

# 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: ITL65461

DATE: 08/06/10

PREPARED FOR: NUMBER EIGHT LIGHTING COMPANY

CATALOG NUMBER: 801/A-QT-120 WITH FS-P-WH TRIM

LUMINAIRE: FABRICATED METAL HOUSING WITH BLACK PAINTED GENERAL INTERIOR FINISH, FABRICATED BLACK PAINTED METAL LAMP MOUNTING BRACKET, CLEAR FLAT GLASS LENS IN MACHINED BLACK FINISHED METAL LAMP RETAINING RING, CAST WHITE PAINTED METAL INNER TRIM RING WITH BLACK PAINTED INTERIOR, INNER TRIM RING ATTACHED TO CAST WHITE PAINTED PERFORATED METAL OUTER TRIM RING WITH FOUR MAGNETS.

LAMP: ONE 50-WATT MR-16 HALOGEN INCANDESCENT, GE EXN Q50MR16/C/FL40, VERTICAL BASE-UP POSITION.

MOUNTING: RECESSED

REPORT IS BASED ON 800 LUMENS PER LAMP.

### CANDELA DISTRIBUTION

|    | 0.0  | 22.5 | 45.0 | 67.5 | 90.0 | FLUX |
|----|------|------|------|------|------|------|
| 0  | 1365 | 1365 | 1365 | 1365 | 1365 |      |
| 5  | 1450 | 1434 | 1410 | 1407 | 1416 | 134  |
| 15 | 1014 | 1046 | 1050 | 1079 | 1068 | 284  |
| 25 | 201  | 199  | 238  | 230  | 218  | 120  |
| 35 | 15   | 19   | 23   | 22   | 19   | 15   |
| 45 | 3    | 3    | 5    | 4    | 2    | 3    |
| 55 | 0    | 0    | 0    | 0    | 0    | 0    |
| 65 | 0    | 0    | 0    | 0    | 0    | 0    |
| 75 | 0    | 0    | 0    | 0    | 0    | 0    |
| 85 | 0    | 0    | 0    | 0    | 0    | 0    |
| 90 | 0    | 0    | 0    | 0    | 0    | 0    |

### ZONAL LUMEN SUMMARY

| ZONE   | LUMENS | %LAMP | %FIXT |
|--------|--------|-------|-------|
| 0- 30  | 538    | 67.3  | 96.8  |
| 0- 40  | 553    | 69.2  | 99.5  |
| 0- 60  | 556    | 69.5  | 100.0 |
| 0- 90  | 556    | 69.5  | 100.0 |
| 90-180 | 0      | 0.0   | 0.0   |
| 0-180  | 556    | 69.5  | 100.0 |

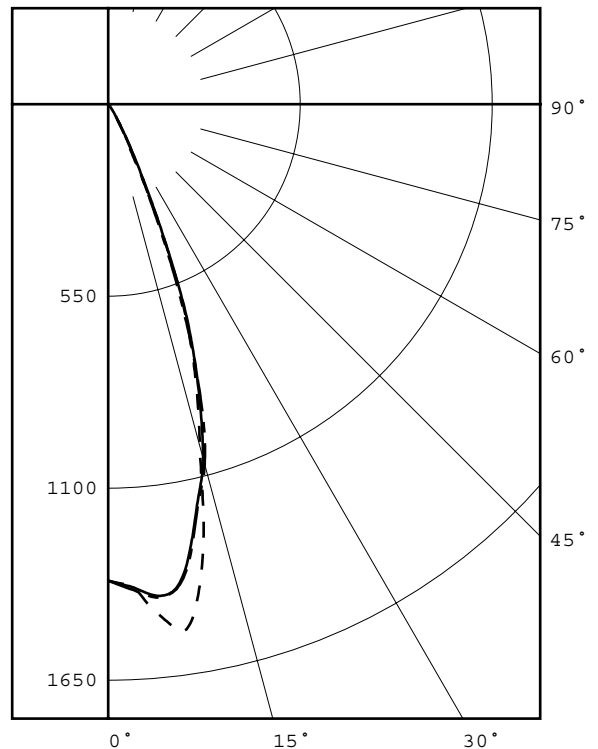
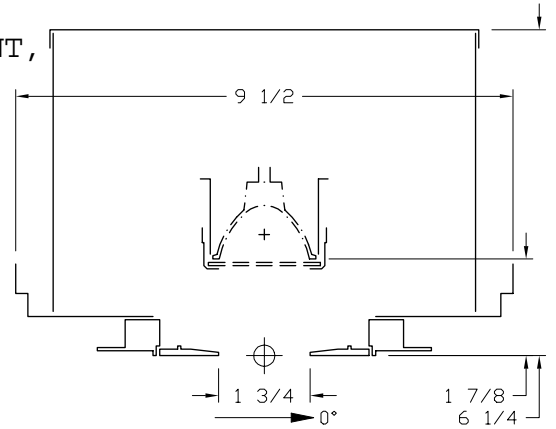
TOTAL LUMINAIRE EFFICIENCY = 69.5 %

### CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG  
SPACING CRITERIA : 0.7 0.7  
LUMINOUS LENGTH : 1.750 1.750

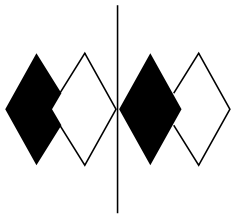
### LUMINANCE DATA IN CANDELA/SQ M

| ANGLE IN DEG | AVERAGE 0-DEG | AVERAGE 45-DEG | AVERAGE 90-DEG |
|--------------|---------------|----------------|----------------|
| 45           | 2147.         | 3579.          | 1432.          |
| 55           | 0.            | 0.             | 0.             |
| 65           | 0.            | 0.             | 0.             |
| 75           | 0.            | 0.             | 0.             |
| 85           | 0.            | 0.             | 0.             |



LEGEND:  
0-deg: - - - - -  
45-deg: = = = = =  
90-deg: - - - - -

Checked B. HYRE  
Approved R. BEATTIE



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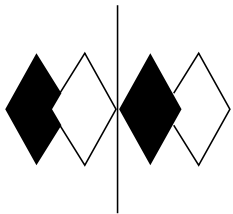
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CANDELA DISTRIBUTION

|      | 0.0  | 22.5 | 45.0 | 67.5 | 90.0 |
|------|------|------|------|------|------|
| 0.0  | 1365 | 1365 | 1365 | 1365 | 1365 |
| 2.5  | 1379 | 1381 | 1382 | 1382 | 1389 |
| 5.0  | 1450 | 1434 | 1410 | 1407 | 1416 |
| 7.5  | 1519 | 1485 | 1409 | 1394 | 1411 |
| 10.0 | 1455 | 1428 | 1321 | 1308 | 1331 |
| 12.5 | 1263 | 1266 | 1176 | 1182 | 1183 |
| 15.0 | 1014 | 1046 | 1050 | 1079 | 1068 |
| 17.5 | 837  | 840  | 863  | 912  | 879  |
| 20.0 | 656  | 631  | 670  | 678  | 636  |
| 22.5 | 424  | 387  | 428  | 414  | 395  |
| 25.0 | 201  | 199  | 238  | 230  | 218  |
| 27.5 | 108  | 105  | 130  | 131  | 121  |
| 30.0 | 58   | 59   | 63   | 68   | 70   |
| 32.5 | 23   | 30   | 39   | 35   | 32   |
| 35.0 | 15   | 19   | 23   | 22   | 19   |
| 37.5 | 9    | 11   | 14   | 13   | 11   |
| 40.0 | 6    | 7    | 9    | 8    | 7    |
| 42.5 | 5    | 5    | 7    | 6    | 5    |
| 45.0 | 3    | 3    | 5    | 4    | 2    |
| 47.5 | 0    | 3    | 3    | 0    | 0    |
| 50.0 | 0    | 0    | 2    | 0    | 0    |
| 52.5 | 0    | 0    | 0    | 0    | 0    |
| 55.0 | 0    | 0    | 0    | 0    | 0    |
| 57.5 | 0    | 0    | 0    | 0    | 0    |
| 60.0 | 0    | 0    | 0    | 0    | 0    |
| 62.5 | 0    | 0    | 0    | 0    | 0    |
| 65.0 | 0    | 0    | 0    | 0    | 0    |
| 67.5 | 0    | 0    | 0    | 0    | 0    |
| 70.0 | 0    | 0    | 0    | 0    | 0    |
| 72.5 | 0    | 0    | 0    | 0    | 0    |
| 75.0 | 0    | 0    | 0    | 0    | 0    |
| 77.5 | 0    | 0    | 0    | 0    | 0    |
| 80.0 | 0    | 0    | 0    | 0    | 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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5-DEGREE

ZONAL LUMEN SUMMARY

|        |      |
|--------|------|
| 0- 5   | 33.  |
| 5- 10  | 101. |
| 10- 15 | 143. |
| 15- 20 | 141. |
| 20- 25 | 88.  |
| 25- 30 | 33.  |
| 30- 35 | 11.  |
| 35- 40 | 4.   |
| 40- 45 | 2.   |
| 45- 50 | 1.   |
| 50- 55 | 0.   |
| 55- 60 | 0.   |
| 60- 65 | 0.   |
| 65- 70 | 0.   |
| 70- 75 | 0.   |
| 75- 80 | 0.   |
| 80- 85 | 0.   |
| 85- 90 | 0.   |

10-DEGREE

ZONAL LUMEN SUMMARY

|       |      |
|-------|------|
| 0- 10 | 134. |
| 0- 20 | 418. |
| 0- 30 | 538. |
| 0- 40 | 553. |
| 0- 50 | 556. |
| 0- 60 | 556. |
| 0- 70 | 556. |
| 0- 80 | 556. |
| 0- 90 | 556. |
| 0-100 | 556. |
| 0-110 | 556. |
| 0-120 | 556. |
| 0-130 | 556. |
| 0-140 | 556. |
| 0-150 | 556. |
| 0-160 | 556. |
| 0-170 | 556. |
| 0-180 | 556. |



