



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-RN-WH.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13257153.23
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 02/08/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CS-L15-835-xxx-DIM-UNV-RN-WH
 [LUMINAIRE] Aluminum housing, optics, and trim enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Downlight
 [_SEARCH_MOUNTING] Surface, Suspended, Wall

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1556 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 90 |
| Total Luminaire Watts | 17.2973 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 0.38 |
| Spacing Criterion (90-270) | 0.38 |
| Spacing Criterion (Diagonal) | 0.40 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.21 ft |
| Luminous Width (90-270) | 0.21 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 48018 | 58071 | 48404 |
| 55 | 28472 | 32805 | 29078 |
| 65 | 22232 | 20350 | 21879 |
| 75 | 12485 | 11621 | 11909 |
| 85 | 5704 | 5704 | 5704 |

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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> |
|------|------------|-------------|-------------|-------------|-------------|
| 0.0 | 5626.0 | 5626.0 | 5626.0 | 5626.0 | 5626.0 |
| 0.5 | 5655.0 | 5613.0 | 5610.0 | 5612.0 | 5616.0 |
| 1.0 | 5631.0 | 5589.0 | 5585.0 | 5587.0 | 5592.0 |
| 1.5 | 5592.0 | 5550.0 | 5548.0 | 5549.0 | 5553.0 |
| 2.0 | 5538.0 | 5497.0 | 5495.0 | 5496.0 | 5501.0 |
| 2.5 | 5471.0 | 5430.0 | 5426.0 | 5427.0 | 5429.0 |
| 3.0 | 5391.0 | 5349.0 | 5343.0 | 5344.0 | 5345.0 |
| 3.5 | 5297.0 | 5255.0 | 5247.0 | 5247.0 | 5248.0 |
| 4.0 | 5189.0 | 5146.0 | 5140.0 | 5137.0 | 5137.0 |
| 4.5 | 5066.0 | 5024.0 | 5016.0 | 5013.0 | 5012.0 |
| 5.0 | 4927.0 | 4889.0 | 4879.0 | 4877.0 | 4874.0 |
| 5.5 | 4776.0 | 4739.0 | 4732.0 | 4731.0 | 4728.0 |
| 6.0 | 4613.0 | 4579.0 | 4577.0 | 4575.0 | 4573.0 |
| 6.5 | 4440.0 | 4411.0 | 4411.0 | 4412.0 | 4410.0 |
| 7.0 | 4263.0 | 4235.0 | 4237.0 | 4243.0 | 4242.0 |
| 7.5 | 4078.0 | 4053.0 | 4058.0 | 4067.0 | 4067.0 |
| 8.0 | 3888.0 | 3864.0 | 3875.0 | 3887.0 | 3890.0 |
| 8.5 | 3697.0 | 3672.0 | 3688.0 | 3705.0 | 3710.0 |
| 9.0 | 3503.0 | 3481.0 | 3502.0 | 3520.0 | 3528.0 |
| 9.5 | 3311.0 | 3291.0 | 3314.0 | 3338.0 | 3346.0 |
| 10.0 | 3118.0 | 3102.0 | 3128.0 | 3154.0 | 3164.0 |
| 10.5 | 2929.0 | 2916.0 | 2945.0 | 2974.0 | 2985.0 |
| 11.0 | 2747.0 | 2734.0 | 2766.0 | 2798.0 | 2809.0 |
| 11.5 | 2567.0 | 2557.0 | 2593.0 | 2625.0 | 2636.0 |
| 12.0 | 2394.0 | 2387.0 | 2424.0 | 2458.0 | 2470.0 |
| 12.5 | 2230.0 | 2224.0 | 2265.0 | 2299.0 | 2309.0 |
| 13.0 | 2076.0 | 2071.0 | 2112.0 | 2147.0 | 2157.0 |
| 13.5 | 1932.0 | 1928.0 | 1967.0 | 2004.0 | 2013.0 |
| 14.0 | 1795.0 | 1793.0 | 1829.0 | 1868.0 | 1875.0 |
| 14.5 | 1665.0 | 1666.0 | 1701.0 | 1738.0 | 1748.0 |
| 15.0 | 1545.0 | 1548.0 | 1582.0 | 1618.0 | 1627.0 |
| 15.5 | 1436.0 | 1439.0 | 1473.0 | 1509.0 | 1515.0 |
| 16.0 | 1337.0 | 1341.0 | 1374.0 | 1407.0 | 1412.0 |
| 16.5 | 1247.0 | 1253.0 | 1284.0 | 1315.0 | 1317.0 |
| 17.0 | 1164.0 | 1172.0 | 1202.0 | 1230.0 | 1231.0 |
| 17.5 | 1091.0 | 1098.0 | 1128.0 | 1152.0 | 1151.0 |
| 18.0 | 1025.0 | 1033.0 | 1061.0 | 1082.0 | 1079.0 |
| 18.5 | 966.1 | 975.1 | 1002.0 | 1019.0 | 1014.0 |
| 19.0 | 912.4 | 923.4 | 949.8 | 963.1 | 956.3 |
| 19.5 | 865.0 | 877.5 | 904.2 | 912.1 | 903.3 |
| 20.0 | 822.6 | 836.8 | 862.9 | 866.3 | 857.2 |
| 20.5 | 785.6 | 800.2 | 826.5 | 825.0 | 814.3 |
| 21.0 | 751.7 | 767.3 | 793.7 | 788.4 | 775.3 |
| 21.5 | 721.3 | 737.5 | 764.2 | 754.6 | 740.1 |
| 22.0 | 692.9 | 711.0 | 737.9 | 724.1 | 707.9 |
| 22.5 | 667.4 | 687.1 | 714.4 | 697.2 | 678.5 |
| 23.0 | 643.5 | 664.9 | 692.5 | 672.4 | 651.6 |
| 23.5 | 621.5 | 644.3 | 672.5 | 649.4 | 626.5 |
| 24.0 | 600.5 | 624.3 | 654.4 | 627.6 | 602.7 |
| 24.5 | 579.9 | 606.1 | 637.7 | 607.4 | 580.3 |
| 25.0 | 559.3 | 588.5 | 621.8 | 588.2 | 559.5 |
| 25.5 | 539.2 | 571.2 | 606.5 | 569.6 | 539.1 |
| 26.0 | 519.4 | 553.8 | 592.2 | 551.5 | 518.6 |
| 26.5 | 500.2 | 536.8 | 578.1 | 534.1 | 499.2 |

