT.



CANDELA DISTRIBUTION

| | | | | | |
|----|-------|-------|-------|-------|-------|
| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
| 0 | 25920 | 25920 | 25920 | 25920 | 25920 |
| 5 | 18120 | 18156 | 18196 | 18272 | 18456 |
| 15 | 1084 | 1204 | 1388 | 1300 | 1144 |
| 25 | 152 | 156 | 160 | 168 | 176 |
| 35 | 68 | 68 | 72 | 76 | 80 |
| 45 | 36 | 36 | 40 | 44 | 48 |
| 55 | 24 | 24 | 24 | 28 | 32 |
| 65 | 12 | 12 | 12 | 16 | 20 |
| 75 | 0 | 0 | 0 | 4 | 8 |
| 85 | 0 | 0 | 0 | 0 | 0 |
| 90 | 0 | 0 | 0 | 0 | 0 |

FLUX

| |
|------|
| 1300 |
| 455 |
| 82 |
| 46 |
| 31 |
| 22 |
| 13 |
| 3 |
| 0 |

ZONAL LUMEN SUMMARY

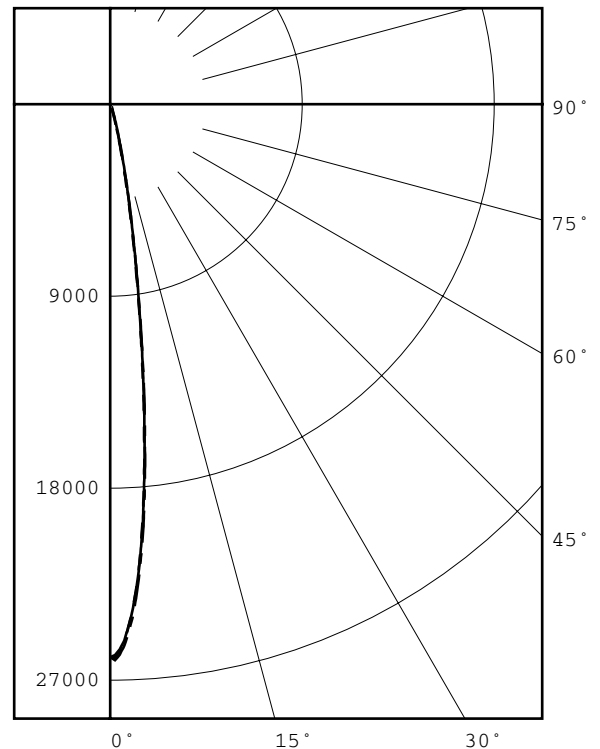
| ZONE | LUMENS | %FIXT |
|--------|--------|-------|
| 0- 30 | 1838 | 94.0 |
| 0- 40 | 1884 | 96.3 |
| 0- 60 | 1938 | 99.1 |
| 0- 90 | 1956 | 100.0 |
| 90-180 | 0 | 0.0 |
| 0-180 | 1956 | 100.0 |

CIE TYPE - DIRECT

| | | |
|------------------|---------|--------|
| PLANE | : 0-DEG | 90-DEG |
| SPACING CRITERIA | : 0.2 | 0.2 |
| LUMINOUS LENGTH | : 0.875 | 45.625 |

LUMINANCE DATA IN CANDELA/SQ M

| ANGLE IN DEG | AVERAGE 0-DEG | AVERAGE 45-DEG | AVERAGE 90-DEG |
|--------------|---------------|----------------|----------------|
| 45 | 1977. | 2196. | 2636. |
| 55 | 1625. | 1625. | 2166. |
| 65 | 1102. | 1102. | 1837. |
| 75 | 0. | 0. | 1200. |
| 85 | 0. | 0. | 0. |



LEGEND:

0-deg: - - - - -
45-deg: _____
90-deg: - . - . - .

Checked R. BERGIN

Approved R. BERGER



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CANDELA DISTRIBUTION
LATERAL ANGLE

