

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: P301576

Luminaire Tested: **GLNA-AF-03-LED-E1-T2R-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301576  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-03-LED-E1-T2R-7050  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18864.5 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 166  
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: 25 FT

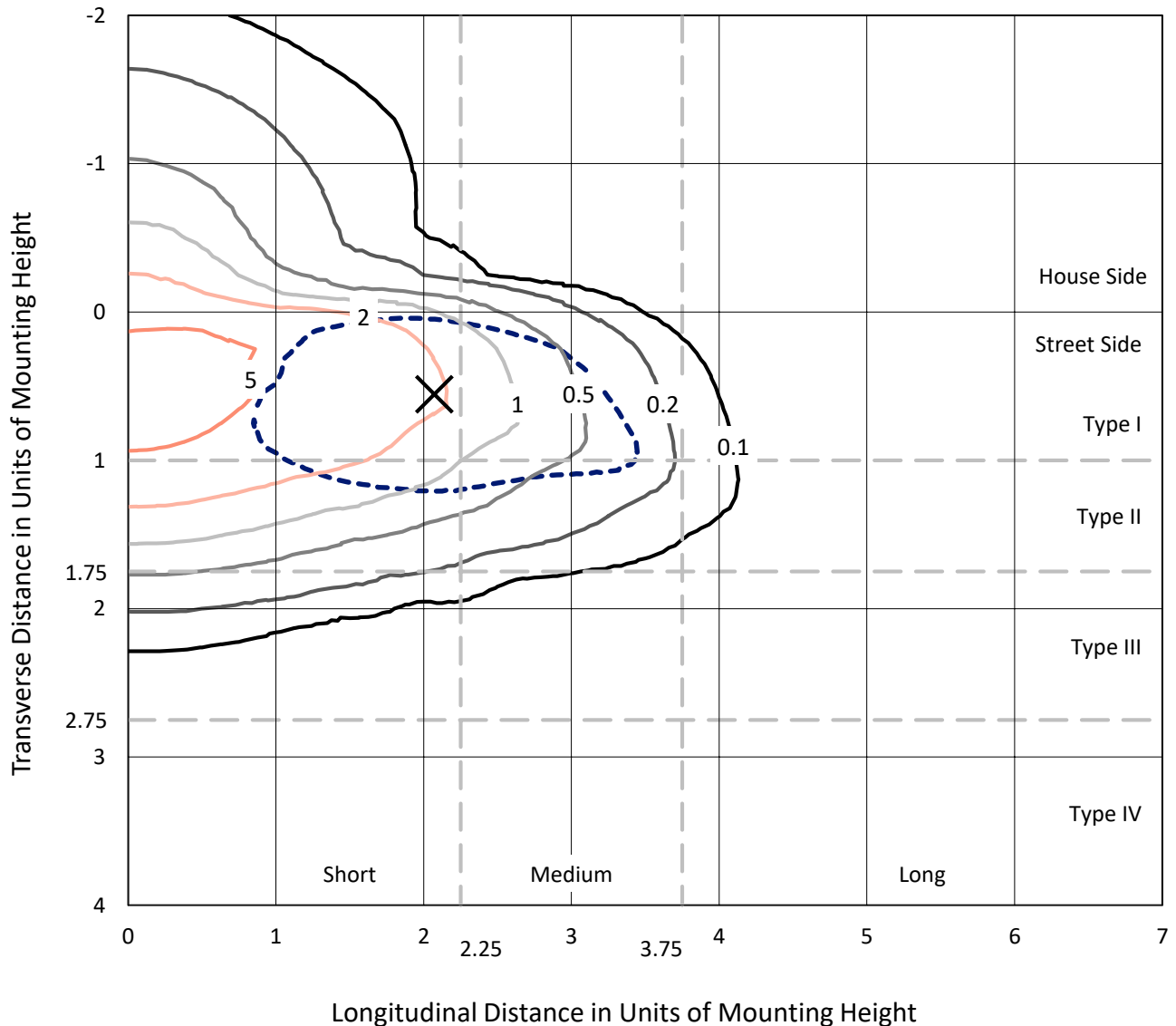


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### Iso-Footcandle Lines of Horizontal Illumination

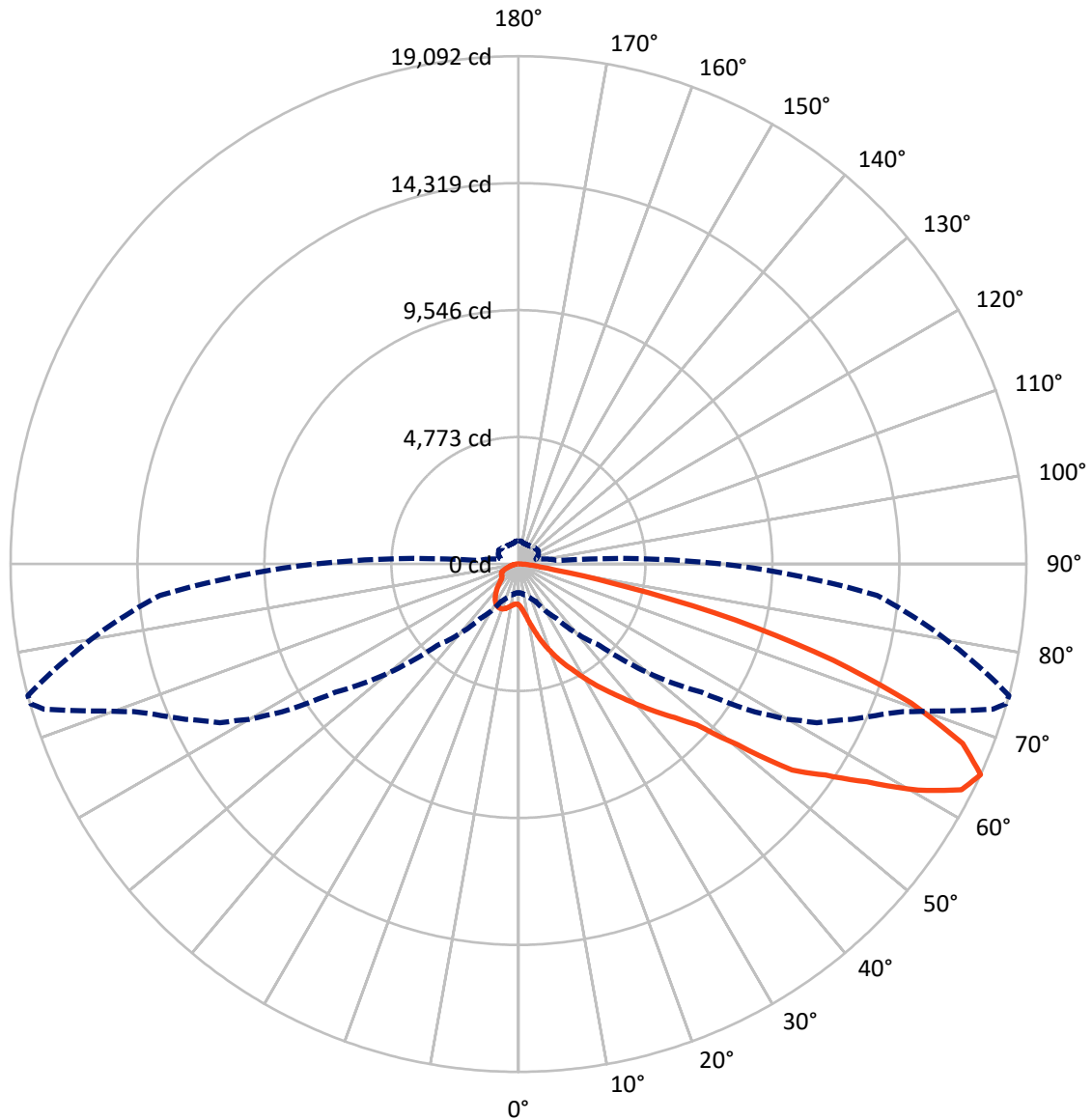
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.6 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2908.5	0.0	2908.5
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	15956.0	0.0	15956.0
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	18864.5	0.0	18864.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.5	1.0
10°-20°	740.4	3.9
20°-30°	1519.1	8.1
30°-40°	2555.7	13.5
40°-50°	3531.3	18.7
50°-60°	4408.1	23.4
60°-70°	3966.9	21.0
70°-80°	1662.9	8.8
80°-90°	290.5	1.5
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°	18864.5	100.0
0°-180°	18864.5	100.0



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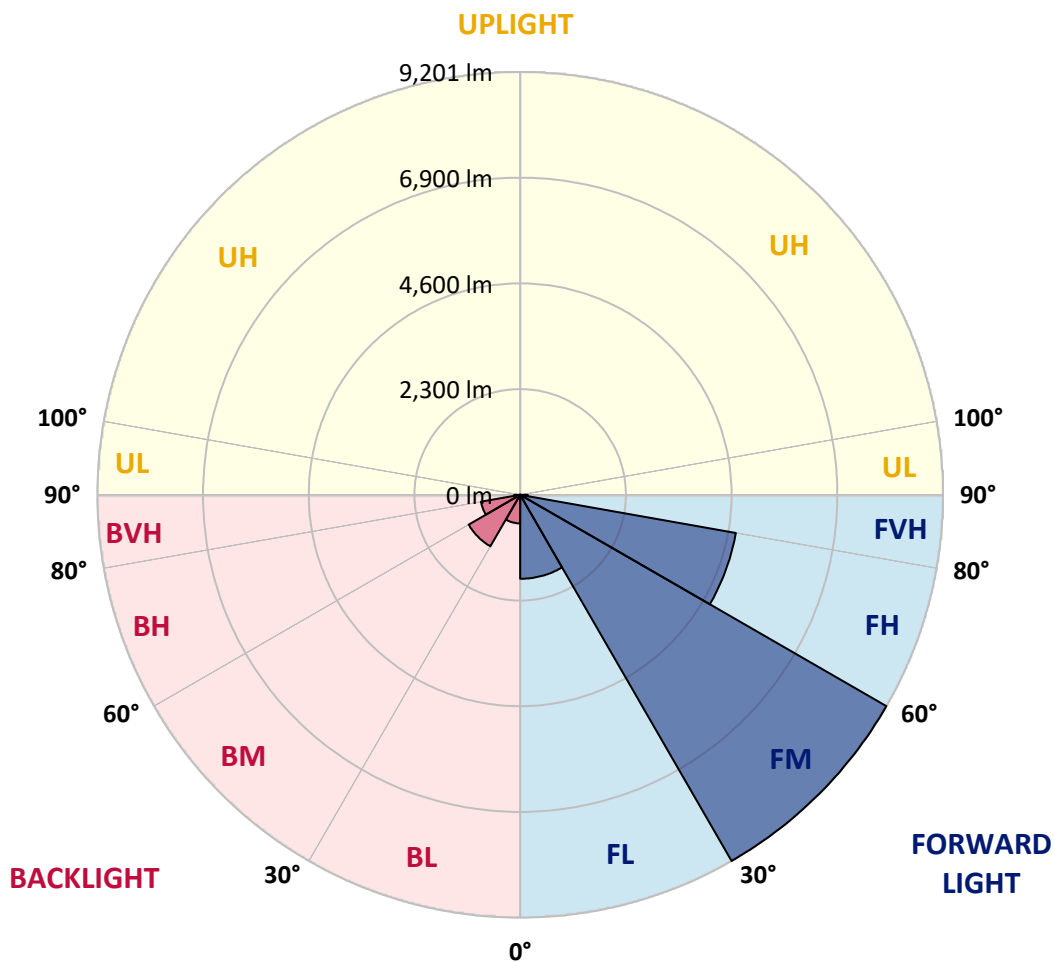
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1827.0	9.7			
FM (30°-60°)	9200.6	48.8			
FH (60°-80°)	4765.1	25.3			G2/5000
FVH (80°-90°)	163.3	0.9			G2/225
BL (0°-30°)	622.0	3.3	B2/1000		
BM (30°-60°)	1294.6	6.9	B2/2500		
BH (60°-80°)	864.7	4.6	B2/1000		G2/1000
BVH (80°-90°)	127.2	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1
2.5°	1946.6	1925.1	1930.4	1894.7	1851.0	1793.7	1730.4	1729.6	1730.4	1724.1	1701.0
5°	2699.1	2673.4	2663.6	2583.1	2465.2	2297.5	2115.3	2095.7	2087.5	2067.1	2019.7
