

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR4AENG-L33-930-CA-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #4792155668.03

[TESTLAB] UL, LLC

[ISSUE DATE] 2026-08-07

[TEST DATE] 3/17/2026

[MANUFAC] H E Williams Inc

[LUMCAT] CMR4AENG-L33-930-CA-DIM-UNV (A,E&N)

[LUMINAIRE] 2' x 4' multi-function recessed troffer with door frame; door

[MORE] frame has arrangement of curved diffused acrylic lenses

[OTHER] This test was performed using the calibrated photodetector method

[MORE] of absolute photometry.

[OTHER] The reported results were measured in a facility that meets the

[MORE] requirements of ANSI/IES LM-75-19. The device under test emits no

[MORE] detectable uplight as defined by ANSI/IES LM-75-19.

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 10668           |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 96              |
| Total Luminaire Watts           | 111.3           |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.22            |
| Spacing Criterion (90-270)      | 1.18            |
| Spacing Criterion (Diagonal)    | 1.30            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 3.75 ft         |
| Luminous Width (90-270)         | 1.75 ft         |
| Luminous Height                 | 0.00 ft         |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 5917             | 5836              | 5795              |
| 55                  | 5408             | 5410              | 5434              |
| 65                  | 4661             | 4812              | 4873              |
| 75                  | 3352             | 3646              | 3664              |
| 85                  | 1340             | 1537              | 1456              |

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**CANDELA TABULATION**

|     | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> | <u>202.5</u> |
|-----|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 0   | 4238.143   | 4238.143    | 4238.143    | 4238.143    | 4238.143    | 4238.143     | 4238.143     | 4238.143     | 4238.143     | 4238.143     |
| 5   | 4222.653   | 4216.979    | 4212.198    | 4201.430    | 4218.752    | 4199.570     | 4208.686     | 4211.608     | 4217.370     | 4211.962     |
| 10  | 4151.800   | 4143.016    | 4134.545    | 4121.324    | 4130.138    | 4117.694     | 4127.403     | 4132.539     | 4139.405     | 4131.743     |
| 15  | 4033.362   | 4021.888    | 4005.653    | 3987.270    | 3993.986    | 3981.869     | 3994.409     | 4004.889     | 4011.906     | 4002.912     |
| 20  | 3870.739   | 3854.571    | 3831.588    | 3808.392    | 3804.021    | 3801.220     | 3815.888     | 3829.928     | 3838.158     | 3826.416     |
| 25  | 3668.533   | 3648.432    | 3619.376    | 3589.900    | 3586.849    | 3580.958     | 3598.511     | 3614.758     | 3623.527     | 3609.948     |
| 30  | 3431.071   | 3407.771    | 3373.677    | 3347.270    | 3337.295    | 3336.705     | 3347.205     | 3364.595     | 3375.824     | 3359.253     |
| 35  | 3161.505   | 3137.721    | 3104.561    | 3083.057    | 3072.863    | 3071.134     | 3072.599     | 3087.137     | 3100.532     | 3082.621     |
| 40  | 2865.287   | 2846.973    | 2817.905    | 2804.682    | 2790.472    | 2791.785     | 2781.546     | 2793.024     | 2803.985     | 2789.719     |
| 45  | 2553.321   | 2536.822    | 2518.301    | 2513.209    | 2500.767    | 2499.397     | 2480.024     | 2483.074     | 2494.152     | 2480.799     |
| 50  | 2230.493   | 2215.934    | 2209.626    | 2214.191    | 2206.663    | 2199.818     | 2172.402     | 2165.905     | 2175.800     | 2164.317     |
| 55  | 1893.005   | 1885.515    | 1893.736    | 1903.801    | 1902.127    | 1889.458     | 1859.747     | 1841.184     | 1844.558     | 1840.024     |
| 60  | 1547.577   | 1549.974    | 1569.497    | 1586.682    | 1591.128    | 1573.201     | 1540.747     | 1512.446     | 1506.133     | 1511.526     |
| 65  | 1202.206   | 1212.443    | 1241.119    | 1252.791    | 1256.657    | 1241.071     | 1218.480     | 1182.494     | 1168.315     | 1181.709     |
| 70  | 853.334    | 873.178     | 903.539     | 911.254     | 911.865     | 902.690      | 887.847      | 851.436      | 827.334      | 850.828      |
| 75  | 529.504    | 553.349     | 575.845     | 576.727     | 578.737     | 572.283      | 567.092      | 539.579      | 511.371      | 539.145      |
| 80  | 256.338    | 277.996     | 288.347     | 280.321     | 276.419     | 279.164      | 285.313      | 271.483      | 245.540      | 271.223      |
| 85  | 71.252     | 83.526      | 81.738      | 77.366      | 77.430      | 77.322       | 81.404       | 82.298       | 66.934       | 82.180       |
| 90  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 95  | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 100 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 105 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 110 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 115 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 120 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 125 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 130 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 135 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 140 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 145 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 150 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 155 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 160 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 165 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 170 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 175 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| 180 | 0.000      | 0.000       | 0.000       | 0.000       | 0.000       | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |

