



LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING MEMBER of the IESNA

905 Harrison Street · Allentown, PA 18103 · 610-770-1044 · Fax 610-770-8912 · www.LuminaireTesting.com

LTL NUMBER: 12718

DATE: 02-28-2008

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: MLS-D1-4-X-PB-X-120-T5HO

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED WHITE ENAMEL ALUMINUM REFLECTOR, 30 CELL, 3/4" DEEP, FORMED SEMI-SPECULAR ALUMINUM BAFFLE.

LAMP: ONE 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMP RATED AT 4400 LUMENS.

LAMP CATALOG NUMBER: PHILIPS F54T5/850/HO/ALTO

BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES BB254PUNV-D

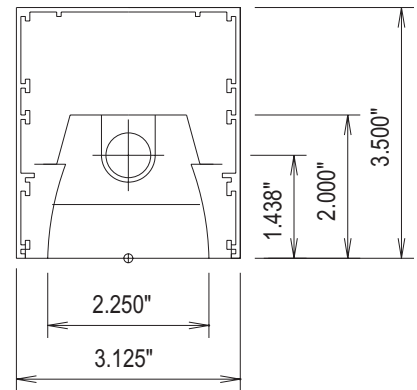
MOUNTING: PENDANT

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 52.7 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

#12718



| CANDELA DISTRIBUTION | | | | | | FLUX |
|----------------------|-----|------|------|------|------|------|
| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 | |
| 0 | 960 | 960 | 960 | 960 | 960 | |
| 5 | 956 | 956 | 964 | 962 | 966 | 92 |
| 15 | 906 | 920 | 963 | 999 | 1018 | 273 |
| 25 | 822 | 861 | 963 | 1045 | 1080 | 441 |
| 35 | 708 | 784 | 904 | 959 | 985 | 545 |
| 45 | 561 | 658 | 698 | 662 | 647 | 502 |
| 55 | 365 | 417 | 346 | 265 | 240 | 298 |
| 65 | 94 | 93 | 81 | 67 | 56 | 87 |
| 75 | 23 | 20 | 16 | 17 | 16 | 20 |
| 85 | 2 | 2 | 2 | 3 | 3 | 3 |
| 90 | 0 | 0 | 0 | 0 | 0 | |

| ZONAL LUMEN SUMMARY | | | |
|---------------------|--------|-------|-------|
| ZONE | LUMENS | %LAMP | %FIXT |
| 0- 30 | 805 | 18.3 | 35.6 |
| 0- 40 | 1350 | 30.7 | 59.7 |
| 0- 60 | 2149 | 48.8 | 95.1 |
| 0- 90 | 2259 | 51.3 | 100.0 |
| 90-180 | 0 | 0.0 | 0.0 |
| 0-180 | 2259 | 51.3 | 100.0 |

TOTAL LUMINAIRE EFFICIENCY: 51.3%

CIE TYPE: DIRECT

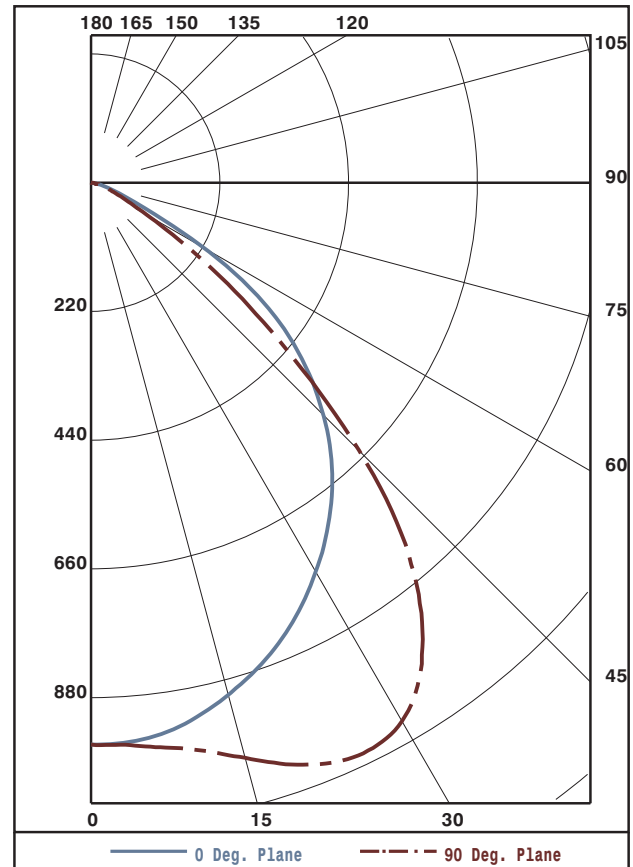
PLANE: 0-DEG 90-DEG

SPACING CRITERIA: 1.2 1.5

SHIELDING ANGLES: 29 41

LUMINOUS LENGTH: 44.875 2.250

| LUMINANCE IN CANDELA PER SQUARE METER | | | |
|---------------------------------------|---------------|----------------|----------------|
| ANGLE IN DEG | AVERAGE 0-DEG | AVERAGE 45-DEG | AVERAGE 90-DEG |
| 0 | 14736. | 14736. | 14736. |
| 45 | 12178. | 15152. | 14045. |
| 55 | 9768. | 9260. | 6423. |
| 65 | 3414. | 2942. | 2034. |
| 75 | 1364. | 949. | 949. |
| 85 | 352. | 352. | 528. |