7.5°	3248.4	3234.1	3218.8	3158.1	3051.1	2863.6	2618.8	2577.0	2536.7	2526.9	2473.4
10°	3602.8	3599.1	3567.1	3550.9	3484.2	3321.5	3083.2	3042.9	2999.2	2984.1	2927.7
12.5°	3883.1	3882.3	3867.2	3871.7	3813.4	3695.8	3490.3	3453.7	3421.7	3375.0	3335.0
15°	4077.0	4077.8	4100.3	4125.2	4116.2	4036.7	3843.9	3827.7	3800.2	3768.1	3720.7
17.5°	4235.9	4240.4	4263.4	4309.0	4358.3	4351.9	4199.3	4185.8	4161.7	4118.0	4093.1
20°	4594.8	4611.7	4567.2	4567.2	4572.5	4596.7	4523.3	4512.7	4478.8	4455.5	4435.9
22.5°	5201.1	5220.7	5119.8	5017.3	4916.4	4843.0	4769.9	4783.1	4760.1	4743.9	4732.3
25°	5988.6	6003.9	5840.5	5667.3	5461.7	5193.9	5012.8	5004.6	4992.1	4982.3	4977.0
27.5°	6729.7	6736.1	6581.6	6327.9	6089.5	5704.6	5259.1	5249.3	5234.2	5215.4	5199.2
30°	7363.8	7362.0	7203.0	6960.9	6705.6	6279.7	5633.4	5602.9	5558.1	5507.3	5468.1
32.5°	7912.9	7910.2	7736.0	7485.1	7217.3	6849.4	6145.9	6083.4	6013.7	5914.4	5854.8
35°	8344.9	8343.3	8178.8	7917.4	7610.1	7386.1	6733.4	6656.6	6568.1	6435.2	6343.2
37.5°	8508.3	8508.3	8416.4	8237.9	7966.4	7812.8	7386.1	7293.1	7198.5	7047.5	6944.0
40°	8412.7	8414.6	8434.2	8401.3	8269.2	8151.3	7995.0	7939.6	7858.3	7722.7	7614.6
42.5°	8092.2	8102.0	8232.6	8392.3	8458.3	8439.7	8535.1	8510.2	8453.0	8348.6	8262.8
45°	7685.9	7716.4	7859.1	8161.1	8511.0	8688.7	8987.8	8990.4	8979.8	8923.7	8857.4
47.5°	7128.1	7170.7	7359.3	7767.2	8387.8	8930.8	9447.6	9471.7	9494.2	9457.6	9427.2
50°	6386.9	6437.8	6719.9	7261.0	8137.0	9181.6	10316.4	10425.5	10527.2	10514.8	10535.2
52.5°	5593.1	5653.0	5998.4	6601.2	7705.8	9239.7	10871.8	11049.6	11227.3	11372.7	11527.1
55°	4876.9	4844.8	5190.5	5825.1	6996.7	8978.0	11371.1	11585.4	11783.5	11962.0	12146.1
57.5°	3906.4	3959.1	4305.6	4933.3	6058.2	8239.5	11714.7	12028.3	12313.0	12608.6	12869.2