**Vert. Angles**      **Horizontal Angles**

|    | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0  | 4238.143     | 4238.143     | 4238.143     | 4238.143     | 4238.143     | 4238.143     | 4238.143     |
| 5  | 4208.804     | 4199.688     | 4218.870     | 4201.430     | 4211.489     | 4215.533     | 4222.653     |
| 10 | 4127.049     | 4117.576     | 4130.374     | 4121.265     | 4133.778     | 4141.393     | 4151.800     |
| 15 | 3993.464     | 3981.456     | 3994.133     | 3987.240     | 4004.886     | 4020.206     | 4033.362     |
| 20 | 3814.117     | 3800.571     | 3804.109     | 3808.156     | 3830.939     | 3852.918     | 3870.739     |
| 25 | 3595.825     | 3579.895     | 3586.967     | 3589.516     | 3618.373     | 3646.602     | 3668.533     |
| 30 | 3343.693     | 3335.259     | 3337.236     | 3346.828     | 3372.585     | 3405.705     | 3431.071     |
| 35 | 3068.319     | 3069.187     | 3072.597     | 3082.762     | 3103.144     | 3135.537     | 3161.505     |
| 40 | 2777.415     | 2789.542     | 2789.852     | 2804.623     | 2816.223     | 2844.376     | 2865.287     |
| 45 | 2476.748     | 2496.712     | 2500.236     | 2512.914     | 2516.560     | 2533.664     | 2553.321     |
| 50 | 2169.917     | 2197.044     | 2205.954     | 2213.689     | 2208.091     | 2212.747     | 2230.493     |
| 55 | 1858.121     | 1886.684     | 1901.478     | 1903.270     | 1892.025     | 1882.386     | 1893.005     |
| 60 | 1539.622     | 1570.672     | 1590.686     | 1586.298     | 1567.815     | 1546.698     | 1547.577     |

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**CANDELA TABULATION - (Cont.)**

|            |          |          |          |          |          |          |          |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>65</b>  | 1217.674 | 1239.032 | 1256.194 | 1252.348 | 1239.525 | 1209.285 | 1202.206 |
| <b>70</b>  | 887.316  | 901.480  | 911.467  | 910.903  | 901.969  | 870.292  | 853.334  |
| <b>75</b>  | 566.776  | 571.739  | 578.631  | 576.559  | 574.594  | 550.770  | 529.504  |
| <b>80</b>  | 285.172  | 279.010  | 276.481  | 280.285  | 287.604  | 275.981  | 256.338  |
| <b>85</b>  | 81.381   | 77.328   | 77.491   | 77.431   | 81.558   | 82.747   | 71.252   |
| <b>90</b>  | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>95</b>  | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>100</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>105</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>110</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>115</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>120</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>125</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>130</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>135</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>140</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>145</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>150</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>155</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>160</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>165</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>170</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>175</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |
| <b>180</b> | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    |

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   | %Lamp | %Fixt  |
|---------|----------|-------|--------|
| 0-20    | 1526.81  | N.A.  | 14.30  |
| 0-30    | 3189.07  | N.A.  | 29.90  |
| 0-40    | 5124.55  | N.A.  | 48.00  |
| 0-60    | 8739.38  | N.A.  | 81.90  |
| 0-80    | 10550.13 | N.A.  | 98.90  |
| 0-90    | 10668.08 | N.A.  | 100.00 |
| 10-90   | 10268.64 | N.A.  | 96.30  |
| 20-40   | 3597.74  | N.A.  | 33.70  |
| 20-50   | 5531.89  | N.A.  | 51.90  |
| 40-70   | 4824.15  | N.A.  | 45.20  |
| 60-80   | 1810.75  | N.A.  | 17.00  |
| 70-80   | 601.44   | N.A.  | 5.60   |
| 80-90   | 117.95   | N.A.  | 1.10   |
| 90-110  | 0.00     | N.A.  | 0.00   |
| 90-120  | 0.00     | N.A.  | 0.00   |
| 90-130  | 0.00     | N.A.  | 0.00   |
| 90-150  | 0.00     | N.A.  | 0.00   |
| 90-180  | 0.00     | N.A.  | 0.00   |
| 110-180 | 0.00     | N.A.  | 0.00   |
| 0-180   | 10668.08 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 399.44  |
| 10-20   | 1127.36 |
| 20-30   | 1662.26 |
| 30-40   | 1935.48 |
| 40-50   | 1934.15 |
| 50-60   | 1680.68 |
| 60-70   | 1209.31 |
| 70-80   | 601.44  |
| 80-90   | 117.95  |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |