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|------|-------|-------|-------|-------|-------|
| 0.0 | 25920 | 25920 | 25920 | 25920 | 25920 |
| 0.5 | 25932 | 25888 | 25824 | 25804 | 26064 |
| 1.0 | 25636 | 25624 | 25560 | 25536 | 25808 |
| 1.5 | 25188 | 25164 | 25140 | 25112 | 25384 |
| 2.0 | 24504 | 24532 | 24532 | 24536 | 24776 |
| 2.5 | 23800 | 23812 | 23784 | 23828 | 24068 |
| 3.0 | 22876 | 22916 | 22916 | 22952 | 23184 |
| 3.5 | 21900 | 21908 | 21928 | 21984 | 22180 |
| 4.0 | 20732 | 20748 | 20788 | 20844 | 21024 |
| 4.5 | 19448 | 19528 | 19580 | 19616 | 19844 |
| 5.0 | 18120 | 18156 | 18196 | 18272 | 18456 |
| 5.5 | 16688 | 16736 | 16808 | 16864 | 17040 |
| 6.0 | 15204 | 15296 | 15372 | 15444 | 15580 |
| 6.5 | 13804 | 13868 | 14000 | 13996 | 14204 |
| 7.0 | 12356 | 12460 | 12628 | 12616 | 12776 |
| 7.5 | 11052 | 11152 | 11264 | 11320 | 11412 |
| 8.0 | 9784 | 9876 | 10012 | 10068 | 10100 |
| 8.5 | 8644 | 8724 | 8876 | 8888 | 8912 |
| 9.0 | 7532 | 7656 | 7844 | 7808 | 7836 |
| 9.5 | 6580 | 6716 | 6888 | 6836 | 6856 |
| 10.0 | 5692 | 5860 | 6056 | 5988 | 5992 |
| 10.5 | 4912 | 5112 | 5292 | 5204 | 5220 |
| 11.0 | 4220 | 4428 | 4604 | 4504 | 4488 |
| 11.5 | 3624 | 3820 | 3996 | 3892 | 3868 |
| 12.0 | 3076 | 3272 | 3452 | 3356 | 3304 |
| 12.5 | 2596 | 2796 | 2996 | 2872 | 2804 |
| 13.0 | 2184 | 2376 | 2568 | 2452 | 2344 |
| 13.5 | 1840 | 2008 | 2204 | 2100 | 1964 |
| 14.0 | 1544 | 1696 | 1884 | 1780 | 1640 |
| 14.5 | 1288 | 1428 | 1620 | 1524 | 1368 |
| 15.0 | 1084 | 1204 | 1388 | 1300 | 1144 |
| 15.5 | 912 | 1024 | 1200 | 1112 | 968 |
| 16.0 | 776 | 872 | 1036 | 952 | 824 |
| 16.5 | 668 | 748 | 904 | 820 | 708 |
| 17.0 | 580 | 644 | 784 | 712 | 612 |
| 17.5 | 508 | 564 | 688 | 620 | 540 |
| 18.0 | 448 | 496 | 604 | 548 | 480 |
| 18.5 | 400 | 440 | 536 | 484 | 432 |
| 19.0 | 360 | 392 | 476 | 432 | 392 |
| 19.5 | 328 | 356 | 424 | 388 | 356 |
| 20.0 | 304 | 320 | 380 | 352 | 328 |
| 22.5 | 212 | 216 | 236 | 236 | 232 |
| 25.0 | 152 | 156 | 160 | 168 | 176 |
| 27.5 | 124 | 120 | 124 | 132 | 136 |
| 30.0 | 100 | 100 | 100 | 108 | 112 |
| 32.5 | 84 | 84 | 84 | 92 | 96 |
| 35.0 | 68 | 68 | 72 | 76 | 80 |
| 37.5 | 56 | 60 | 60 | 64 | 68 |
| 40.0 | 48 | 52 | 52 | 56 | 60 |
| 42.5 | 40 | 44 | 44 | 52 | 48 |
| 45.0 | 36 | 36 | 40 | 44 | 48 |
| 47.5 | 32 | 32 | 36 | 40 | 40 |
| 50.0 | 28 | 28 | 28 | 36 | 36 |
| 52.5 | 24 | 24 | 28 | 32 | 32 |
| 55.0 | 24 | 24 | 24 | 28 | 32 |
| 57.5 | 20 | 20 | 20 | 24 | 28 |
| 60.0 | 16 | 16 | 20 | 20 | 28 |
| 62.5 | 12 | 16 | 16 | 20 | 24 |
| 65.0 | 12 | 12 | 12 | 16 | 20 |
| 67.5 | 8 | 8 | 8 | 12 | 16 |
| 70.0 | 8 | 8 | 8 | 12 | 12 |
| 72.5 | 4 | 4 | 4 | 8 | 8 |
| 75.0 | 0 | 0 | 0 | 4 | 8 |
| 77.5 | 0 | 0 | 0 | 4 | 4 |
| 80.0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION
LATERAL ANGLE

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|------|-----|------|------|------|------|
| 82.5 | 0 | 0 | 0 | 0 | 0 |
| 85.0 | 0 | 0 | 0 | 0 | 0 |
| 87.5 | 0 | 0 | 0 | 0 | 0 |
| 90.0 | 0 | 0 | 0 | 0 | 0 |



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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 | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 |
| 2 | 113 | 109 | 107 | 105 | 111 | 108 | 105 | 103 | 105 | 103 | 101 | 102 | 100 | 99 | 99 | 98 | 97 | 96 |
| 3 | 110 | 106 | 103 | 100 | 108 | 104 | 102 | 99 | 102 | 100 | 98 | 100 | 98 | 97 | 98 | 96 | 95 | 94 |
| 4 | 107 | 103 | 99 | 97 | 106 | 102 | 99 | 96 | 100 | 97 | 95 | 98 | 96 | 94 | 96 | 95 | 93 | 92 |
| 5 | 105 | 100 | 97 | 94 | 104 | 99 | 96 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 95 | 93 | 92 | 91 |
| 6 | 103 | 98 | 95 | 92 | 102 | 97 | 94 | 92 | 96 | 93 | 91 | 95 | 93 | 91 | 94 | 92 | 90 | 89 |
| 7 | 101 | 96 | 93 | 90 | 100 | 95 | 92 | 90 | 94 | 92 | 90 | 94 | 91 | 89 | 93 | 91 | 89 | 88 |
| 8 | 99 | 94 | 91 | 89 | 99 | 94 | 91 | 89 | 93 | 90 | 88 | 92 | 90 | 88 | 92 | 89 | 88 | 87 |
| 9 | 98 | 93 | 90 | 88 | 97 | 92 | 89 | 87 | 92 | 89 | 87 | 91 | 89 | 87 | 90 | 88 | 87 | 86 |
| 10 | 97 | 91 | 88 | 86 | 96 | 91 | 88 | 86 | 91 | 88 | 86 | 90 | 88 | 86 | 89 | 87 | 86 | 85 |

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 LUMINAIRE SAMPLE.