

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P651649

Luminaire Tested: **GALN-SA9D-840-U-T4FT-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P651649
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-29)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA9D-840-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42470.5 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

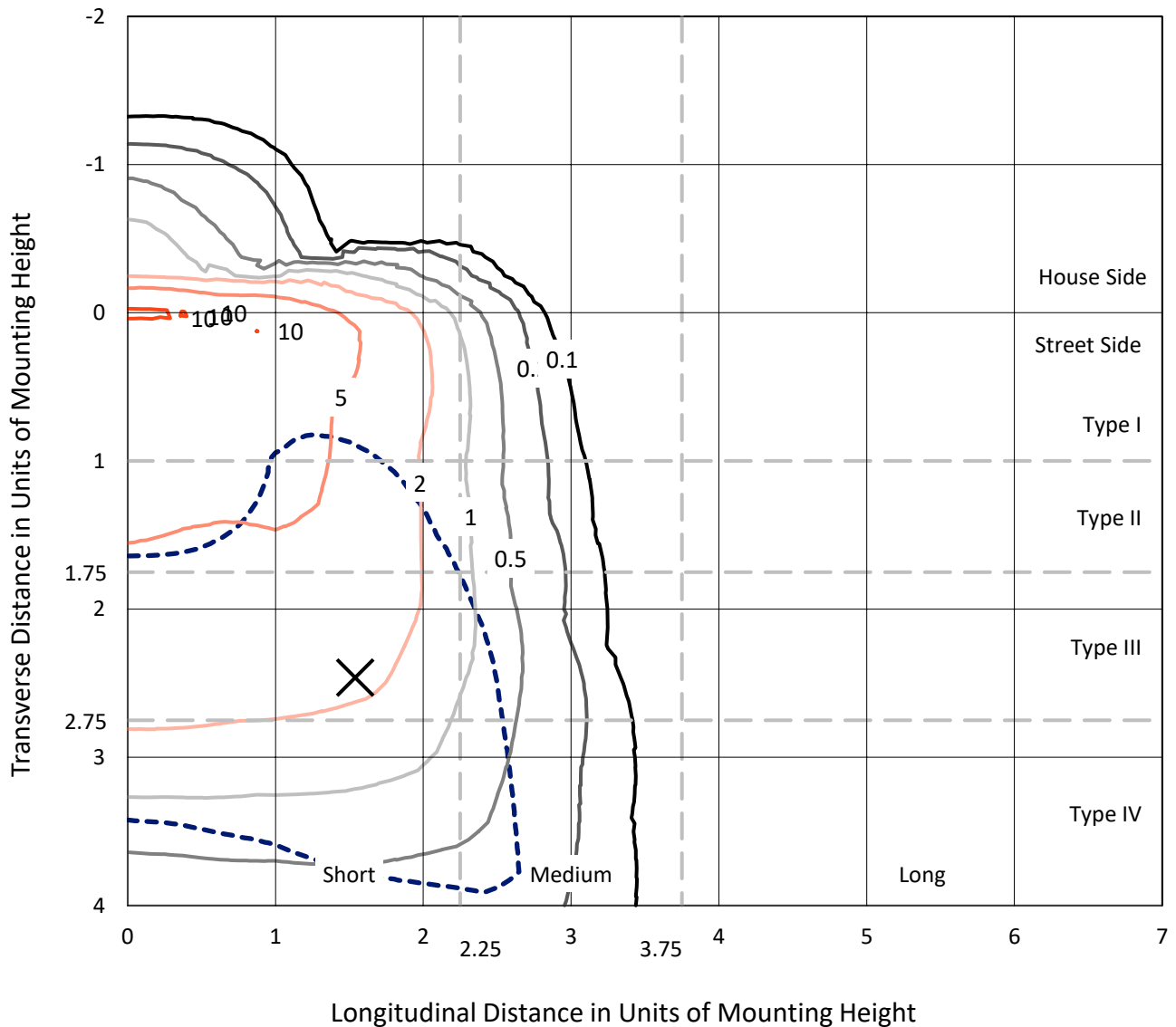
Input Watts (W): 552
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

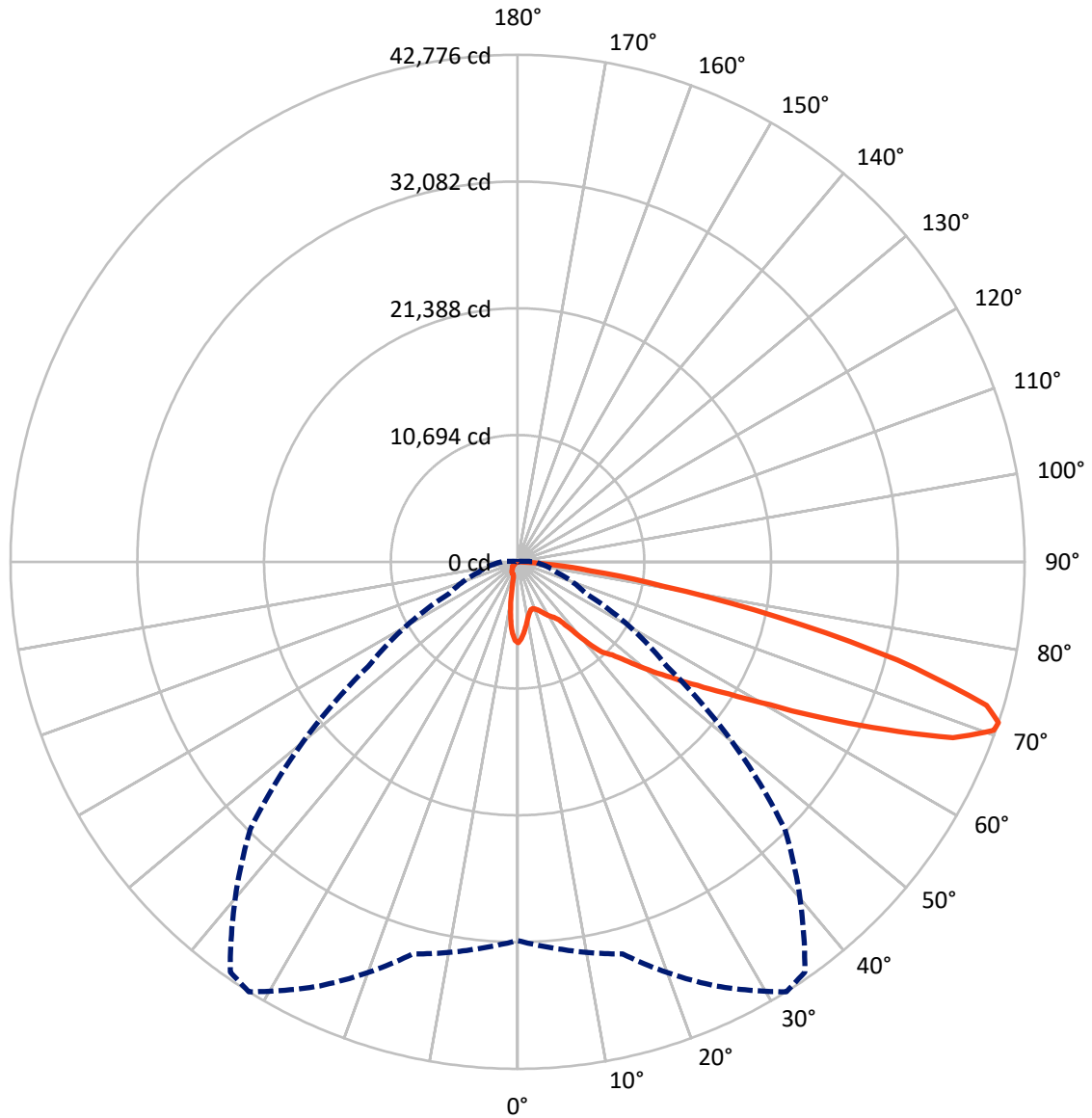
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3557.4 | 0.0 | 3557.4 |
| | % Fixture | 8.4 | 0.0 | 8.4 |
| Street Side | Lumens | 38913.1 | 0.0 | 38913.1 |
| | % Fixture | 91.6 | 0.0 | 91.6 |
| Total | Lumens | 42470.5 | 0.0 | 42470.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 555.4 | 1.3 |
| 10°-20° | 1205.3 | 2.8 |
| 20°-30° | 1875.1 | 4.4 |
| 30°-40° | 3123.9 | 7.4 |
| 40°-50° | 5811.0 | 13.7 |
| 50°-60° | 9329.8 | 22.0 |
| 60°-70° | 12549.0 | 29.5 |
| 70°-80° | 7445.5 | 17.5 |
| 80°-90° | 575.5 | 1.4 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 42470.5 | 100.0 |
| 0°-180° | 42470.5 | 100.0 |

Coefficient of Utilization



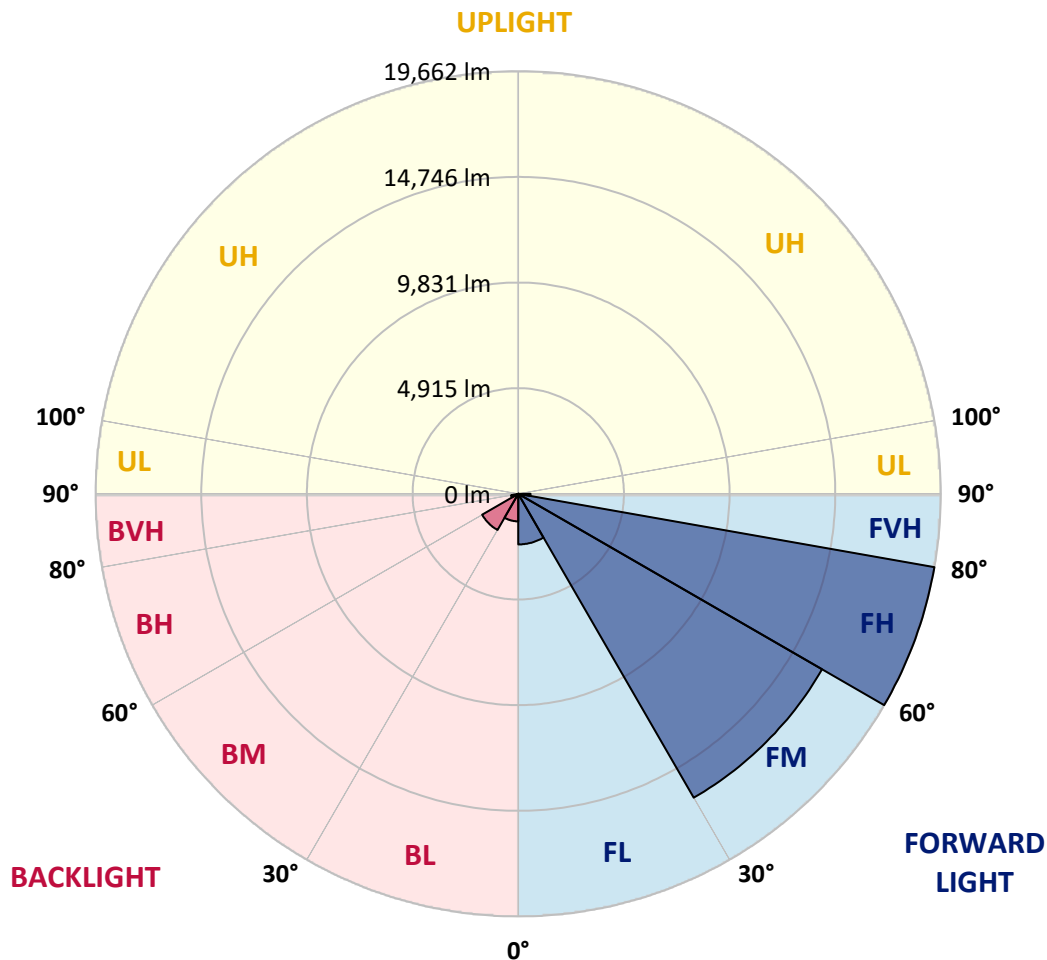
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 2354.0 | 5.5 | | | |
