

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: P301944

Luminaire Tested: **GLNA-AF-05-LED-E1-SL4-7027-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301944  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-05-LED-E1-SL4-7027-600-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12556.8 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 162  
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

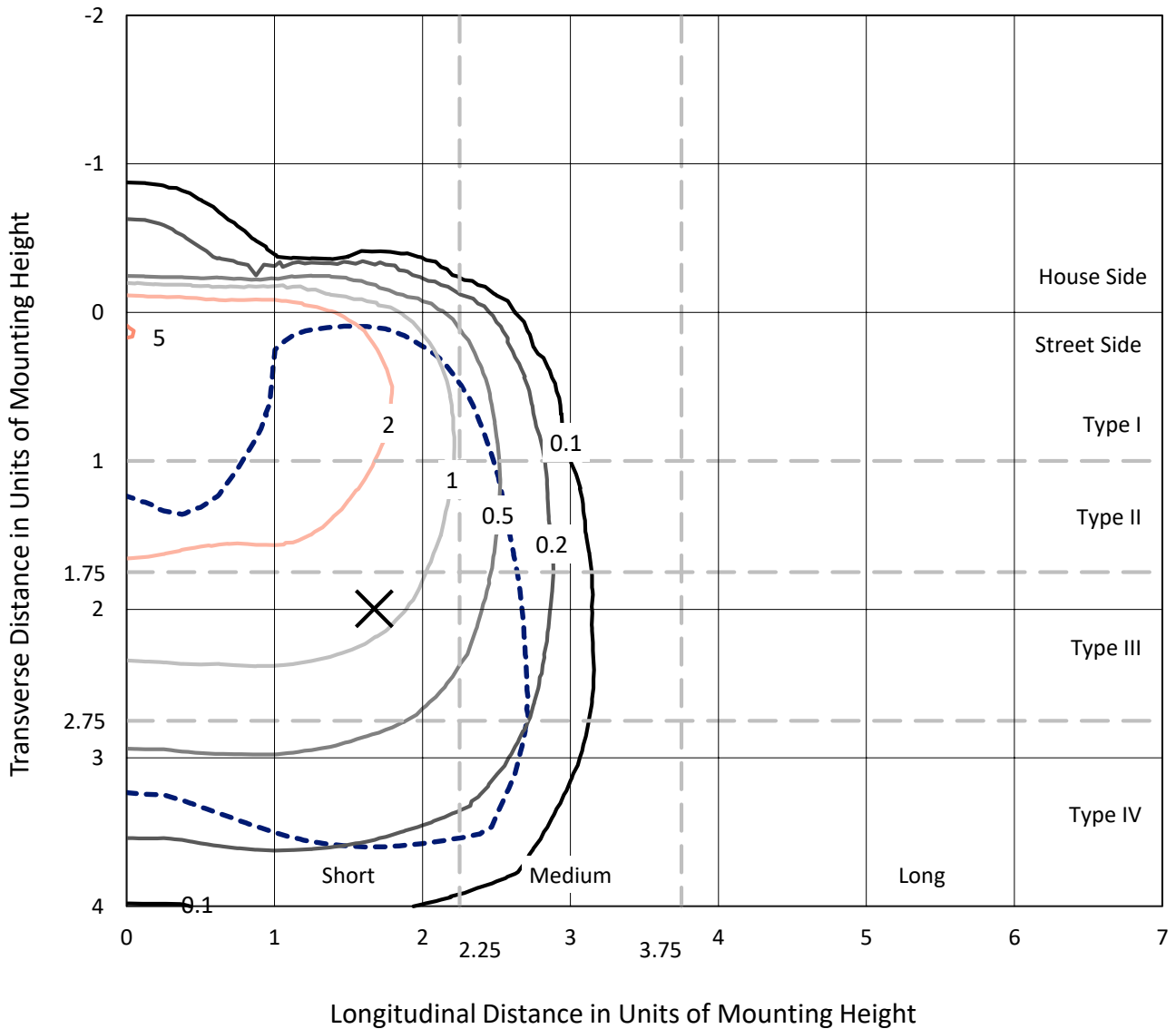


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

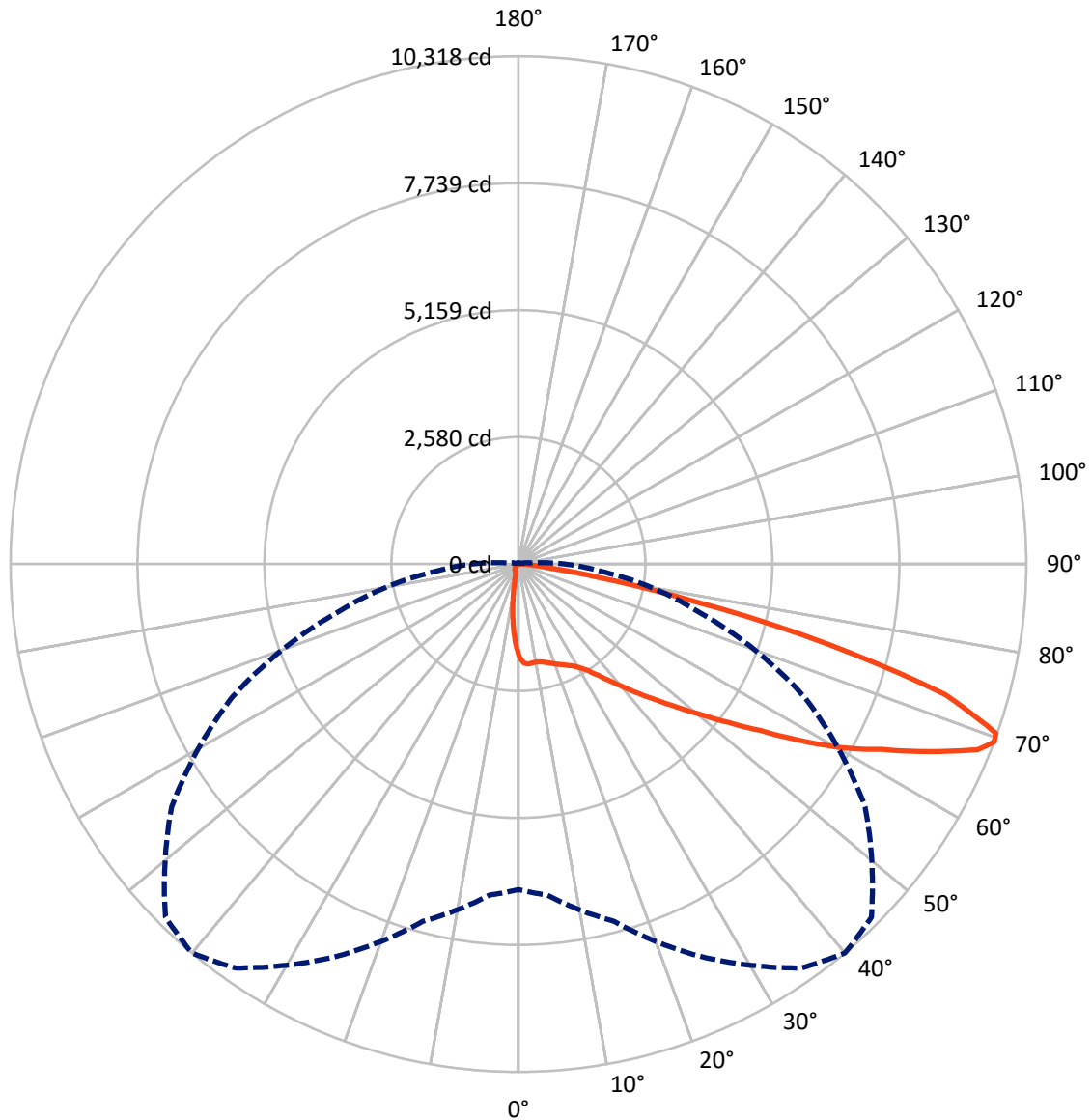


Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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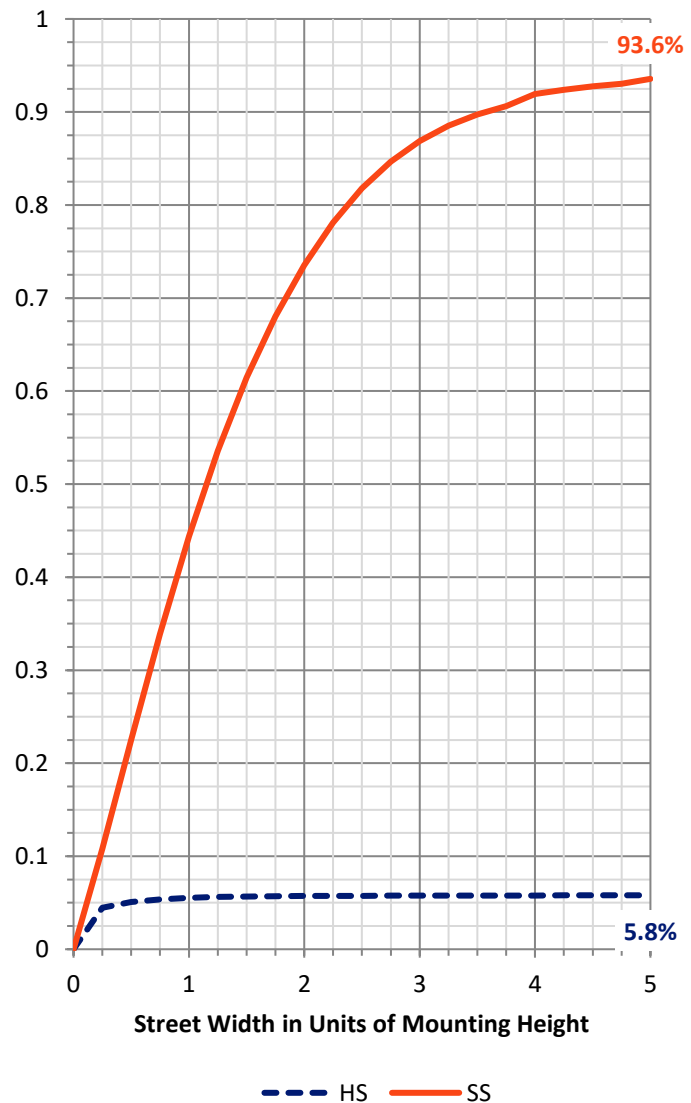
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	734.6	0.0	734.6
	% Fixture	5.9	0.0	5.9
<b>Street Side</b>	Lumens	11822.1	0.0	11822.1
	% Fixture	94.1	0.0	94.1
<b>Total</b>	Lumens	12556.8	0.0	12556.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.1	1.2
10°-20°	374.1	3.0
20°-30°	630.1	5.0
30°-40°	1031.4	8.2
40°-50°	1785.9	14.2
50°-60°	2812.9	22.4
60°-70°	3673.6	29.3
70°-80°	1892.1	15.1
80°-90°	204.7	1.6
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°	12556.8	100.0
