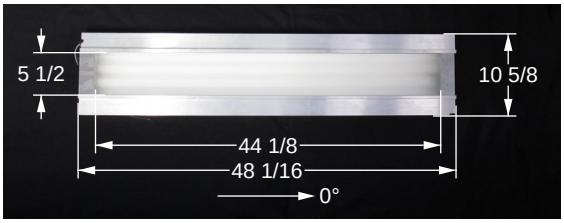
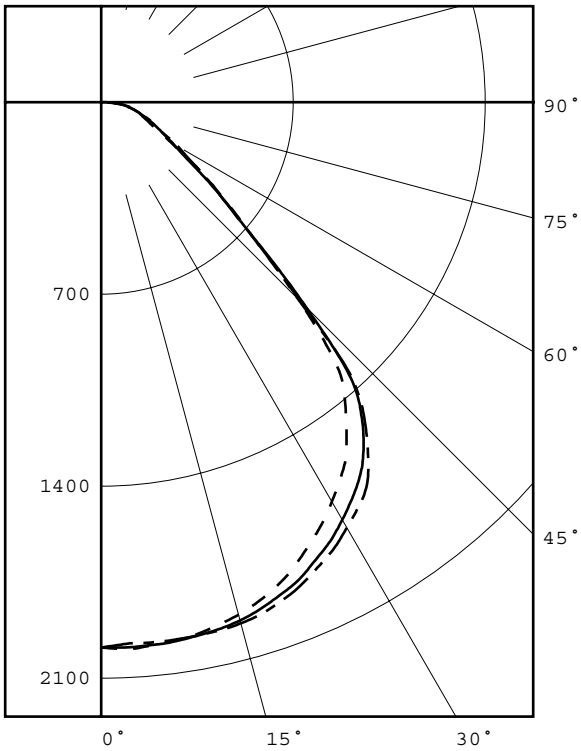
itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955
INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA
PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL70242 
ISSUE DATE: 11/16/11
PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING
CATALOG NUMBER: 907S-02-X-4-X-OC0/MPL-X-120-T8
LUMINAIRE: EXTRUDED SEMI-DIFFUSE METAL HOUSING WITH FABRICATED SEMI-DIFFUSE METAL END CAPS, TWO FORMED METAL SIDE REFLECTORS WITH PREMIUM SPECULAR FINISH, FORMED WHITE PAINTED METAL UPPER REFLECTOR, CLEAR MICRO-PRISMATIC PLASTIC LENS. LENS PRISMS DOWN.
LAMPS: TWO 32-WATT T-8 FO32/835 LINEAR FLUORESCENTS.
BALLAST: SYLVANIA QTP 2X32T8/UNV ISN-SC
MOUNTING: SUSPENDED
TOTAL REFLECTANCE OF PAINT = 90.4 %
THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.
TOTAL INPUT WATTS = 54.1 AT 120.0 VOLTS
LUMEN TO CANDELA RATIO USED = 9.17
REPORT IS BASED ON 2950 LUMENS PER LAMP.




CANDELA DISTRIBUTION

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 | FLUX |
|---|---|---|---|---|---|---|
| 0 | 1988 | 1988 | 1988 | 1988 | 1988 | |
| 5 | 1990 | 1992 | 1988 | 1979 | 1978 | 189 |
| 15 | 1935 | 1943 | 1956 | 1963 | 1967 | 551 |
| 25 | 1786 | 1809 | 1844 | 1873 | 1870 | 847 |
| 35 | 1558 | 1601 | 1650 | 1680 | 1692 | 1017 |
| 45 | 1020 | 1041 | 1056 | 1039 | 1015 | 806 |
| 55 | 447 | 447 | 426 | 428 | 445 | 402 |
| 65 | 210 | 237 | 232 | 226 | 227 | 230 |
| 75 | 130 | 148 | 139 | 133 | 139 | 146 |
| 85 | 63 | 65 | 62 | 62 | 55 | 63 |
| 90 | 0 | 0 | 0 | 0 | 0 | |