60°	2855.4	2908.1	3283.9	3921.5	5039.5	7119.9	11452.2	11927.3	12383.5	12836.1	13189.7
62.5°	1724.1	1763.5	2094.6	2702.0	3886.0	5792.3	10282.5	10905.7	11577.2	12118.3	12660.3
65°	1073.3	1095.5	1217.9	1551.9	2495.7	4324.4	8401.3	9080.7	9803.8	10490.7	11054.1
67.5°	878.6	886.5	909.1	980.3	1370.5	2819.9	6252.9	6854.7	7507.4	8171.7	8798.6
70°	790.1	784.8	784.8	789.3	878.6	1516.1	4093.9	4485.9	5029.7	5607.4	6180.6
72.5°	713.3	708.0	698.2	685.0	717.0	924.9	2116.1	2411.7	2803.7	3317.0	3866.1
75°	641.0	633.8	622.5	605.5	627.8	698.2	1016.1	1140.3	1331.3	1604.6	1910.8
77.5°	566.0	557.0	546.4	534.0	562.6	543.0	595.4	640.2	713.3	801.0	916.2
80°	481.3	473.3	469.6	463.5	497.4	413.5	420.6	448.2	491.1	538.5	592.0
82.5°	376.9	376.9	391.0	393.9	431.2	297.5	314.4	338.5	360.8	385.7	410.8
85°	248.2	250.0	298.2	317.1	340.1	200.0	235.7	243.7	261.7	276.0	286.6
87.5°	77.6	84.0	182.2	201.8	195.5	113.4	144.6	148.3	160.8	170.6	179.6
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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**CANDELA DISTRIBUTION (continued):**

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1
2.5°	1701.0	1690.2	1680.4	1679.6	1672.4	1662.6	1666.1	1651.0	1651.8	1643.8	1634.8
5°	2000.1	1992.9	1957.2	1947.4	1920.6	1903.7	1901.0	1865.3	1860.8	1840.4	1817.8
7.5°	2430.5	2407.2	2357.1	2333.0	2287.5	2253.6	2237.7	2190.3	2166.9	2113.4	2089.3
10°	2881.3	2851.9	2790.2	2756.3	2712.6	2658.0	2628.6	2560.0	2533.0	2484.0	2425.2
12.5°	3299.3	3269.9	3206.3	3180.4	3122.4	3064.3	3032.3	2954.7	2919.7	2841.1	2794.7
15°	3685.7	3656.3	3601.0	3574.2	3516.2	3468.8	3425.9	3349.4	3308.3	3234.9	3174.3
17.5°	4060.8	4029.6	3981.3	3957.2	3901.1	3852.9	3806.5	3734.0	3692.1	3619.0	3564.4
20°	4409.1	4385.8	4351.1	4318.8	4262.6	4218.9	4163.6	4101.1	4040.4	3986.6	3935.0