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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  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2  | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 87  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 72  |
| 3  | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |
| 4  | 84  | 72  | 64  | 57  | 81  | 71  | 63  | 57  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 59  | 54  | 52  |
| 5  | 77  | 65  | 56  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 58  | 52  | 48  | 45  |
| 6  | 71  | 58  | 50  | 43  | 69  | 57  | 49  | 43  | 56  | 48  | 43  | 54  | 47  | 42  | 52  | 46  | 42  | 40  |
| 7  | 66  | 53  | 44  | 38  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 37  | 35  |
| 8  | 62  | 48  | 40  | 34  | 60  | 48  | 40  | 34  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9  | 58  | 44  | 36  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 30  | 29  |
| 10 | 54  | 41  | 33  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 28  | 26  |

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**UGR TABLE - CORRECTED**

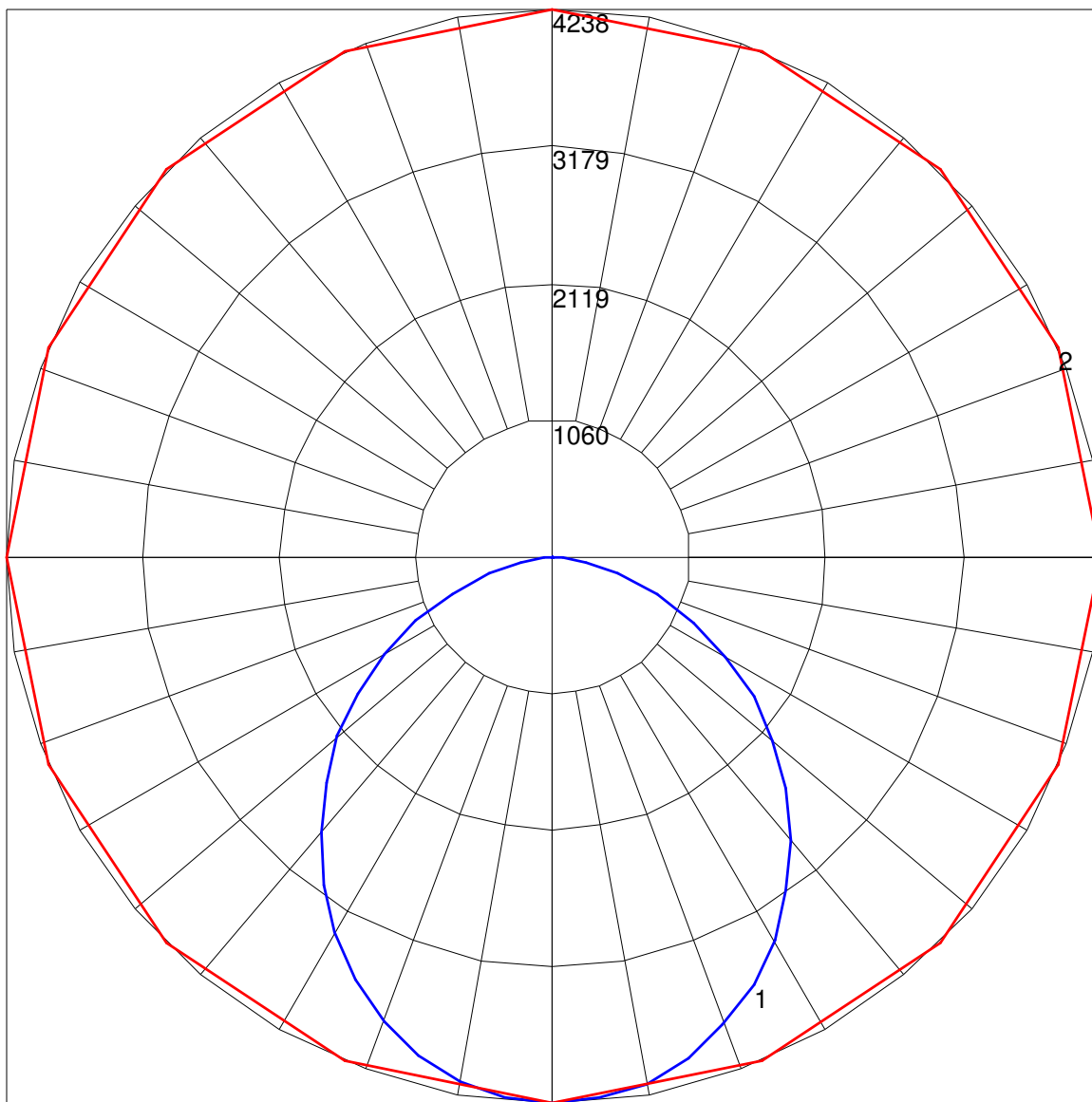
Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| Ceiling Cavity | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls          | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity   | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