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CANDELA TABULATION - (Cont.)

| | | | | | |
|------|-------|-------|-------|-------|-------|
| 27.0 | 481.0 | 519.7 | 564.1 | 517.2 | 480.7 |
| 27.5 | 462.4 | 502.2 | 550.3 | 500.5 | 462.3 |
| 28.0 | 443.8 | 484.7 | 536.6 | 483.7 | 444.1 |
| 28.5 | 425.5 | 467.3 | 522.8 | 467.0 | 426.7 |
| 29.0 | 407.8 | 450.1 | 508.8 | 450.4 | 410.0 |
| 29.5 | 390.6 | 433.1 | 494.9 | 434.0 | 393.8 |
| 30.0 | 374.1 | 415.9 | 480.7 | 417.6 | 378.2 |
| 30.5 | 358.3 | 399.2 | 466.1 | 401.9 | 363.5 |
| 31.0 | 343.4 | 382.8 | 451.2 | 386.4 | 349.6 |
| 31.5 | 329.5 | 367.3 | 436.7 | 371.6 | 336.6 |
| 32.0 | 316.6 | 352.6 | 422.4 | 357.3 | 323.9 |
| 32.5 | 304.5 | 338.6 | 408.2 | 343.9 | 311.6 |
| 33.0 | 291.1 | 325.4 | 394.3 | 331.2 | 300.5 |
| 33.5 | 280.4 | 313.1 | 380.5 | 318.9 | 289.3 |
| 34.0 | 271.6 | 301.5 | 366.9 | 307.0 | 279.4 |
| 34.5 | 263.3 | 290.0 | 353.3 | 296.1 | 269.5 |
| 35.0 | 254.4 | 278.4 | 340.1 | 285.8 | 260.9 |
| 35.5 | 247.1 | 268.3 | 327.2 | 275.9 | 252.7 |
| 36.0 | 240.7 | 259.4 | 314.7 | 266.6 | 244.9 |
| 36.5 | 234.7 | 251.0 | 302.7 | 257.5 | 237.8 |
| 37.0 | 228.7 | 243.0 | 291.2 | 249.0 | 230.7 |
| 37.5 | 222.9 | 235.2 | 280.6 | 241.0 | 224.3 |
| 38.0 | 217.4 | 228.5 | 270.2 | 233.3 | 217.8 |
| 38.5 | 211.6 | 222.2 | 260.4 | 226.2 | 211.7 |
| 39.0 | 205.8 | 216.2 | 251.2 | 219.2 | 205.7 |
| 39.5 | 200.1 | 210.2 | 242.3 | 212.7 | 199.7 |
| 40.0 | 194.3 | 204.5 | 233.9 | 206.3 | 193.8 |
| 40.5 | 188.3 | 198.9 | 226.1 | 200.2 | 187.9 |
| 41.0 | 182.4 | 193.3 | 218.7 | 194.2 | 182.0 |
| 41.5 | 176.5 | 187.9 | 211.6 | 188.5 | 176.3 |
| 42.0 | 170.6 | 182.4 | 204.6 | 182.9 | 170.5 |
| 42.5 | 164.8 | 176.9 | 197.5 | 177.3 | 164.9 |
| 43.0 | 158.9 | 171.4 | 190.7 | 171.8 | 159.3 |
| 43.5 | 153.2 | 165.9 | 184.0 | 166.4 | 153.7 |
| 44.0 | 147.6 | 160.5 | 177.6 | 161.0 | 148.3 |
| 44.5 | 142.1 | 155.2 | 171.2 | 155.7 | 142.9 |
| 45.0 | 136.6 | 149.9 | 165.2 | 150.6 | 137.7 |
| 45.5 | 131.4 | 144.8 | 159.3 | 145.5 | 132.8 |
| 46.0 | 126.3 | 139.7 | 153.6 | 140.4 | 127.8 |
| 46.5 | 121.1 | 134.6 | 148.1 | 135.5 | 122.9 |
| 47.0 | 116.4 | 129.7 | 142.8 | 130.6 | 118.3 |
| 47.5 | 111.8 | 124.8 | 137.5 | 125.9 | 113.7 |
| 48.0 | 107.2 | 120.1 | 132.4 | 121.4 | 109.4 |
| 48.5 | 103.1 | 115.5 | 127.5 | 116.9 | 105.1 |
| 49.0 | 99.0 | 111.1 | 122.6 | 112.6 | 101.0 |
| 49.5 | 95.0 | 106.8 | 117.9 | 108.4 | 97.2 |
| 50.0 | 91.6 | 102.7 | 113.3 | 104.4 | 93.6 |
| 50.5 | 88.1 | 98.8 | 108.9 | 100.5 | 90.2 |
| 51.0 | 85.0 | 95.0 | 104.7 | 96.8 | 86.9 |
| 51.5 | 81.9 | 91.5 | 100.6 | 93.4 | 83.9 |
| 52.0 | 79.1 | 88.1 | 96.6 | 90.0 | 81.1 |
| 52.5 | 76.5 | 84.8 | 92.7 | 86.7 | 78.3 |
| 53.0 | 73.9 | 81.9 | 89.0 | 83.6 | 75.8 |
| 53.5 | 71.8 | 78.9 | 85.5 | 80.7 | 73.4 |
| 54.0 | 69.6 | 76.2 | 82.0 | 77.9 | 71.2 |
| 54.5 | 67.7 | 73.7 | 78.8 | 75.3 | 69.1 |

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CANDELA TABULATION - (Cont.)