22.5°	4712.7	4703.7	4666.3	4652.0	4603.8	4566.2	4518.0	4456.5	4412.6	4344.8	4296.5
25°	4974.4	4971.7	4953.7	4949.2	4915.3	4879.5	4868.9	4818.1	4777.8	4718.0	4668.2
27.5°	5199.2	5201.9	5197.7	5210.1	5201.1	5184.9	5186.0	5169.0	5145.7	5095.7	5052.0
30°	5449.3	5435.0	5443.2	5460.9	5466.2	5468.1	5497.5	5507.3	5505.7	5472.6	5451.1
32.5°	5802.9	5769.0	5737.7	5735.1	5752.8	5760.0	5810.0	5836.0	5858.3	5866.2	5869.9
35°	6253.7	6185.9	6120.7	6086.0	6055.6	6063.5	6099.3	6141.4	6190.4	6224.3	6264.6
37.5°	6821.6	6738.7	6623.5	6541.4	6520.7	6476.2	6499.3	6532.4	6580.6	6633.3	6702.9
40°	7510.0	7384.2	7254.7	7145.8	7087.0	7004.6	7003.8	6997.5	7027.1	7076.2	7174.4
42.5°	8172.7	8061.0	7923.5	7809.3	7732.5	7622.6	7600.3	7542.3	7555.6	7598.5	7694.1
45°	8793.1	8701.2	8617.2	8485.3	8419.9	8301.2	8263.6	8195.0	8156.6	8176.2	8271.8
47.5°	9394.1	9335.3	9247.6	9162.0	9112.0	9005.8	8957.6	8908.3	8859.3	8857.4	8957.6
50°	10565.6	10534.4	10430.8	10341.5	10365.6	10235.3	10243.3	10111.1	10171.0	10178.1	10387.9
52.5°	11666.4	11775.6	11852.4	11945.9	12006.8	12018.5	12058.5	12118.3	12190.6	12333.4	12528.1
55°	12296.8	12433.5	12513.0	12584.5	12702.4	12727.3	12794.3	12873.7	12937.1	13097.8	13263.1
57.5°	13046.2	13299.7	13422.8	13536.2	13695.1	13755.8	13867.6	13954.2	14036.3	14226.5	14426.4
60°	13507.6	13816.7	14067.5	14246.9	14446.1	14589.1	14757.8	14893.4	15086.3	15314.0	15612.3
62.5°	13140.7	13594.2	13927.4	14235.5	14505.9	14779.3	15021.1	15274.8	15567.5	15912.1	16374.9
65°	11679.2	12140.6	12711.1	13030.8	13388.9	13810.3	14178.3	14589.1	14988.0	15489.9	16173.8
67.5°	9402.3	9938.7	10579.9	10902.3	11313.9	11784.3	12197.0	12698.7	13164.8	13772.7	14618.5
70°	6777.1	7470.8	8010.1	8346.8	8827.2	9312.0	9710.3	10294.1	10679.8	11303.0	12177.4