0°-180°	12556.8	100.0

**Coefficient of Utilization**



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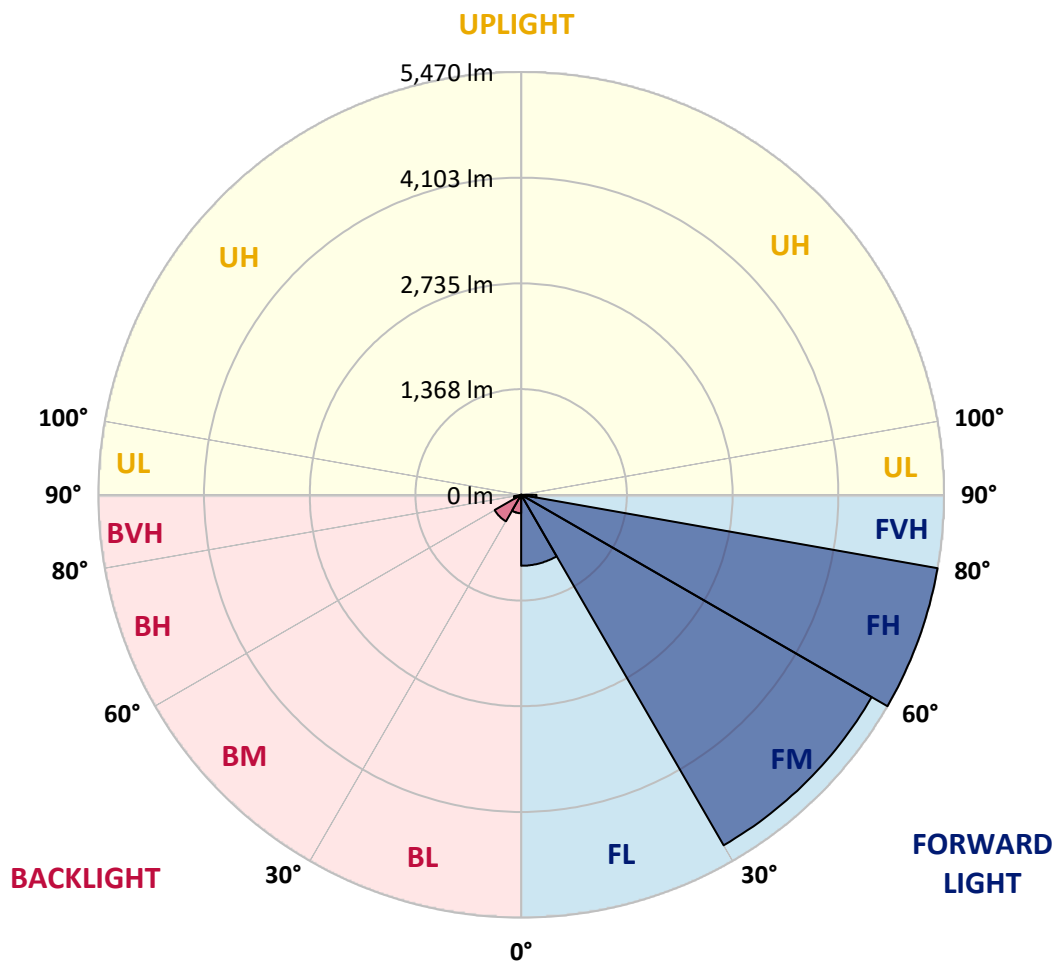
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	918.3	7.3			
FM	(30°-60°)	5235.4	41.7			
FH	(60°-80°)	5470.3	43.6			G3/7500
FVH	(80°-90°)	198.2	1.6			G2/225
BL	(0°-30°)	238.0	1.9	B1/500		
BM	(30°-60°)	394.8	3.1	B1/1000		
BH	(60°-80°)	95.4	0.8	B0/110		G0/110
BVH	(80°-90°)	6.4	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0
2.5°	2059.9	2048.7	2042.0	2033.0	2021.8	2012.1	2008.3	1980.7	1954.5	1918.7	1877.5
5°	2098.0	2094.3	2082.3	2070.4	2056.9	2042.0	2033.8	2000.9	1963.5	1911.2	1839.4
7.5°	2101.8	2097.3	2082.3	2065.9	2047.2	2029.3	2015.1	1982.2	1947.8	1894.7	1807.3
10°	2095.8	2090.6	2079.3	2061.4	2038.2	2021.0	2006.8	1975.5	1946.3	1898.5	1801.3
12.5°	2089.1	2083.8	2078.6	2069.6	2049.5	2037.5	2025.5	1995.6	1969.5	1929.1	1823.0
15°	2095.8	2092.8	2098.8	2095.0	2083.8	2073.4	2061.4	2034.5	2010.6	1976.9	1862.6
17.5°	2124.2	2124.2	2142.9	2145.1	2134.7	2119.7	2102.5	2075.6	2055.4	2027.0	1909.7
20°	2190.7	2188.5	2212.4	2216.9	2191.5	2168.3	2142.9	2110.0	2094.3	2076.4	1956.0
22.5°	2305.1	2294.6	2308.8	2304.3	2254.2	2218.4	2187.0	2146.6	2138.4	2130.2	2007.6
