

REPORT NUMBER: ITL84581
ISSUE DATE: 05/11/15
PREPARED FOR: OXYGEN LIGHTING
CATALOG NUMBER: 3-695-XX

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REVISED: 04/04/16

LUMINAIRE: FORMED SEMI-DIFFUSE METAL HOUSING/MOUNTING PLATE, 2 FORMED WHITE PAINTED METAL DRIVER COVERS, 2 WHITE CIRCUIT BOARDS EACH WITH 30 LEDS, FORMED CYLINDRICAL WHITE PLASTIC DIFFUSER WITH WOVEN WHITE CLOTH COVERED EXTERIOR, FLAT TRANSLUCENT WHITE ACRYLIC BOTTOM DIFFUSER, MACHINED SEMI-SPECULAR METAL DECORATIVE CENTER WITH ACRYLIC BOTTOM. THE 0-DEGREE PLANE IS PARALLEL WITH THE CIRCUIT BOARDS.

LAMPS: SIXTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

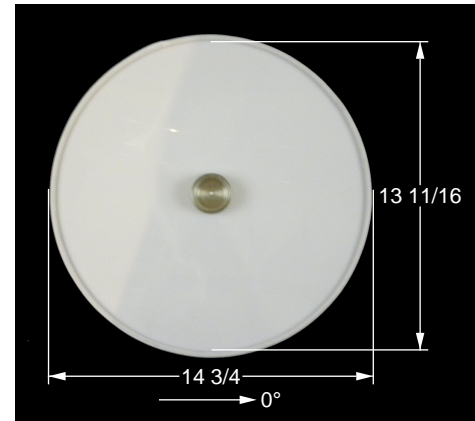
INPUT ELECTRICAL: 120.0 VOLTS, 20.5 WATTS, 0.173 AMPS

MOUNTING: SURFACE

LED DRIVERS: TWO ESPEN VEL12030MVH-1

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVERS. DIFFUSER MATERIAL INFORMATION PROVIDED BY CLIENT.

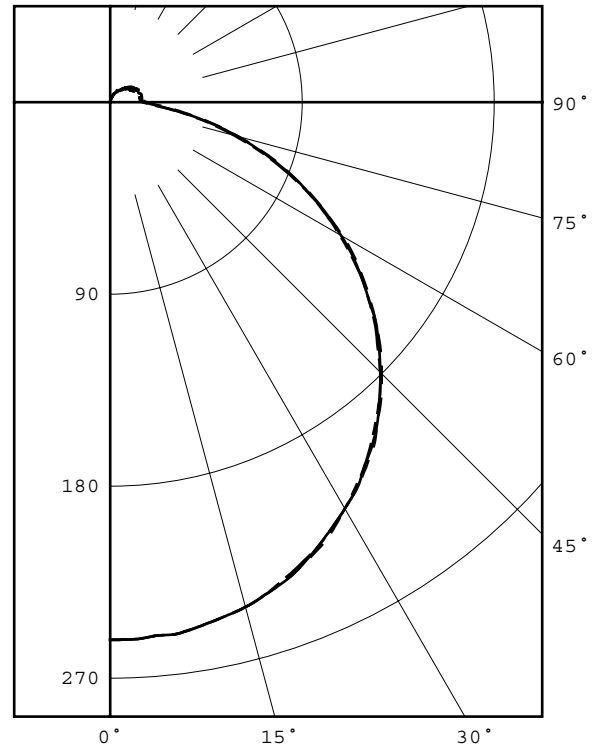
TEST PROCEDURE: IESNA LM-79-08
TEST DISTANCE = 20.0 FEET



CANDELA DISTRIBUTION

FLUX

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 | |
|-----|-----|------|------|------|------|-----|
| 0 | 252 | 252 | 252 | 252 | 252 | |
| 5 | 251 | 251 | 251 | 251 | 251 | 24 |
| 15 | 245 | 245 | 245 | 245 | 245 | 69 |
| 25 | 231 | 231 | 230 | 230 | 230 | 106 |
| 35 | 209 | 208 | 208 | 208 | 208 | 130 |
| 45 | 180 | 180 | 179 | 179 | 179 | 138 |
| 55 | 145 | 145 | 144 | 144 | 144 | 129 |
| 65 | 105 | 105 | 104 | 104 | 104 | 103 |
| 75 | 62 | 62 | 62 | 61 | 60 | 65 |
| 85 | 26 | 25 | 24 | 24 | 23 | 28 |
| 90 | 17 | 16 | 16 | 15 | 15 | |
| 95 | 16 | 16 | 15 | 15 | 14 | 17 |
| 105 | 16 | 15 | 15 | 14 | 14 | 15 |
| 115 | 14 | 14 | 13 | 13 | 12 | 13 |
| 125 | 12 | 12 | 11 | 11 | 11 | 10 |
| 135 | 10 | 10 | 9 | 9 | 8 | 7 |
| 145 | 7 | 7 | 7 | 6 | 6 | 4 |
| 155 | 5 | 5 | 4 | 4 | 4 | 2 |
| 165 | 2 | 2 | 2 | 2 | 2 | 1 |
| 175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180 | 0 | 0 | 0 | 0 | 0 | 0 |