72.5°	4291.2	4838.5	5499.3	5923.4	6350.1	6841.5	7248.6	7752.1	8111.8	8679.7	9471.7
75°	2307.3	2710.7	3291.1	3694.0	4151.1	4570.7	5047.5	5384.9	5651.1	6100.3	6743.2
77.5°	1081.2	1326.8	1620.5	1930.4	2240.3	2563.5	2877.9	3151.0	3265.4	3522.6	3901.9
80°	656.4	735.8	821.4	917.0	1046.5	1150.9	1289.4	1389.3	1396.4	1477.7	1593.8
82.5°	438.4	467.8	493.7	517.8	550.9	576.9	606.3	641.0	655.3	674.1	711.7
85°	299.0	313.3	318.6	334.0	330.3	339.3	351.0	362.6	368.7	367.9	384.9
87.5°	183.8	191.0	194.7	198.1	195.5	192.0	197.3	203.7	205.3	200.0	201.8
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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**CANDELA DISTRIBUTION (continued):**

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1
2.5°	1636.7	1628.7	1620.5	1615.2	1613.4	1566.2	1545.5	1532.3	1503.7	1480.4	1461.6
5°	1805.4	1788.4	1775.2	1759.0	1750.0	1630.3	1586.6	1556.4	1506.3	1476.9	1449.9
7.5°	2076.9	2029.5	2001.9	1970.7	1943.9	1727.8	1655.5	1608.1	1538.4	1499.2	1468.7
10°	2384.9	2335.9	2292.0	2243.8	2201.9	1857.3	1751.9	1678.5	1586.6	1535.7	1495.5
12.5°	2728.7	2680.5	2625.2	2563.5	2510.0	2021.5	1875.1	1770.7	1644.6	1576.8	1520.7
15°	3135.1	3050.0	2983.0	2911.8	2849.3	2218.1	2018.9	1874.3	1706.3	1614.4	1539.5
17.5°	3512.5	3423.3	3332.4	3269.9	3197.6	2438.4	2163.5	1979.4	1757.2	1638.5	1542.9
20°	3881.5	3784.0	3705.6	3621.6	3545.6	2667.0	2317.9	2072.4	1790.3	1639.3	1520.7
22.5°	4206.5	4145.6	4058.2	3967.0	3890.2	2895.6	2462.5	2151.1	1802.7	1618.9	1481.2
25°	4576.0	4511.9	4404.6	4327.8	4242.2	3128.7	2604.5	2211.7	1795.6	1580.5	1420.5
27.5°	4970.7	4899.4	4789.5	4709.2	4605.7	3370.5	2734.8	2255.4	1768.8	1518.0	1339.2
30°	5382.3	5317.1	5209.0	5128.0	5023.4	3626.9	2880.5	2284.8	1715.3	1431.4	1244.7
32.5°	5824.3	5769.8	5662.8	5578.0	5466.2	3904.5	3016.1	2293.8	1634.0	1328.6	1144.8