25°	2453.8	2447.8	2457.5	2413.4	2325.3	2276.7	2239.3	2193.7	2193.7	2201.9	2065.9
27.5°	2669.8	2647.4	2614.5	2536.8	2404.5	2342.4	2302.1	2253.5	2266.2	2296.8	2142.9
30°	2891.1	2866.4	2790.9	2671.3	2500.9	2435.9	2388.8	2338.0	2367.9	2423.9	2246.0
32.5°	3109.3	3081.6	2974.8	2823.8	2639.2	2574.1	2528.6	2472.5	2522.6	2616.7	2397.0
35°	3320.8	3296.2	3172.8	2994.9	2823.0	2769.2	2727.4	2678.8	2743.1	2874.6	2610.0
37.5°	3558.5	3531.6	3381.4	3188.5	3046.5	3007.7	2977.0	2928.4	3040.5	3233.4	2906.8
40°	3850.8	3805.2	3602.6	3410.5	3305.1	3286.4	3265.5	3258.8	3432.9	3699.8	3302.1
42.5°	4185.6	4110.9	3834.3	3644.5	3589.2	3602.6	3597.4	3627.3	3924.0	4279.8	3783.5
45°	4520.5	4424.0	4092.2	3894.1	3901.6	3948.7	3977.8	4097.4	4539.1	4945.0	4301.5
47.5°	4804.5	4709.6	4339.6	4163.9	4253.6	4346.3	4425.5	4652.0	5171.5	5599.7	4704.3
50°	5047.4	4957.7	4601.9	4460.7	4662.5	4811.9	4940.5	5276.1	5851.6	6098.3	4986.8
52.5°	5246.2	5186.4	4874.0	4800.7	5129.6	5348.6	5537.0	5939.1	6454.0	6503.4	5206.6
55°	5439.8	5397.2	5166.2	5205.1	5678.2	5976.4	6214.9	6642.4	6972.8	6841.2	5417.4
57.5°	5662.5	5623.7	5499.6	5717.8	6399.5	6774.7	7034.8	7265.8	7429.4	7186.5	5616.2