Approved By: MG



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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 | |
| 0 | 61 | 61 | 61 | 61 | 60 | 60 | 60 | 60 | 57 | 57 | 57 | 55 | 55 | 55 | 52 | 52 | 52 | 51 |
| 1 | 57 | 56 | 54 | 53 | 56 | 55 | 53 | 52 | 52 | 51 | 50 | 51 | 50 | 49 | 49 | 48 | 47 | 46 |
| 2 | 54 | 51 | 48 | 46 | 53 | 50 | 47 | 45 | 48 | 46 | 44 | 46 | 45 | 43 | 45 | 44 | 42 | 41 |
| 3 | 50 | 46 | 43 | 40 | 49 | 45 | 42 | 40 | 44 | 41 | 39 | 42 | 40 | 38 | 41 | 39 | 38 | 37 |
| 4 | 46 | 42 | 38 | 35 | 45 | 41 | 38 | 35 | 40 | 37 | 34 | 39 | 36 | 34 | 38 | 35 | 34 | 33 |
| 5 | 43 | 37 | 34 | 31 | 42 | 37 | 33 | 31 | 36 | 33 | 30 | 35 | 32 | 30 | 34 | 32 | 30 | 29 |
| 6 | 40 | 34 | 30 | 27 | 39 | 33 | 30 | 27 | 33 | 29 | 27 | 32 | 29 | 27 | 31 | 28 | 26 | 25 |
| 7 | 37 | 31 | 27 | 24 | 36 | 30 | 26 | 24 | 29 | 26 | 24 | 29 | 26 | 23 | 28 | 25 | 23 | 22 |
| 8 | 34 | 27 | 23 | 21 | 33 | 27 | 23 | 21 | 26 | 23 | 21 | 26 | 23 | 20 | 25 | 22 | 20 | 19 |
| 9 | 31 | 25 | 21 | 18 | 30 | 24 | 21 | 18 | 24 | 20 | 18 | 23 | 20 | 18 | 23 | 20 | 18 | 17 |
| 10 | 29 | 22 | 18 | 16 | 28 | 22 | 18 | 16 | 22 | 18 | 16 | 21 | 18 | 16 | 21 | 18 | 16 | 15 |

CANDELA DISTRIBUTION

| | | | | | |
|----|-----|------|------|------|------|
| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
| 0 | 960 | 960 | 960 | 960 | 960 |
| 5 | 956 | 956 | 964 | 962 | 966 |
| 10 | 938 | 943 | 965 | 975 | 983 |
| 15 | 906 | 920 | 963 | 999 | 1018 |
| 20 | 868 | 893 | 965 | 1029 | 1059 |
| 25 | 822 | 861 | 963 | 1045 | 1080 |
| 30 | 768 | 825 | 947 | 1027 | 1063 |
| 35 | 708 | 784 | 904 | 959 | 985 |
| 40 | 641 | 731 | 824 | 837 | 851 |
| 45 | 561 | 658 | 698 | 662 | 647 |
| 50 | 472 | 556 | 536 | 447 | 420 |
| 55 | 365 | 417 | 346 | 265 | 240 |
| 60 | 223 | 247 | 185 | 132 | 110 |
| 65 | 94 | 93 | 81 | 67 | 56 |
| 70 | 47 | 42 | 34 | 37 | 31 |
| 75 | 23 | 20 | 16 | 17 | 16 |
| 80 | 11 | 10 | 8 | 9 | 9 |
| 85 | 2 | 2 | 2 | 3 | 3 |
| 90 | 0 | 0 | 0 | 0 | 0 |

ZONAL LUMEN SUMMARY

| | |
|--------|------|
| 0- 5 | 23. |
| 5- 10 | 69. |
| 10- 15 | 114. |
| 15- 20 | 159. |
| 20- 25 | 201. |
| 25- 30 | 239. |
| 30- 35 | 267. |
| 35- 40 | 278. |
| 40- 45 | 269. |
| 45- 50 | 233. |
| 50- 55 | 180. |
| 55- 60 | 117. |
| 60- 65 | 59. |
| 65- 70 | 27. |
| 70- 75 | 14. |
| 75- 80 | 7. |
| 80- 85 | 3. |
| 85- 90 | 0. |

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE DATA FOR OTHER BALLAST/LAMP COMBINATIONS MAY PRODUCE ERRONEOUS RESULTS. 2) ACCORDING TO IESNA PROCEDURES, THE BALLAST(S) AND LAMP(S) ARE PRESUMED TO PRODUCE 100% OF RATED OUTPUT. AN APPROPRIATE BALLAST FACTOR MUST BE APPLIED TO THE LUMEN OUTPUT RATINGS AND LUMINOUS INTENSITY VALUES GIVEN. 3) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT WHERE THE AMBIENT TEMPERATURE WAS HELD AT 25°C ±1°C. FIELD PERFORMANCE MAY DIFFER PARTICULARLY IN REGARDS TO CHANGE IN LUMINOUS OUTPUT AS A RESULT OF DIFFERENCE IN AMBIENT TEMPERATURE AND METHOD OF MOUNTING THE LUMINAIRE.