



# 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](http://www.LuminaireTesting.com)

LTL NUMBER: 10906

DATE: 01-22-2007

PREPARED FOR: MERCURY LIGHTING PRODUCTS COMPANY INC.

CATALOG NUMBER: M401-332-OCT-MRT-ELB-UNI

LUMINAIRE: MOLDED ACRYLIC HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR,  
CLEAR PATTERNED ACRYLIC ENCLOSURE.

LAMPS: THREE 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS  
EACH.

LAMP CATALOG NUMBER: PHILIPS F32T8/TL830/ALTO

BALLAST: ONE ADVANCE ICN-3P32-SC

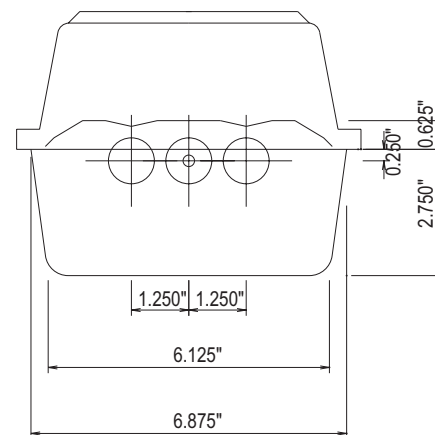
MOUNTING: SURFACE

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 75.9 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

#10906



## CANDELA DISTRIBUTION

|     | 0.0  | 22.5 | 45.0 | 67.5 | 90.0 |
|-----|------|------|------|------|------|
| 0   | 1722 | 1722 | 1722 | 1722 | 1722 |
| 5   | 1714 | 1717 | 1733 | 1732 | 1736 |
| 15  | 1654 | 1681 | 1703 | 1701 | 1710 |
| 25  | 1534 | 1569 | 1633 | 1716 | 1745 |
| 35  | 1352 | 1397 | 1549 | 1596 | 1607 |
| 45  | 1111 | 1198 | 1315 | 1369 | 1392 |
| 55  | 814  | 925  | 1054 | 1147 | 1178 |
| 65  | 506  | 634  | 824  | 921  | 944  |
| 75  | 258  | 408  | 570  | 636  | 653  |
| 85  | 81   | 183  | 283  | 348  | 371  |
| 90  | 29   | 106  | 179  | 237  | 258  |
| 95  | 40   | 68   | 107  | 152  | 170  |
| 105 | 32   | 45   | 46   | 46   | 51   |
| 115 | 15   | 30   | 40   | 32   | 29   |
| 125 | 7    | 15   | 32   | 32   | 29   |
| 135 | 3    | 5    | 20   | 28   | 29   |
| 145 | 1    | 2    | 8    | 15   | 18   |
| 155 | 2    | 1    | 2    | 5    | 7    |
| 165 | 0    | 0    | 0    | 0    | 0    |
| 175 | 0    | 0    | 0    | 0    | 0    |
| 180 | 0    | 0    | 0    | 0    | 0    |

## FLUX

165  
479  
756  
942  
991  
922  
769  
546  
287

120  
50  
31  
22  
14  
6  
2  
0  
0

## ZONAL LUMEN SUMMARY

| ZONE   | LUMENS | %LAMP | %FIXT |
|--------|--------|-------|-------|
| 0- 30  | 1400   | 16.4  | 22.9  |
| 0- 40  | 2342   | 27.4  | 38.4  |
| 0- 60  | 4256   | 49.8  | 69.7  |
| 0- 90  | 5858   | 68.5  | 96.0  |
| 90-120 | 201    | 2.4   | 3.3   |
| 90-130 | 223    | 2.6   | 3.7   |
| 90-150 | 242    | 2.8   | 4.0   |
| 90-180 | 244    | 2.9   | 4.0   |
| 0-180  | 6102   | 71.4  | 100.0 |