60°	5889.7	5867.3	5870.3	6287.4	7227.6	7587.9	7731.4	7791.2	7877.9	7511.7	5627.4
62.5°	6106.5	6149.1	6294.1	6921.2	8020.7	8297.2	8369.7	8428.8	8327.1	7563.2	5199.1
65°	6473.5	6543.0	6889.1	7769.5	8892.9	9188.9	9263.6	9061.1	8398.1	6896.5	4229.0
67.5°	6652.9	6779.9	7397.3	8560.3	9739.0	10067.9	10040.2	9102.2	7536.3	5258.9	2713.9
69°	6615.5	6750.8	7514.7	8802.5	10020.0	10318.3	10142.6	8599.2	6420.4	3809.6	1666.0
70°	6467.5	6604.3	7454.1	8793.5	10055.9	10292.1	9952.8	7978.1	5428.6	2785.7	1041.9
72.5°	5400.9	5519.0	6617.7	7948.2	9263.6	9071.5	8326.4	5527.2	2645.2	758.6	234.7
75°	3324.6	3390.3	4748.4	5987.7	6996.7	6503.4	5547.4	2749.8	788.5	214.5	130.1
77.5°	1756.5	1786.4	2599.6	3529.4	4435.2	3669.9	2843.2	1072.6	363.3	134.5	94.2
80°	1038.2	1060.6	1399.9	1613.7	1919.4	1603.2	1136.8	658.5	260.1	84.5	83.7
82.5°	594.2	608.4	1015.0	896.9	756.4	645.8	565.8	624.1	156.2	56.8	86.7
85°	218.2	221.2	571.0	682.4	450.0	267.6	281.0	517.2	41.9	35.9	68.0
87.5°	101.7	99.4	293.7	417.8	263.1	169.7	219.0	113.6	16.4	23.2	18.7
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0	1876.0
2.5°	1853.6	1826.0	1775.9	1724.3	1672.0	1631.6	1592.0	1560.6	1550.2	1530.7	1532.2