| | | | | | |
|------|------|------|------|------|------|
| 55.0 | 65.7 | 71.3 | 75.7 | 72.8 | 67.1 |
| 55.5 | 64.0 | 68.9 | 72.7 | 70.4 | 65.4 |
| 56.0 | 62.3 | 66.8 | 69.8 | 68.1 | 63.4 |
| 56.5 | 60.8 | 64.7 | 67.1 | 65.9 | 61.7 |
| 57.0 | 59.3 | 62.7 | 64.4 | 63.8 | 60.1 |
| 57.5 | 57.8 | 60.7 | 61.9 | 61.8 | 58.5 |
| 58.0 | 56.5 | 59.0 | 59.5 | 59.9 | 56.9 |
| 58.5 | 55.1 | 57.2 | 57.3 | 58.0 | 55.4 |
| 59.0 | 53.8 | 55.5 | 55.1 | 56.2 | 53.9 |
| 59.5 | 52.5 | 53.9 | 53.0 | 54.4 | 52.5 |
| 60.0 | 51.1 | 52.2 | 50.9 | 52.7 | 51.0 |
| 60.5 | 49.9 | 50.7 | 49.0 | 51.0 | 49.6 |
| 61.0 | 48.6 | 49.1 | 47.2 | 49.4 | 48.2 |
| 61.5 | 47.3 | 47.6 | 45.5 | 47.8 | 46.8 |
| 62.0 | 45.9 | 46.2 | 43.8 | 46.2 | 45.4 |
| 62.5 | 44.6 | 44.7 | 42.2 | 44.6 | 44.0 |
| 63.0 | 43.3 | 43.3 | 40.6 | 43.1 | 42.6 |
| 63.5 | 41.8 | 41.8 | 39.0 | 41.6 | 41.2 |
| 64.0 | 40.5 | 40.4 | 37.5 | 40.2 | 39.8 |
| 64.5 | 39.1 | 39.0 | 36.0 | 38.7 | 38.5 |
| 65.0 | 37.8 | 37.6 | 34.6 | 37.3 | 37.2 |
| 65.5 | 36.5 | 36.2 | 33.2 | 35.9 | 35.9 |
| 66.0 | 35.2 | 34.8 | 31.9 | 34.5 | 34.5 |
| 66.5 | 33.8 | 33.4 | 30.5 | 33.1 | 33.2 |
| 67.0 | 32.6 | 32.1 | 29.3 | 31.8 | 32.0 |
| 67.5 | 31.3 | 30.8 | 28.0 | 30.5 | 30.8 |
| 68.0 | 30.0 | 29.5 | 26.8 | 29.1 | 29.5 |
| 68.5 | 28.7 | 28.2 | 25.6 | 27.8 | 28.2 |
| 69.0 | 27.5 | 26.9 | 24.5 | 26.6 | 26.9 |
| 69.5 | 26.3 | 25.7 | 23.3 | 25.3 | 25.7 |
| 70.0 | 25.0 | 24.5 | 22.2 | 24.1 | 24.5 |
| 70.5 | 23.8 | 23.2 | 21.0 | 22.9 | 23.3 |
| 71.0 | 22.5 | 22.0 | 20.0 | 21.7 | 22.1 |
| 71.5 | 21.3 | 20.8 | 19.0 | 20.5 | 20.9 |
| 72.0 | 20.1 | 19.6 | 17.9 | 19.3 | 19.7 |
| 72.5 | 18.9 | 18.5 | 16.9 | 18.2 | 18.5 |
| 73.0 | 17.8 | 17.3 | 15.9 | 17.1 | 17.3 |
| 73.5 | 16.6 | 16.2 | 14.9 | 16.0 | 16.1 |
| 74.0 | 15.3 | 15.2 | 14.0 | 14.9 | 14.9 |
| 74.5 | 14.2 | 14.1 | 13.0 | 13.8 | 13.7 |
| 75.0 | 13.0 | 13.0 | 12.1 | 12.8 | 12.4 |
| 75.5 | 11.6 | 12.0 | 11.2 | 11.7 | 11.1 |
| 76.0 | 10.2 | 10.8 | 10.4 | 10.7 | 9.7 |
| 76.5 | 8.8 | 9.8 | 9.6 | 9.6 | 8.9 |
| 77.0 | 7.3 | 8.6 | 8.8 | 8.5 | 8.0 |
| 77.5 | 6.3 | 7.6 | 8.1 | 7.7 | 7.1 |
| 78.0 | 5.9 | 6.6 | 7.4 | 7.0 | 6.3 |
| 78.5 | 5.6 | 6.0 | 6.7 | 6.2 | 5.7 |
| 79.0 | 5.3 | 5.5 | 6.1 | 5.6 | 5.3 |
| 79.5 | 5.0 | 5.1 | 5.6 | 5.1 | 5.1 |
| 80.0 | 4.8 | 4.7 | 5.1 | 4.8 | 4.7 |
| 80.5 | 4.4 | 4.4 | 4.6 | 4.5 | 4.5 |
| 81.0 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 |
| 81.5 | 3.8 | 3.9 | 3.9 | 3.9 | 3.9 |
| 82.0 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 |
| 82.5 | 3.3 | 3.3 | 3.3 | 3.4 | 3.3 |