LEGEND:
0-deg: - - - - - - - -
45-deg: ————————
90-deg: — - — - — - —

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %LAMP | %FIXT |
|---|---|---|---|
| 0- 30 | 1588 | 26.9 | 37.3 |
| 0- 40 | 2605 | 44.2 | 61.2 |
| 0- 60 | 3814 | 64.6 | 89.6 |
| 0- 90 | 4255 | 72.1 | 100.0 |
| 90-180 | 0 | 0.0 | 0.0 |
| 0-180 | 4255 | 72.1 | 100.0 |

TOTAL LUMINAIRE EFFICIENCY = 72.1 %

CIE TYPE - DIRECT

| PLANE | : 0-DEG | 90-DEG |
|---|---|---|
| SPACING CRITERIA | : 1.25 | 1.33 |
| SHIELDING ANGLES | : 90 | 90 |
| LUMINOUS LENGTH | :44.125 | 5.500 |

LUMINANCE DATA IN CANDELA/SQ M

| ANGLE IN DEG | AVERAGE 0-DEG | AVERAGE 45-DEG | AVERAGE 90-DEG |
|---|---|---|---|
| 45 | 9213. | 9538. | 9168. |
| 55 | 4977. | 4744. | 4955. |
| 65 | 3174. | 3506. | 3431. |
| 75 | 3208. | 3430. | 3430. |
| 85 | 4617. | 4543. | 4030. |

Checked S BERGIN
Approved R BEATTIE
Lighting Engineer

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CANDELA DISTRIBUTION

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|
| 0.0 | 1988 | 1988 | 1988 | 1988 | 1988 |
| 2.5 | 1996 | 1995 | 1990 | 1979 | 1977 |
| 5.0 | 1990 | 1992 | 1988 | 1979 | 1978 |
| 7.5 | 1982 | 1985 | 1985 | 1977 | 1978 |
| 10.0 | 1972 | 1975 | 1977 | 1975 | 1976 |
| 12.5 | 1954 | 1960 | 1969 | 1970 | 1974 |
| 15.0 | 1935 | 1943 | 1956 | 1963 | 1967 |
| 17.5 | 1908 | 1919 | 1936 | 1951 | 1954 |
| 20.0 | 1876 | 1887 | 1911 | 1931 | 1932 |
| 22.5 | 1835 | 1850 | 1884 | 1904 | 1905 |
| 25.0 | 1786 | 1809 | 1844 | 1873 | 1870 |
| 27.5 | 1738 | 1763 | 1806 | 1831 | 1836 |
| 30.0 | 1682 | 1717 | 1758 | 1792 | 1791 |
| 32.5 | 1624 | 1660 | 1707 | 1740 | 1748 |
| 35.0 | 1558 | 1601 | 1650 | 1680 | 1692 |
| 37.5 | 1468 | 1529 | 1572 | 1603 | 1597 |
| 40.0 | 1378 | 1430 | 1473 | 1488 | 1490 |
| 42.5 | 1238 | 1305 | 1327 | 1333 | 1342 |
| 45.0 | 1020 | 1041 | 1056 | 1039 | 1015 |
| 47.5 | 802 | 803 | 816 | 811 | 800 |
| 50.0 | 652 | 648 | 641 | 669 | 638 |
| 52.5 | 538 | 524 | 528 | 531 | 529 |
| 55.0 | 447 | 447 | 426 | 428 | 445 |
| 57.5 | 360 | 380 | 351 | 353 | 371 |
| 60.0 | 294 | 312 | 303 | 299 | 325 |
| 62.5 | 248 | 269 | 263 | 261 | 271 |
| 65.0 | 210 | 237 | 232 | 226 | 227 |
| 67.5 | 186 | 205 | 206 | 194 | 199 |
| 70.0 | 168 | 185 | 175 | 169 | 186 |
| 72.5 | 150 | 170 | 153 | 151 | 157 |
| 75.0 | 130 | 148 | 139 | 133 | 139 |
| 77.5 | 116 | 124 | 119 | 117 | 120 |
| 80.0 | 114 | 102 | 102 | 103 | 100 |
| 82.5 | 84 | 84 | 86 | 87 | 78 |
| 85.0 | 63 | 65 | 62 | 62 | 55 |
| 87.5 | 37 | 39 | 35 | 34 | 27 |
| 90.0 | 0 | 0 | 0 | 0 | 0 |