5°	1796.8	1746.0	1641.4	1535.2	1424.6	1333.4	1247.5	1177.9	1144.3	1109.9	1109.9
7.5°	1747.5	1673.5	1509.8	1337.2	1158.5	1008.3	873.0	771.3	715.3	670.4	669.7
10°	1728.8	1628.6	1399.9	1152.5	903.6	698.8	538.1	435.0	381.9	347.6	346.1
12.5°	1737.0	1613.0	1315.5	982.1	669.7	449.2	311.7	245.2	222.7	212.3	212.3
15°	1760.9	1608.5	1231.0	815.4	473.1	281.0	207.0	189.1	187.6	187.6	187.6
17.5°	1790.1	1610.0	1144.3	653.3	322.1	201.1	178.6	176.4	177.9	177.9	177.9
20°	1820.0	1610.7	1050.9	503.0	227.2	174.9	168.2	167.4	168.9	168.9	169.7
22.5°	1856.6	1614.4	957.5	376.0	187.6	165.2	159.9	159.9	160.7	160.7	159.9
25°	1898.5	1621.9	860.3	278.8	171.2	158.5	154.0	153.2	154.0	153.2	152.5
27.5°	1950.8	1632.4	751.9	218.2	163.7	151.7	148.0	148.0	147.2	146.5	145.7
30°	2016.6	1644.3	630.1	185.4	156.2	145.7	142.0	141.3	140.5	139.0	139.0
32.5°	2116.7	1670.5	509.7	168.2	148.0	137.5	134.5	134.5	133.0	131.5	130.8
35°	2270.7	1722.1	402.1	157.7	139.0	128.6	124.8	124.8	123.3	122.6	121.8
37.5°	2483.7	1800.6	312.4	148.0	130.1	118.8	115.1	114.4	112.9	111.4	110.6
40°	2767.0	1897.7	245.9	139.0	121.1	109.1	106.1	104.6	101.7	99.4	99.4
42.5°	3122.8	2008.3	199.6	129.3	110.6	100.2	97.9	95.7	90.4	88.2	87.4
45°	3495.0	2107.7	168.9	118.1	100.2	91.2	89.7	86.0	79.2	77.0	77.0