| FM (30°-60°) | 16324.1 | 38.4 | | | |
| FH (60°-80°) | 19661.8 | 46.3 | | | G5 |
| FVH (80°-90°) | 573.3 | 1.3 | | | G4/750 |
| BL (0°-30°) | 1281.8 | 3.0 | B3/2500 | | |
| BM (30°-60°) | 1940.6 | 4.6 | B2/2500 | | |
| BH (60°-80°) | 332.7 | 0.8 | B1/500 | | G1/500 |
| BVH (80°-90°) | 2.2 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 |
| 2.5° | 6334.4 | 6399.6 | 6389.8 | 6412.6 | 6468.0 | 6490.8 | 6552.8 | 6621.3 | 6715.8 | 6781.0 | 6823.4 |
| 5° | 5672.5 | 5721.5 | 5728.0 | 5842.1 | 5897.5 | 5959.5 | 6142.1 | 6340.9 | 6562.6 | 6738.6 | 6856.0 |
| 7.5° | 4965.2 | 4991.3 | 5043.4 | 5193.3 | 5333.5 | 5395.4 | 5672.5 | 6018.1 | 6367.0 | 6696.3 | 6908.1 |
| 10° | 4381.6 | 4411.0 | 4505.5 | 4665.2 | 4795.6 | 4877.1 | 5261.8 | 5695.4 | 6184.4 | 6673.4 | 6983.2 |
| 12.5° | 4049.1 | 4065.3 | 4101.2 | 4244.7 | 4411.0 | 4498.9 | 4913.0 | 5408.6 | 6037.7 | 6683.2 | 7110.3 |
| 15° | 4026.2 | 4019.7 | 3977.3 | 4036.0 | 4186.0 | 4277.2 | 4681.5 | 5212.9 | 5907.3 | 6715.8 | 7260.3 |
| 17.5° | 4146.9 | 4130.6 | 4029.5 | 4029.5 | 4153.4 | 4228.4 | 4583.7 | 5108.6 | 5842.1 | 6790.8 | 7472.2 |
| 20° | 4332.7 | 4306.6 | 4140.3 | 4127.3 | 4247.9 | 4326.2 | 4642.4 | 5115.1 | 5855.1 | 6931.0 | 7755.8 |
| 22.5° | 4567.4 | 4538.0 | 4287.0 | 4293.6 | 4424.0 | 4502.2 | 4811.9 | 5232.4 | 5936.6 | 7103.8 | 8059.0 |