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

ZONAL LUMEN SUMMARY

| ZONE | LUMENS | %FIXT |
|--------|--------|-------|
| 0- 30 | 199 | 23.1 |
| 0- 40 | 330 | 38.2 |
| 0- 60 | 597 | 69.2 |
| 0- 90 | 794 | 92.0 |
| 90-120 | 45 | 5.2 |
| 90-130 | 55 | 6.4 |
| 90-150 | 67 | 7.7 |
| 90-180 | 69 | 8.0 |
| 0-180 | 863 | 100.0 |

EFFICACY = 42.1 lm/W
CIE TYPE - DIRECT
PLANE : 0-DEG 90-DEG
SPACING CRITERIA : 1.30 1.30

Checked B. HYRE
Approved R. BEATTIE
Lighting Engineer



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INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

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LUMINOUS DIAMETER: 13.688
HEIGHT OF SIDE : 5.438

LUMINANCE DATA IN CANDELA/SQ M

| ANGLE IN DEG | AVERAGE 0-DEG | AVERAGE 45-DEG | AVERAGE 90-DEG |
|-----------------|------------------|-------------------|-------------------|
| 45 | 1781. | 1771. | 1771. |
| 55 | 1546. | 1535. | 1535. |
| 65 | 1255. | 1243. | 1243. |
| 75 | 874. | 874. | 846. |
| 85 | 463. | 428. | 410. |



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CANDELA DISTRIBUTION
LATERAL ANGLE

| | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|-------|-----|------|------|------|------|
| 0.0 | 252 | 252 | 252 | 252 | 252 |
| 5.0 | 251 | 251 | 251 | 251 | 251 |
| 10.0 | 249 | 249 | 249 | 249 | 249 |
| 15.0 | 245 | 245 | 245 | 245 | 245 |
| 20.0 | 239 | 239 | 239 | 239 | 238 |
| 25.0 | 231 | 231 | 230 | 230 | 230 |
| 30.0 | 220 | 221 | 220 | 220 | 220 |
| 35.0 | 209 | 208 | 208 | 208 | 208 |
| 40.0 | 195 | 195 | 195 | 194 | 194 |
| 45.0 | 180 | 180 | 179 | 179 | 179 |
| 50.0 | 163 | 163 | 163 | 162 | 162 |
| 55.0 | 145 | 145 | 144 | 144 | 144 |
| 60.0 | 126 | 125 | 125 | 124 | 124 |
| 65.0 | 105 | 105 | 104 | 104 | 104 |
| 70.0 | 84 | 84 | 83 | 83 | 82 |
| 75.0 | 62 | 62 | 62 | 61 | 60 |
| 80.0 | 42 | 42 | 41 | 41 | 40 |
| 85.0 | 26 | 25 | 24 | 24 | 23 |
| 90.0 | 17 | 16 | 16 | 15 | 15 |
| 95.0 | 16 | 16 | 15 | 15 | 14 |
| 100.0 | 16 | 16 | 15 | 14 | 14 |
| 105.0 | 16 | 15 | 15 | 14 | 14 |
| 110.0 | 15 | 15 | 14 | 13 | 13 |
| 115.0 | 14 | 14 | 13 | 13 | 12 |
| 120.0 | 13 | 13 | 12 | 12 | 11 |
| 125.0 | 12 | 12 | 11 | 11 | 11 |
| 130.0 | 11 | 11 | 10 | 10 | 10 |
| 135.0 | 10 | 10 | 9 | 9 | 8 |
| 140.0 | 9 | 8 | 8 | 8 | 7 |
| 145.0 | 7 | 7 | 7 | 6 | 6 |
| 150.0 | 6 | 6 | 6 | 5 | 5 |
| 155.0 | 5 | 5 | 4 | 4 | 4 |
| 160.0 | 3 | 3 | 3 | 3 | 3 |
| 165.0 | 2 | 2 | 2 | 2 | 2 |
| 170.0 | 1 | 1 | 1 | 1 | 1 |
| 175.0 | 0 | 0 | 0 | 0 | 0 |
| 180.0 | 0 | 0 | 0 | 0 | 0 |