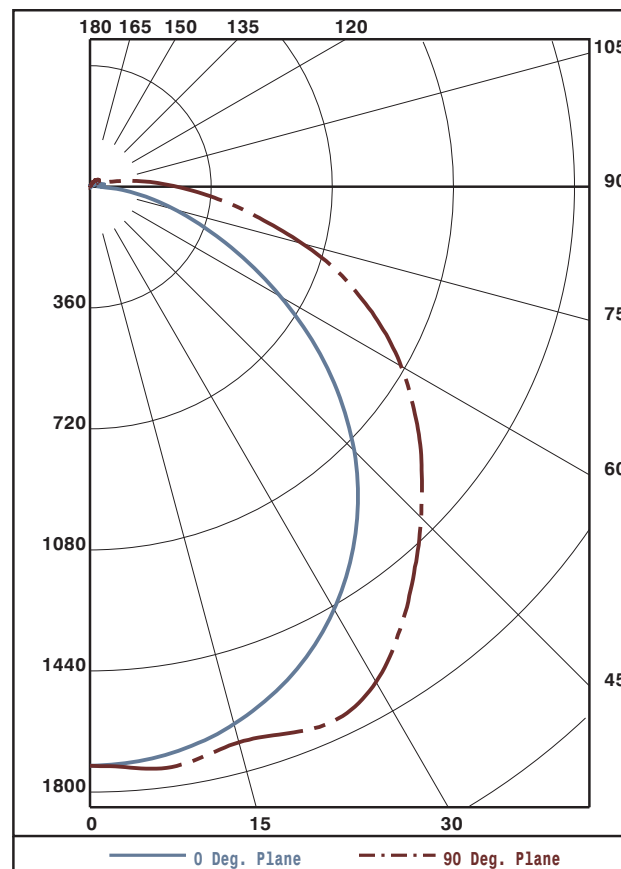
TOTAL LUMINAIRE EFFICIENCY:

71.4%

CIE TYPE: DIRECT

PLANE: 0-DEG 90-DEG

SPACING CRITERIA: 1.3 1.4



Approved By: MG

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IESNA PROCEDURES.



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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  | 84 | 84 | 84 | 84 | 82 | 82 | 82 | 82 | 78 | 78 | 78 | 74 | 74 | 74 | 70 | 70 | 70 | 69 |
| 1  | 76 | 73 | 69 | 67 | 74 | 71 | 68 | 65 | 67 | 65 | 63 | 64 | 62 | 60 | 61 | 59 | 58 | 56 |
| 2  | 69 | 63 | 58 | 54 | 67 | 62 | 57 | 53 | 59 | 55 | 51 | 56 | 53 | 50 | 53 | 51 | 48 | 46 |
| 3  | 63 | 56 | 50 | 45 | 61 | 54 | 49 | 44 | 52 | 47 | 43 | 49 | 45 | 42 | 47 | 44 | 41 | 39 |
| 4  | 58 | 49 | 43 | 38 | 56 | 48 | 42 | 37 | 46 | 41 | 37 | 44 | 39 | 36 | 42 | 38 | 35 | 33 |
| 5  | 53 | 43 | 37 | 32 | 51 | 42 | 36 | 31 | 40 | 35 | 31 | 39 | 34 | 30 | 37 | 33 | 30 | 28 |
| 6  | 48 | 39 | 32 | 27 | 47 | 38 | 32 | 27 | 36 | 31 | 27 | 35 | 30 | 26 | 33 | 29 | 26 | 24 |
| 7  | 45 | 35 | 28 | 24 | 43 | 34 | 28 | 23 | 32 | 27 | 23 | 31 | 26 | 23 | 30 | 26 | 22 | 21 |
| 8  | 41 | 31 | 25 | 20 | 40 | 30 | 24 | 20 | 29 | 24 | 20 | 28 | 23 | 20 | 27 | 23 | 19 | 18 |
| 9  | 38 | 28 | 22 | 17 | 37 | 27 | 21 | 17 | 26 | 21 | 17 | 25 | 20 | 17 | 24 | 20 | 17 | 15 |
| 10 | 35 | 25 | 19 | 15 | 34 | 25 | 19 | 15 | 24 | 19 | 15 | 23 | 18 | 15 | 22 | 18 | 15 | 13 |

PLANE: 0-DEG 90-DEG  
LUMINOUS LENGTH: 49.000 6.875  
HEIGHT OF SIDE: 2.750 2.750

LUMINANCE IN CANDELA PER SQUARE METER

| ANGLE  | AVERAGE | AVERAGE | AVERAGE |
|--------|---------|---------|---------|
| IN DEG | 0-DEG   | 45-DEG  | 90-DEG  |
| 0      | 7923.   | 7923.   | 7923.   |
| 45     | 6931.   | 6825.   | 6753.   |
| 55     | 6124.   | 6079.   | 6250.   |
| 65     | 4985.   | 5538.   | 5719.   |
| 75     | 3854.   | 4766.   | 4781.   |
| 85     | 2674.   | 3264.   | 3571.   |