47.5°	3763.3	2130.9	148.7	107.6	90.4	81.5	80.7	74.0	68.0	66.5	65.8
50°	3930.7	2085.3	132.3	97.2	81.5	72.5	70.3	62.0	58.3	56.8	56.1
52.5°	4043.6	2003.9	118.8	88.2	73.2	64.3	59.0	53.1	50.1	48.6	48.6
55°	4134.0	1888.8	105.4	80.0	66.5	57.6	50.1	45.6	42.6	41.1	41.1
57.5°	4159.4	1732.5	91.9	73.2	59.8	50.8	42.6	39.6	35.9	35.1	35.1
60°	3974.8	1450.8	81.5	65.0	53.8	44.1	37.4	33.6	29.9	29.1	28.4
62.5°	3488.3	1122.6	71.8	57.6	47.1	38.1	32.1	27.7	24.7	24.7	24.7
65°	2660.8	752.7	62.8	50.1	41.1	32.1	27.7	22.4	20.9	20.9	21.7
67.5°	1592.8	409.6	53.8	42.6	35.1	26.9	23.2	19.4	18.7	19.4	19.4
69°	933.5	240.7	48.6	38.1	30.6	23.9	20.2	17.2	18.7	19.4	19.4
70°	576.3	162.2	44.8	34.4	27.7	21.7	18.7	16.4	17.9	18.7	18.7
72.5°	160.7	83.7	35.9	26.9	22.4	17.9	14.9	14.9	17.2	17.9	17.9
75°	104.6	62.0	27.7	20.2	17.2	14.2	12.7	14.2	16.4	17.2	17.2
77.5°	86.7	50.8	22.4	16.4	14.2	13.5	12.0	12.7	14.9	15.7	15.7
80°	79.2	35.9	17.9	14.9	12.7	12.0	11.2	10.5	13.5	14.2	14.2
82.5°	75.5	28.4	15.7	13.5	12.0	10.5	9.7	10.5	12.0	12.7	13.5
85°	47.1	18.7	14.2	12.7	10.5	9.7	9.7	9.7	11.2	12.0	12.0
87.5°	17.2	14.9	12.7	10.5	9.0	9.0	9.0	9.0	9.7	11.2	11.2
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)