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CANDELA TABULATION - (Cont.)

| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 83.0 | 3.0 | 3.0 | 3.0 | 3.1 | 3.0 |
| 83.5 | 2.7 | 2.8 | 2.7 | 2.8 | 2.8 |
| 84.0 | 2.5 | 2.5 | 2.5 | 2.6 | 2.5 |
| 84.5 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 85.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 |
| 85.5 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 |
| 86.0 | 1.6 | 1.5 | 1.6 | 1.6 | 1.6 |
| 86.5 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 |
| 87.0 | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 |
| 87.5 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 88.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 |
| 88.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 89.0 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |
| 89.5 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 |
| 90.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 98.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 98.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 103.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 103.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 104.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 104.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 106.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 106.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 108.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 108.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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CANDELA TABULATION - (Cont.)

| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 111.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 111.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 116.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 116.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 118.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 118.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 119.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 119.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 121.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 121.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 124.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 124.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 126.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 126.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 129.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 129.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 134.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 134.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 138.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 138.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-RN-WH.IES

CANDELA TABULATION - (Cont.)

| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 139.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 139.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 143.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 143.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 146.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 146.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 149.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 149.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 151.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 151.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 153.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 153.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 156.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 156.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 158.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 158.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 159.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 159.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 161.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 161.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 163.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 163.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 164.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 164.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 166.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 166.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-RN-WH.IES

CANDELA TABULATION - (Cont.)

| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 167.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 168.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 168.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 169.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 169.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 171.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 171.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 173.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 173.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 174.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 174.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 176.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 176.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 178.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 178.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 179.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 179.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-RN-WH.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 862.35 | N.A. | 55.40 |
| 0-30 | 1135.79 | N.A. | 73.00 |
| 0-40 | 1321.15 | N.A. | 84.90 |
| 0-60 | 1503.69 | N.A. | 96.60 |
| 0-80 | 1554.06 | N.A. | 99.80 |
| 0-90 | 1556.4 | N.A. | 100.00 |
| 10-90 | 1148.48 | N.A. | 73.80 |
| 20-40 | 458.80 | N.A. | 29.50 |
| 20-50 | 575.81 | N.A. | 37.00 |
| 40-70 | 219.17 | N.A. | 14.10 |
| 60-80 | 50.37 | N.A. | 3.20 |
| 70-80 | 13.74 | N.A. | 0.90 |
| 80-90 | 2.34 | N.A. | 0.20 |
| 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 | 1556.4 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 407.92 |
| 10-20 | 454.43 |
| 20-30 | 273.44 |
| 30-40 | 185.36 |
| 40-50 | 117.01 |
| 50-60 | 65.53 |
| 60-70 | 36.63 |
| 70-80 | 13.74 |
| 80-90 | 2.34 |
| 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 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-RN-WH.IES