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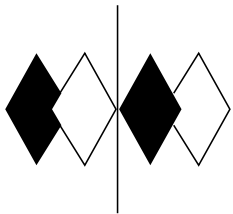
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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  | 83 | 83 | 83 | 83 | 81 | 81 | 81 | 81 | 77 | 77 | 77 | 74 | 74 | 74 | 71 | 71 | 71 | 70 | 0  |
| 1  | 80 | 78 | 77 | 76 | 78 | 77 | 76 | 74 | 74 | 73 | 72 | 71 | 71 | 70 | 69 | 69 | 68 | 67 | 67 |
| 2  | 77 | 74 | 72 | 70 | 76 | 73 | 71 | 70 | 71 | 69 | 68 | 69 | 68 | 67 | 67 | 66 | 65 | 64 | 64 |
| 3  | 74 | 71 | 68 | 66 | 73 | 70 | 68 | 66 | 68 | 66 | 65 | 67 | 65 | 64 | 65 | 64 | 63 | 62 | 62 |
| 4  | 72 | 68 | 65 | 63 | 71 | 67 | 64 | 62 | 66 | 63 | 62 | 64 | 63 | 61 | 63 | 62 | 60 | 59 | 59 |
| 5  | 69 | 65 | 62 | 60 | 68 | 65 | 62 | 60 | 63 | 61 | 59 | 62 | 60 | 59 | 61 | 60 | 58 | 57 | 57 |
| 6  | 67 | 63 | 59 | 57 | 66 | 62 | 59 | 57 | 61 | 59 | 57 | 60 | 58 | 56 | 59 | 58 | 56 | 55 | 55 |
| 7  | 65 | 60 | 57 | 55 | 64 | 60 | 57 | 55 | 59 | 56 | 55 | 58 | 56 | 54 | 58 | 56 | 54 | 53 | 53 |
| 8  | 63 | 58 | 55 | 53 | 62 | 58 | 55 | 53 | 57 | 54 | 53 | 56 | 54 | 52 | 56 | 54 | 52 | 51 | 51 |
| 9  | 61 | 56 | 53 | 51 | 60 | 56 | 53 | 51 | 55 | 53 | 51 | 55 | 52 | 51 | 54 | 52 | 50 | 50 | 50 |
| 10 | 59 | 54 | 51 | 49 | 59 | 54 | 51 | 49 | 53 | 51 | 49 | 53 | 51 | 49 | 53 | 50 | 49 | 48 | 48 |

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.



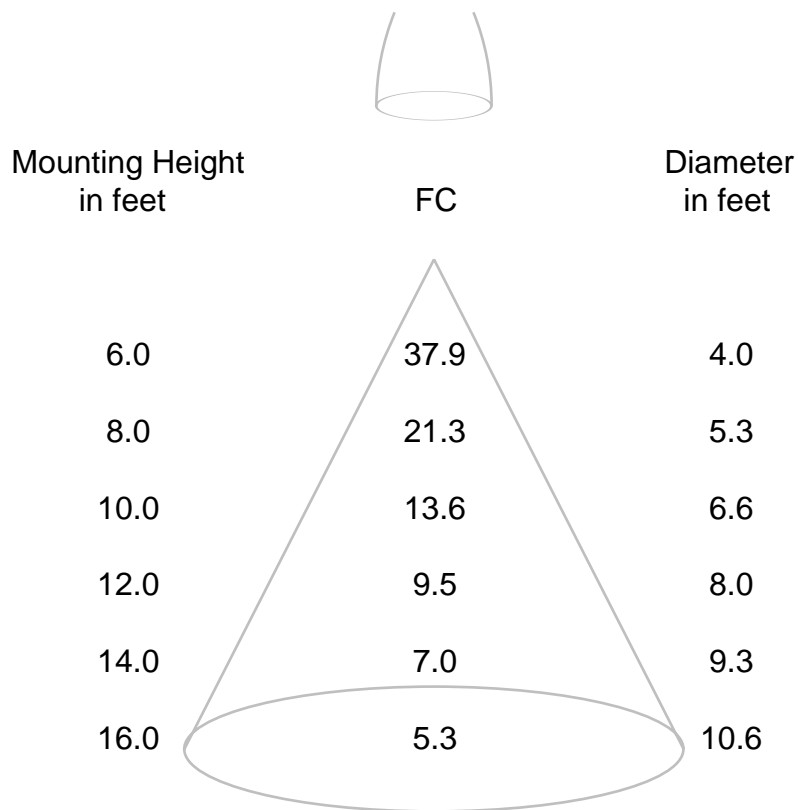
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## CONE OF LIGHT DIAGRAM

(diameter shown is where fc value is half the fc at nadir)



Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.