35°	6243.9	6206.6	6116.2	6036.8	5920.8	4167.0	3160.0	2289.3	1537.6	1216.0	1053.7
37.5°	6716.5	6693.9	6649.4	6548.5	6406.5	4523.3	3332.4	2270.5	1419.7	1104.5	984.0
40°	7220.0	7221.8	7173.6	7104.8	6972.6	4955.6	3537.7	2234.0	1291.0	1006.3	920.4
42.5°	7752.9	7780.7	7757.4	7708.4	7581.5	5391.3	3783.2	2189.5	1166.2	910.6	858.2
45°	8363.7	8397.6	8433.4	8361.1	8237.9	5966.3	4106.4	2131.5	1031.2	831.2	815.3
47.5°	9068.3	9121.8	9153.8	9154.9	9031.7	6678.8	4631.3	2096.5	911.7	777.7	794.6
50°	10554.8	10572.0	10647.7	10779.9	10685.3	8328.0	5548.3	2075.0	830.4	744.6	779.5
52.5°	12696.8	12883.5	13014.9	13005.9	12877.2	9375.3	6053.7	1964.3	782.2	732.1	772.4
55°	13569.3	13802.4	14045.3	14109.4	14009.5	10269.2	6531.6	1853.6	758.9	741.1	775.0
57.5°	14731.9	15124.7	15457.9	15598.0	15453.4	11413.0	7160.1	1795.6	751.7	765.2	792.0
60°	16089.9	16575.6	17013.2	17264.9	17264.9	12727.3	7812.0	1771.5	741.9	801.0	820.6
62.5°	16962.4	17675.7	18336.5	18705.2	18694.4	13642.4	8101.2	1689.4	719.7	825.9	859.8
65°	16965.8	17814.2	18656.0	19070.5	19091.7	13530.1	7623.6	1492.0	678.6	829.6	899.3
67.5°	15551.6	16455.9	17437.3	17900.8	18007.8	12455.0	6599.4	1226.9	611.6	793.8	913.6
70°	13134.4	14017.5	15019.2	15474.8	15665.0	10617.3	5315.3	945.6	526.0	715.2	883.9
72.5°	10347.6	11213.8	11911.2	12244.1	12392.5	8115.5	3870.6	714.4	431.2	602.6	804.4
75°	7326.2	7976.2	8346.8	8420.9	8444.0	4892.3	2351.8	531.3	355.5	468.8	679.4
77.5°	4135.0	4413.6	4383.2	4416.3	4141.3	1888.6	1024.3	380.4	293.0	356.3	526.8
80°	1614.4	1664.5	1563.6	1532.3	1405.4	702.7	451.9	265.1	233.9	269.6	368.7
82.5°	711.7	734.8	713.3	718.9	687.6	362.6	270.4	192.0	178.5	197.3	244.7
85°	392.0	399.2	397.3	409.0	392.0	144.6	128.5	117.9	125.0	134.0	157.1
87.5°	191.0	192.8	186.7	196.5	190.2	73.1	63.3	67.0	73.1	75.0	75.0