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 | 114 | 111 | 108 | 106 | 111 | 109 | 107 | 105 | 105 | 103 | 101 | 101 | 100 | 98 | 98 | 96 | 95 | 94 |
| 2 | 108 | 103 | 99 | 96 | 106 | 102 | 98 | 95 | 98 | 96 | 93 | 96 | 93 | 91 | 93 | 91 | 89 | 87 |
| 3 | 103 | 97 | 92 | 88 | 101 | 96 | 91 | 88 | 93 | 89 | 86 | 91 | 87 | 85 | 88 | 86 | 84 | 82 |
| 4 | 98 | 91 | 86 | 82 | 97 | 90 | 85 | 81 | 88 | 84 | 81 | 86 | 82 | 80 | 84 | 81 | 79 | 77 |
| 5 | 94 | 86 | 81 | 77 | 93 | 85 | 80 | 76 | 84 | 79 | 76 | 82 | 78 | 75 | 80 | 77 | 74 | 73 |
| 6 | 90 | 82 | 76 | 72 | 89 | 81 | 76 | 72 | 80 | 75 | 72 | 78 | 74 | 71 | 77 | 74 | 71 | 69 |
| 7 | 87 | 78 | 73 | 69 | 85 | 77 | 72 | 68 | 76 | 72 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 66 |
| 8 | 83 | 75 | 69 | 65 | 82 | 74 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 65 | 63 |
| 9 | 80 | 72 | 66 | 63 | 79 | 71 | 66 | 62 | 70 | 66 | 62 | 69 | 65 | 62 | 69 | 65 | 62 | 61 |
| 10 | 77 | 69 | 64 | 60 | 76 | 68 | 63 | 60 | 68 | 63 | 60 | 67 | 63 | 60 | 66 | 62 | 60 | 58 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CS-L15-835-XXX-DIM-UNV-RN-WH.IES