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|     |      |      |      |      |      |
|-----|------|------|------|------|------|
|     | 0.0  | 22.5 | 45.0 | 67.5 | 90.0 |
| 0   | 1722 | 1722 | 1722 | 1722 | 1722 |
| 5   | 1714 | 1717 | 1733 | 1732 | 1736 |
| 10  | 1691 | 1705 | 1734 | 1733 | 1735 |
| 15  | 1654 | 1681 | 1703 | 1701 | 1710 |
| 20  | 1601 | 1635 | 1658 | 1701 | 1729 |
| 25  | 1534 | 1569 | 1633 | 1716 | 1745 |
| 30  | 1451 | 1486 | 1608 | 1682 | 1700 |
| 35  | 1352 | 1397 | 1549 | 1596 | 1607 |
| 40  | 1238 | 1303 | 1446 | 1483 | 1499 |
| 45  | 1111 | 1198 | 1315 | 1369 | 1392 |
| 50  | 967  | 1071 | 1181 | 1257 | 1287 |
| 55  | 814  | 925  | 1054 | 1147 | 1178 |
| 60  | 655  | 772  | 933  | 1039 | 1068 |
| 65  | 506  | 634  | 824  | 921  | 944  |
| 70  | 371  | 517  | 712  | 784  | 809  |
| 75  | 258  | 408  | 570  | 636  | 653  |
| 80  | 167  | 296  | 419  | 479  | 499  |
| 85  | 81   | 183  | 283  | 348  | 371  |
| 90  | 29   | 106  | 179  | 237  | 258  |
| 95  | 40   | 68   | 107  | 152  | 170  |
| 100 | 39   | 53   | 62   | 86   | 99   |
| 105 | 32   | 45   | 46   | 46   | 51   |
| 110 | 23   | 38   | 42   | 35   | 34   |
| 115 | 15   | 30   | 40   | 32   | 29   |
| 120 | 10   | 22   | 36   | 31   | 28   |
| 125 | 7    | 15   | 32   | 32   | 29   |
| 130 | 5    | 10   | 26   | 32   | 31   |
| 135 | 3    | 5    | 20   | 28   | 29   |
| 140 | 2    | 3    | 14   | 22   | 25   |
| 145 | 1    | 2    | 8    | 15   | 18   |
| 150 | 3    | 3    | 5    | 10   | 13   |
| 155 | 2    | 1    | 2    | 5    | 7    |
| 160 | 2    | 2    | 2    | 2    | 3    |
| 165 | 0    | 0    | 0    | 0    | 0    |
| 170 | 0    | 0    | 0    | 0    | 0    |
| 175 | 0    | 0    | 0    | 0    | 0    |
| 180 | 0    | 0    | 0    | 0    | 0    |

## ZONAL LUMEN SUMMARY

|         |      |
|---------|------|
| 0- 5    | 41.  |
| 5- 10   | 124. |
| 10- 15  | 203. |
| 15- 20  | 276. |
| 20- 25  | 347. |
| 25- 30  | 410. |
| 30- 35  | 457. |
| 35- 40  | 485. |
| 40- 45  | 497. |
| 45- 50  | 494. |
| 50- 55  | 476. |
| 55- 60  | 446. |
| 60- 65  | 408. |
| 65- 70  | 361. |
| 70- 75  | 306. |
| 75- 80  | 240. |
| 80- 85  | 173. |
| 85- 90  | 114. |
| 90- 95  | 74.  |
| 95-100  | 47.  |
| 100-105 | 29.  |
| 105-110 | 21.  |
| 110-115 | 17.  |
| 115-120 | 14.  |
| 120-125 | 12.  |
| 125-130 | 10.  |
| 130-135 | 8.   |
| 135-140 | 6.   |
| 140-145 | 4.   |
| 145-150 | 2.   |
| 150-155 | 1.   |
| 155-160 | 1.   |
| 160-165 | 0.   |
| 165-170 | 0.   |
| 170-175 | 0.   |
| 175-180 | 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.