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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**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
0°	1533.1	1533.1	1533.1	1533.1	1533.1	1533.1
2.5°	1448.3	1441.2	1442.0	1440.1	1436.7	1436.7
5°	1435.9	1428.7	1428.7	1426.9	1422.4	1423.2
7.5°	1448.3	1436.7	1432.2	1425.8	1419.7	1419.7
10°	1462.6	1442.0	1429.5	1418.9	1410.7	1410.7
12.5°	1473.2	1441.2	1420.5	1406.2	1398.3	1398.3
15°	1476.9	1434.8	1406.2	1389.3	1382.1	1381.3
17.5°	1465.3	1410.7	1376.0	1356.4	1347.4	1344.8
20°	1429.5	1367.0	1325.2	1302.7	1290.2	1285.7
22.5°	1376.0	1304.5	1255.5	1232.2	1216.0	1213.4
25°	1301.1	1224.3	1176.0	1153.5	1144.8	1141.9
27.5°	1213.4	1141.9	1100.8	1086.5	1078.6	1077.8
30°	1130.5	1069.6	1039.4	1028.5	1018.7	1017.1
32.5°	1052.6	1014.2	1002.8	987.5	964.4	961.8
35°	997.3	993.8	985.9	951.7	923.4	915.1
37.5°	963.4	996.5	955.4	888.4	868.0	866.1
40°	943.8	968.9	898.2	875.1	876.7	875.1
42.5°	899.3	924.9	900.0	889.5	896.3	898.2
45°	854.5	883.1	913.6	906.4	923.4	923.4
47.5°	829.6	872.2	912.5	912.5	937.7	946.4
50°	801.0	863.5	898.2	910.6	930.5	923.4
52.5°	799.1	848.1	877.8	900.0	909.1	900.8
55°	801.8	835.7	857.1	882.3	892.9	893.7
57.5°	805.5	828.5	842.8	854.5	886.5	886.5
60°	814.2	822.4	830.4	836.7	878.6	879.4
62.5°	828.5	816.1	814.2	820.6	874.1	870.6
65°	851.0	807.1	793.8	799.9	869.6	859.0
67.5°	881.2	793.8	767.9	772.4	866.1	842.8
70°	909.1	772.4	735.8	731.3	832.2	791.2
72.5°	911.7	747.5	691.1	677.8	723.4	683.9
75°	866.9	730.3	642.1	602.6	597.3	592.0
77.5°	781.4	720.5	584.8	523.1	512.5	516.0
80°	653.7	683.9	516.0	442.9	500.9	494.8
82.5°	488.4	603.7	438.4	392.0	391.0	345.7
85°	271.5	470.7	357.1	293.7	204.5	198.1
87.5°	76.0	261.7	250.0	166.1	113.4	117.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)