UGR TABLE - CORRECTED

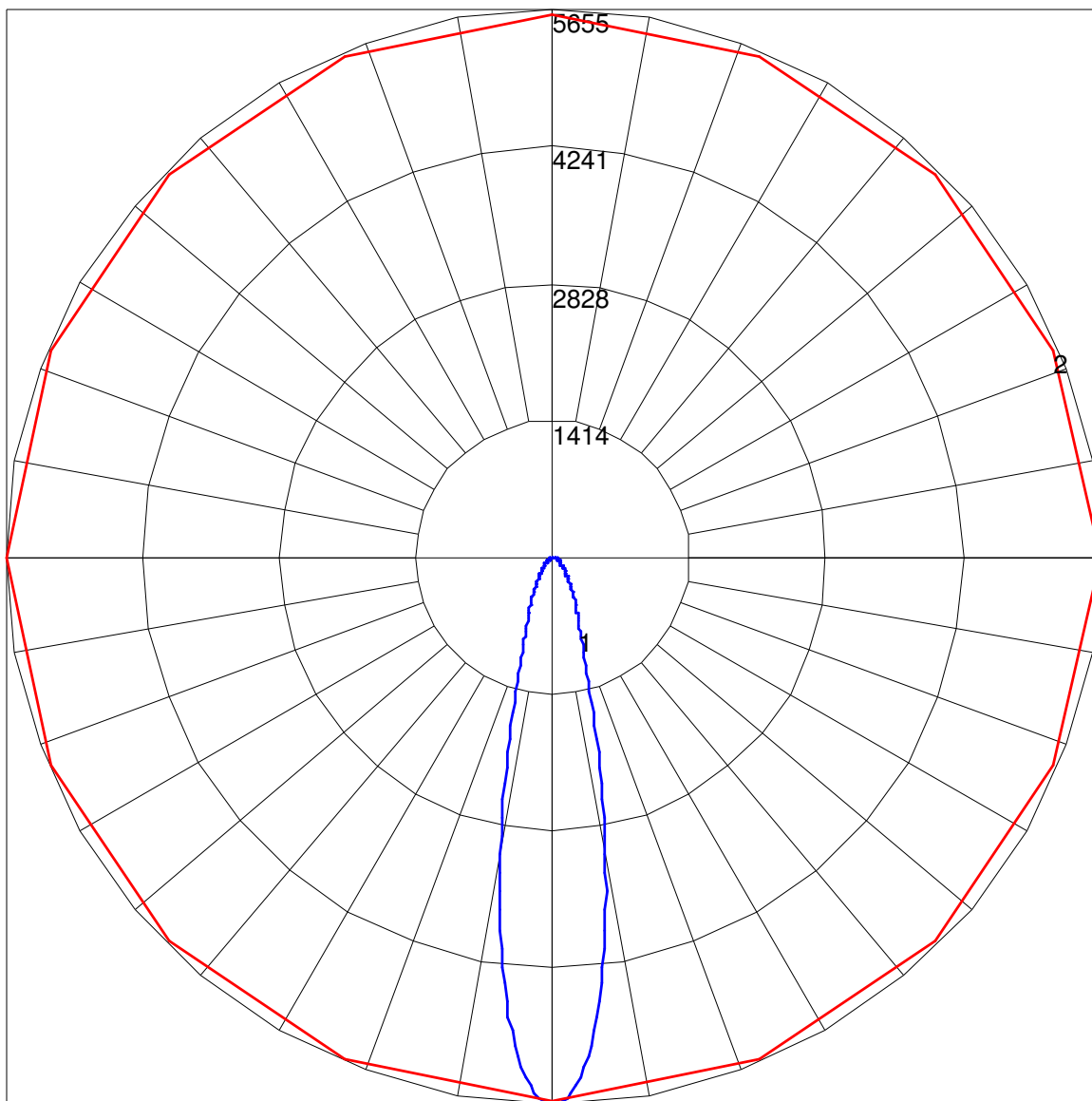
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 19.3 | 20.4 | 19.7 | 20.7 | 21.1 | 19.5 | 20.5 | 19.8 | 20.8 | 21.2 |
| | 3H | 20.4 | 21.4 | 20.8 | 21.7 | 22.1 | 20.5 | 21.4 | 20.8 | 21.8 | 22.1 |
| | 4H | 20.6 | 21.5 | 21.0 | 21.9 | 22.3 | 20.6 | 21.6 | 21.1 | 21.9 | 22.3 |
| | 6H | 20.6 | 21.4 | 21.0 | 21.8 | 22.2 | 20.7 | 21.5 | 21.1 | 21.9 | 22.3 |
| | 8H | 20.6 | 21.4 | 21.0 | 21.8 | 22.2 | 20.6 | 21.4 | 21.1 | 21.8 | 22.2 |
| | 12H | 20.6 | 21.3 | 21.0 | 21.7 | 22.1 | 20.6 | 21.4 | 21.1 | 21.7 | 22.2 |
| 4H | 2H | 19.6 | 20.5 | 20.0 | 20.8 | 21.2 | 19.7 | 20.6 | 20.1 | 20.9 | 21.3 |
| | 3H | 20.8 | 21.5 | 21.2 | 21.9 | 22.4 | 20.8 | 21.6 | 21.3 | 22.0 | 22.4 |
| | 4H | 21.1 | 21.7 | 21.5 | 22.2 | 22.6 | 21.1 | 21.8 | 21.6 | 22.2 | 22.6 |
| | 6H | 21.1 | 21.7 | 21.6 | 22.1 | 22.6 | 21.2 | 21.7 | 21.6 | 22.2 | 22.6 |