| Room Size |      | UGR Viewed Crosswise |      |      |      |      | UGR Viewed Endwise |      |      |      |      |
|-----------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| X=2H      | Y=2H | 17.9                 | 19.5 | 18.2 | 19.8 | 20.1 | 17.9               | 19.5 | 18.3 | 19.9 | 20.2 |
|           | 3H   | 19.4                 | 20.8 | 19.8 | 21.1 | 21.5 | 19.6               | 21.0 | 19.9 | 21.3 | 21.7 |
|           | 4H   | 19.9                 | 21.2 | 20.3 | 21.6 | 21.9 | 20.1               | 21.4 | 20.5 | 21.8 | 22.2 |
|           | 6H   | 20.1                 | 21.4 | 20.5 | 21.7 | 22.1 | 20.4               | 21.6 | 20.8 | 22.0 | 22.4 |
|           | 8H   | 20.2                 | 21.4 | 20.6 | 21.8 | 22.2 | 20.4               | 21.6 | 20.9 | 22.0 | 22.4 |
|           | 12H  | 20.2                 | 21.3 | 20.6 | 21.7 | 22.1 | 20.4               | 21.6 | 20.9 | 22.0 | 22.4 |
| 4H        | 2H   | 18.5                 | 19.8 | 18.9 | 20.2 | 20.5 | 18.5               | 19.9 | 18.9 | 20.2 | 20.6 |
|           | 3H   | 20.2                 | 21.3 | 20.6 | 21.7 | 22.1 | 20.3               | 21.5 | 20.7 | 21.9 | 22.3 |
|           | 4H   | 20.8                 | 21.8 | 21.2 | 22.2 | 22.6 | 20.9               | 22.0 | 21.4 | 22.4 | 22.8 |
|           | 6H   | 21.1                 | 22.0 | 21.6 | 22.4 | 22.9 | 21.3               | 22.2 | 21.8 | 22.6 | 23.1 |
|           | 8H   | 21.2                 | 22.0 | 21.6 | 22.5 | 22.9 | 21.4               | 22.2 | 21.9 | 22.7 | 23.1 |
|           | 12H  | 21.2                 | 22.0 | 21.7 | 22.4 | 22.9 | 21.4               | 22.2 | 21.9 | 22.7 | 23.1 |
| 8H        | 4H   | 21.0                 | 21.8 | 21.4 | 22.3 | 22.7 | 21.2               | 22.0 | 21.6 | 22.4 | 22.9 |
|           | 6H   | 21.4                 | 22.1 | 21.9 | 22.6 | 23.1 | 21.6               | 22.3 | 22.1 | 22.8 | 23.3 |
|           | 8H   | 21.5                 | 22.2 | 22.0 | 22.7 | 23.1 | 21.7               | 22.3 | 22.2 | 22.8 | 23.3 |
|           | 12H  | 21.6                 | 22.1 | 22.1 | 22.6 | 23.2 | 21.8               | 22.3 | 22.3 | 22.8 | 23.4 |
| 12H       | 4H   | 21.0                 | 21.7 | 21.5 | 22.2 | 22.7 | 21.2               | 21.9 | 21.6 | 22.4 | 22.9 |
|           | 6H   | 21.4                 | 22.1 | 22.0 | 22.5 | 23.1 | 21.6               | 22.2 | 22.1 | 22.7 | 23.2 |
|           | 8H   | 21.6                 | 22.1 | 22.1 | 22.6 | 23.2 | 21.8               | 22.3 | 22.3 | 22.8 | 23.4 |

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 4238.143 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)