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5-DEGREE
ZONAL LUMEN SUMMARY

| | |
|---------|----|
| 0- 5 | 6 |
| 5- 10 | 18 |
| 10- 15 | 29 |
| 15- 20 | 40 |
| 20- 25 | 49 |
| 25- 30 | 57 |
| 30- 35 | 63 |
| 35- 40 | 67 |
| 40- 45 | 69 |
| 45- 50 | 69 |
| 50- 55 | 67 |
| 55- 60 | 62 |
| 60- 65 | 56 |
| 65- 70 | 47 |
| 70- 75 | 38 |
| 75- 80 | 27 |
| 80- 85 | 18 |
| 85- 90 | 11 |
| 90- 95 | 8 |
| 95-100 | 8 |
| 100-105 | 8 |
| 105-110 | 7 |
| 110-115 | 7 |
| 115-120 | 6 |
| 120-125 | 6 |
| 125-130 | 5 |
| 130-135 | 4 |
| 135-140 | 3 |
| 140-145 | 2 |
| 145-150 | 2 |
| 150-155 | 1 |
| 155-160 | 1 |
| 160-165 | 0 |
| 165-170 | 0 |
| 170-175 | 0 |
| 175-180 | 0 |

10-DEGREE
ZONAL LUMEN SUMMARY

| | |
|-------|-----|
| 0- 10 | 24 |
| 0- 20 | 93 |
| 0- 30 | 199 |
| 0- 40 | 330 |
| 0- 50 | 468 |
| 0- 60 | 597 |
| 0- 70 | 700 |
| 0- 80 | 765 |
| 0- 90 | 794 |
| 0-100 | 810 |
| 0-110 | 826 |
| 0-120 | 839 |
| 0-130 | 849 |
| 0-140 | 856 |
| 0-150 | 860 |
| 0-160 | 862 |
| 0-170 | 863 |
| 0-180 | 863 |



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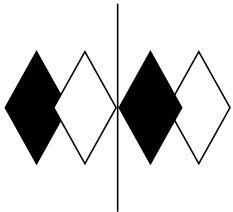
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 117 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 107 | 107 | 107 | 100 | 100 | 100 | 95 | 95 | 95 | 92 |
| 1 | 106 | 101 | 96 | 92 | 102 | 98 | 94 | 90 | 92 | 89 | 86 | 87 | 84 | 82 | 82 | 80 | 78 | 75 | 75 |
| 2 | 96 | 87 | 80 | 74 | 93 | 85 | 78 | 73 | 80 | 74 | 70 | 75 | 71 | 67 | 71 | 68 | 64 | 62 | 62 |
| 3 | 87 | 76 | 68 | 61 | 84 | 74 | 66 | 60 | 70 | 63 | 58 | 66 | 61 | 56 | 63 | 58 | 54 | 51 | 51 |
| 4 | 80 | 67 | 58 | 51 | 77 | 65 | 57 | 51 | 62 | 55 | 49 | 59 | 53 | 48 | 56 | 50 | 46 | 44 | 44 |
| 5 | 73 | 60 | 51 | 44 | 70 | 58 | 50 | 43 | 55 | 48 | 42 | 52 | 46 | 41 | 50 | 44 | 40 | 37 | 37 |
| 6 | 67 | 54 | 45 | 38 | 65 | 52 | 44 | 38 | 50 | 42 | 37 | 47 | 41 | 36 | 45 | 39 | 35 | 33 | 33 |
| 7 | 62 | 49 | 40 | 34 | 60 | 47 | 39 | 33 | 45 | 38 | 32 | 43 | 36 | 32 | 41 | 35 | 31 | 29 | 29 |
| 8 | 58 | 44 | 36 | 30 | 56 | 43 | 35 | 29 | 41 | 34 | 29 | 39 | 33 | 28 | 38 | 32 | 28 | 25 | 25 |
| 9 | 54 | 41 | 32 | 27 | 52 | 40 | 32 | 26 | 38 | 31 | 26 | 36 | 30 | 25 | 35 | 29 | 25 | 23 | 23 |
| 10 | 51 | 37 | 29 | 24 | 49 | 37 | 29 | 24 | 35 | 28 | 23 | 34 | 27 | 23 | 32 | 27 | 22 | 21 | 21 |

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 TEST SAMPLE.



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ADDRESS: 201 RAILHEAD ROAD
FORT WORTH, TX 76106

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