| | 8H | 21.1 | 21.6 | 21.6 | 22.1 | 22.6 | 21.1 | 21.7 | 21.6 | 22.1 | 22.6 |
| | 12H | 21.1 | 21.5 | 21.6 | 22.0 | 22.5 | 21.1 | 21.6 | 21.6 | 22.0 | 22.5 |
| 8H | 4H | 21.1 | 21.6 | 21.6 | 22.1 | 22.5 | 21.1 | 21.6 | 21.6 | 22.1 | 22.5 |
| | 6H | 21.2 | 21.6 | 21.7 | 22.1 | 22.5 | 21.2 | 21.6 | 21.7 | 22.1 | 22.6 |
| | 8H | 21.1 | 21.5 | 21.7 | 22.0 | 22.5 | 21.2 | 21.5 | 21.7 | 22.1 | 22.6 |
| | 12H | 21.2 | 21.5 | 21.7 | 22.0 | 22.6 | 21.2 | 21.5 | 21.7 | 22.0 | 22.6 |
| 12H | 4H | 21.1 | 21.5 | 21.5 | 22.0 | 22.5 | 21.1 | 21.5 | 21.6 | 22.0 | 22.5 |
| | 6H | 21.1 | 21.5 | 21.6 | 21.9 | 22.5 | 21.1 | 21.5 | 21.7 | 22.0 | 22.5 |
| | 8H | 21.1 | 21.5 | 21.7 | 22.0 | 22.5 | 21.2 | 21.5 | 21.7 | 22.0 | 22.6 |

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 5655 Located At Horizontal Angle = 0, Vertical Angle = .5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)