| 25° | 4873.8 | 4841.2 | 4544.6 | 4531.6 | 4668.5 | 4736.9 | 5062.9 | 5441.1 | 6050.7 | 7319.0 | 8456.7 |
| 27.5° | 5281.4 | 5212.9 | 4857.5 | 4838.0 | 4984.7 | 5072.7 | 5366.2 | 5721.5 | 6252.9 | 7615.6 | 8991.4 |
| 30° | 5617.1 | 5542.2 | 5203.1 | 5151.0 | 5307.5 | 5375.9 | 5679.1 | 6099.7 | 6650.6 | 8134.0 | 9731.4 |
| 32.5° | 6057.3 | 5946.5 | 5548.7 | 5411.8 | 5578.0 | 5666.1 | 6132.2 | 6803.9 | 7240.7 | 8681.6 | 10611.7 |
| 35° | 7048.3 | 6979.9 | 6494.1 | 6014.9 | 6005.1 | 6115.9 | 6800.6 | 7514.5 | 7847.0 | 9535.8 | 11811.3 |
| 37.5° | 8466.5 | 8417.6 | 7902.5 | 7260.3 | 7074.4 | 7022.3 | 7612.3 | 8297.0 | 8815.4 | 10709.5 | 13206.6 |
| 40° | 10112.9 | 9998.7 | 9526.0 | 8981.6 | 8740.3 | 8587.1 | 8570.8 | 9460.8 | 10080.2 | 12303.7 | 14660.7 |
| 42.5° | 11293.0 | 11084.4 | 10510.6 | 10471.5 | 10419.3 | 10259.5 | 9796.6 | 11162.6 | 11713.5 | 14018.5 | 16215.7 |
| 45° | 12531.8 | 12215.6 | 11361.5 | 11214.7 | 11195.2 | 11185.4 | 11648.4 | 13177.4 | 13493.6 | 15876.7 | 17813.2 |
| 47.5° | 13493.6 | 13242.6 | 12541.7 | 12476.4 | 12557.9 | 12779.6 | 14096.7 | 15316.0 | 15250.8 | 17532.8 | 19153.1 |
| 50° | 14774.8 | 14585.7 | 13806.5 | 13930.4 | 14351.0 | 14712.9 | 16858.0 | 17647.0 | 16695.0 | 18836.9 | 20127.9 |
| 52.5° | 16287.5 | 15938.6 | 15215.0 | 15550.7 | 16196.2 | 16799.3 | 19788.8 | 19687.8 | 17708.9 | 19818.2 | 20854.9 |