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5-DEGREE
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0- 5 | 48. |
| 5- 10 | 142. |
| 10- 15 | 233. |
| 15- 20 | 318. |
| 20- 25 | 393. |
| 25- 30 | 454. |
| 30- 35 | 499. |
| 35- 40 | 518. |
| 40- 45 | 473. |
| 45- 50 | 333. |
| 50- 55 | 233. |
| 55- 60 | 169. |
| 60- 65 | 129. |
| 65- 70 | 102. |
| 70- 75 | 82. |
| 75- 80 | 64. |
| 80- 85 | 45. |
| 85- 90 | 18. |

10-DEGREE
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0- 10 | 189. |
| 0- 20 | 741. |
| 0- 30 | 1588. |
| 0- 40 | 2605. |
| 0- 50 | 3412. |
| 0- 60 | 3814. |
| 0- 70 | 4045. |
| 0- 80 | 4191. |
| 0- 90 | 4255. |
| 0-100 | 4255. |
| 0-110 | 4255. |
| 0-120 | 4255. |
| 0-130 | 4255. |
| 0-140 | 4255. |
| 0-150 | 4255. |
| 0-160 | 4255. |
| 0-170 | 4255. |
| 0-180 | 4255. |

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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 | 86 | 86 | 86 | 86 | 84 | 84 | 84 | 84 | 80 | 80 | 80 | 77 | 77 | 77 | 74 | 74 | 74 | 72 |
| 1 | 80 | 77 | 74 | 72 | 78 | 75 | 73 | 71 | 72 | 70 | 68 | 69 | 68 | 66 | 67 | 66 | 64 | 63 |
| 2 | 74 | 69 | 65 | 61 | 72 | 67 | 64 | 60 | 65 | 62 | 59 | 63 | 60 | 58 | 61 | 58 | 56 | 55 |
| 3 | 68 | 62 | 57 | 53 | 67 | 61 | 56 | 52 | 59 | 55 | 51 | 57 | 53 | 50 | 55 | 52 | 50 | 48 |
| 4 | 63 | 56 | 50 | 46 | 62 | 55 | 50 | 46 | 53 | 49 | 45 | 51 | 48 | 45 | 50 | 47 | 44 | 43 |
| 5 | 59 | 51 | 45 | 41 | 57 | 50 | 44 | 40 | 48 | 44 | 40 | 47 | 43 | 40 | 46 | 42 | 39 | 38 |
| 6 | 55 | 46 | 40 | 36 | 53 | 45 | 40 | 36 | 44 | 39 | 36 | 43 | 39 | 35 | 42 | 38 | 35 | 34 |
| 7 | 51 | 42 | 36 | 32 | 50 | 42 | 36 | 32 | 41 | 36 | 32 | 40 | 35 | 32 | 39 | 35 | 32 | 30 |
| 8 | 48 | 39 | 33 | 29 | 47 | 38 | 33 | 29 | 37 | 33 | 29 | 37 | 32 | 29 | 36 | 32 | 29 | 28 |
| 9 | 45 | 36 | 30 | 27 | 44 | 35 | 30 | 27 | 35 | 30 | 26 | 34 | 29 | 26 | 33 | 29 | 26 | 25 |
| 10 | 42 | 33 | 28 | 24 | 41 | 33 | 28 | 24 | 32 | 27 | 24 | 31 | 27 | 24 | 31 | 27 | 24 | 23 |

ALL CANDELA, LUMENS, LUMINANCE, COEFFICIENT OF UTILIZATION AND VCP VALUES IN THIS REPORT ARE BASED ON RELATIVE PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR OF 1.000. ANY CALCULATIONS PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.

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