| 55° | 17598.0 | 17350.3 | 17102.5 | 17451.3 | 18416.3 | 19169.4 | 22436.0 | 21216.7 | 18445.7 | 20607.1 | 21174.4 |
| 57.5° | 19814.9 | 19756.3 | 19501.9 | 19857.3 | 21027.7 | 21810.1 | 24806.1 | 22403.4 | 18918.4 | 21017.9 | 20799.4 |
| 60° | 23094.6 | 23000.0 | 22527.4 | 22980.5 | 24506.2 | 25735.3 | 26990.4 | 23469.5 | 19025.9 | 20858.1 | 19720.4 |
| 62.5° | 27039.3 | 26716.6 | 26312.3 | 26980.6 | 29073.6 | 29614.8 | 29047.6 | 24102.0 | 18625.0 | 19586.7 | 17118.8 |
| 65° | 30723.2 | 30390.7 | 30400.5 | 31808.8 | 34087.7 | 34456.0 | 31447.0 | 24007.4 | 17451.3 | 16401.6 | 12626.4 |
| 67.5° | 33543.2 | 33487.8 | 33885.6 | 36633.8 | 39613.5 | 39359.2 | 33592.1 | 22592.5 | 13972.8 | 10631.2 | 6709.3 |
| 70° | 33686.7 | 33794.2 | 34935.3 | 39574.4 | 42599.8 | 42195.6 | 33409.6 | 18364.2 | 8711.0 | 4890.2 | 2643.9 |
| 71° | 31952.3 | 32676.0 | 34253.9 | 39483.1 | 42775.9 | 42251.0 | 31870.8 | 15381.1 | 6389.8 | 3410.1 | 1907.1 |
| 72.5° | 27228.4 | 27609.9 | 31019.9 | 37158.7 | 41383.8 | 40262.3 | 27968.5 | 10781.2 | 4091.5 | 2086.4 | 1095.4 |
| 75° | 14996.5 | 15935.4 | 20773.4 | 29151.8 | 33099.8 | 32115.3 | 18227.2 | 5121.6 | 2040.9 | 1141.1 | 453.1 |
| 77.5° | 7139.7 | 6957.1 | 10135.6 | 17337.2 | 22442.6 | 22390.4 | 9183.7 | 2275.6 | 1189.9 | 772.6 | 228.2 |
| 80° | 2040.9 | 2295.1 | 3879.5 | 8241.5 | 12460.1 | 12597.1 | 3527.4 | 1098.7 | 824.8 | 603.1 | 117.4 |
| 82.5° | 616.2 | 629.2 | 1424.7 | 3644.8 | 6197.5 | 5842.1 | 1323.6 | 560.8 | 593.3 | 479.2 | 68.5 |
| 85° | 107.6 | 133.6 | 420.6 | 1284.5 | 2363.5 | 1793.1 | 332.5 | 267.4 | 391.2 | 316.2 | 39.1 |
| 87.5° | 6.6 | 9.8 | 140.2 | 146.7 | 208.7 | 120.6 | 58.7 | 39.1 | 84.8 | 84.8 | 22.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: GALN-SA9D-840-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 | 6829.9 |
| 2.5° | 6852.7 | 6872.3 | 6859.3 | 6829.9 | 6781.0 | 6722.4 | 6644.1 | 6578.9 | 6523.5 | 6494.1 | 6530.0 |
| 5° | 6895.1 | 6921.2 | 6856.0 | 6709.3 | 6487.6 | 6246.4 | 5972.5 | 5760.6 | 5594.3 | 5542.2 | 5522.6 |
| 7.5° | 6960.3 | 6976.6 | 6800.6 | 6474.6 | 6005.1 | 5434.6 | 4935.8 | 4515.2 | 4189.3 | 4091.5 | 3948.0 |
| 10° | 7045.1 | 7035.3 | 6702.8 | 6096.4 | 5271.6 | 4414.2 | 3641.5 | 3067.8 | 2634.2 | 2477.7 | 2464.6 |
| 12.5° | 7175.5 | 7123.4 | 6578.9 | 5581.3 | 4397.8 | 3276.4 | 2321.2 | 1815.9 | 1542.1 | 1450.7 | 1431.2 |
| 15° | 7338.5 | 7214.6 | 6383.3 | 4978.2 | 3367.7 | 2115.8 | 1431.2 | 1278.0 | 1242.1 | 1235.6 | 1229.0 |
| 17.5° | 7530.8 | 7335.2 | 6125.8 | 4238.1 | 2366.8 | 1372.5 | 1196.5 | 1193.2 | 1196.5 | 1189.9 | 1186.7 |
| 20° | 7791.6 | 7462.4 | 5819.3 | 3361.1 | 1564.8 | 1157.3 | 1141.1 | 1141.1 | 1144.3 | 1141.1 | 1141.1 |
| 22.5° | 8068.7 | 7612.3 | 5441.1 | 2565.7 | 1180.2 | 1098.7 | 1095.4 | 1101.9 | 1108.4 | 1105.2 | 1105.2 |
| 25° | 8411.1 | 7807.9 | 4942.3 | 1757.2 | 1056.3 | 1049.7 | 1053.0 | 1066.1 | 1079.1 | 1082.4 | 1079.1 |
| 27.5° | 8906.6 | 8049.2 | 4407.7 | 1209.5 | 968.2 | 974.8 | 1007.3 | 1040.0 | 1059.6 | 1062.8 | 1062.8 |
| 30° | 9464.1 | 8316.6 | 3710.0 | 981.3 | 896.5 | 896.5 | 935.6 | 997.6 | 1040.0 | 1046.5 | 1049.7 |
| 32.5° | 10181.3 | 8626.2 | 2937.4 | 883.5 | 828.0 | 821.6 | 857.4 | 932.4 | 1010.6 | 1033.4 | 1033.4 |
| 35° | 11068.1 | 8991.4 | 2184.2 | 821.6 | 779.2 | 762.9 | 782.5 | 844.4 | 945.5 | 1010.6 | 1017.2 |
| 37.5° | 12108.0 | 9337.0 | 1597.5 | 766.2 | 733.5 | 710.7 | 723.8 | 772.6 | 854.1 | 951.9 | 978.0 |
| 40° | 13069.7 | 9643.4 | 1193.2 | 720.5 | 687.9 | 671.6 | 681.4 | 704.2 | 772.6 | 864.0 | 880.2 |
| 42.5° | 14119.5 | 9881.4 | 948.7 | 671.6 | 642.3 | 635.7 | 635.7 | 645.5 | 691.1 | 743.3 | 746.6 |
| 45° | 15166.0 | 9966.1 | 795.5 | 612.9 | 593.3 | 599.9 | 596.6 | 590.0 | 609.6 | 603.1 | 603.1 |
| 47.5° | 15912.6 | 9865.1 | 658.5 | 557.5 | 557.5 | 567.3 | 550.9 | 528.1 | 518.4 | 479.2 | 482.5 |
| 50° | 16424.4 | 9496.7 | 541.2 | 492.2 | 518.4 | 531.4 | 498.8 | 463.0 | 427.1 | 384.7 | 374.9 |
| 52.5° | 16636.3 | 8841.4 | 443.4 | 407.5 | 459.7 | 476.0 | 436.8 | 394.5 | 339.1 | 303.2 | 293.4 |
| 55° | 16499.4 | 8032.9 | 368.4 | 332.5 | 388.0 | 407.5 | 368.4 | 319.5 | 257.5 | 218.4 | 211.9 |
| 57.5° | 15896.2 | 7067.9 | 312.9 | 264.1 | 309.7 | 322.8 | 296.7 | 244.5 | 182.6 | 143.5 | 143.5 |
| 60° | 14853.1 | 6070.3 | 254.3 | 208.7 | 231.4 | 251.0 | 225.0 | 176.0 | 123.9 | 88.1 | 81.5 |
| 62.5° | 12737.2 | 4929.3 | 205.4 | 163.0 | 163.0 | 179.3 | 156.5 | 127.2 | 78.2 | 45.7 | 42.4 |
| 65° | 9196.8 | 3380.7 | 163.0 | 120.6 | 117.4 | 117.4 | 97.8 | 84.8 | 45.7 | 19.6 | 13.0 |
| 67.5° | 4997.7 | 1907.1 | 130.4 | 91.2 | 81.5 | 78.2 | 62.0 | 48.9 | 19.6 | 3.3 | 0.0 |
| 70° | 1965.8 | 733.5 | 101.1 | 62.0 | 52.1 | 48.9 | 32.6 | 22.8 | 13.0 | 0.0 | 0.0 |
| 71° | 1333.4 | 505.4 | 88.1 | 52.1 | 42.4 | 35.8 | 26.1 | 19.6 | 9.8 | 0.0 | 0.0 |
| 72.5° | 762.9 | 312.9 | 68.5 | 39.1 | 32.6 | 26.1 | 19.6 | 13.0 | 9.8 | 0.0 | 0.0 |
| 75° | 332.5 | 159.7 | 42.4 | 29.4 | 22.8 | 16.3 | 13.0 | 9.8 | 3.3 | 0.0 | 0.0 |
| 77.5° | 169.5 | 88.1 | 29.4 | 22.8 | 13.0 | 9.8 | 6.6 | 3.3 | 0.0 | 0.0 | 0.0 |
| 80° | 94.5 | 45.7 | 19.6 | 13.0 | 9.8 | 6.6 | 3.3 | 3.3 | 0.0 | 0.0 | 0.0 |
| 82.5° | 52.1 | 26.1 | 9.8 | 6.6 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 32.6 | 16.3 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 16.3 | 6.6 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 3.3 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)