

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: P301848

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301848
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-09-LED-E1-SL4-7027-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 1050mA 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: 34094.6 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G5

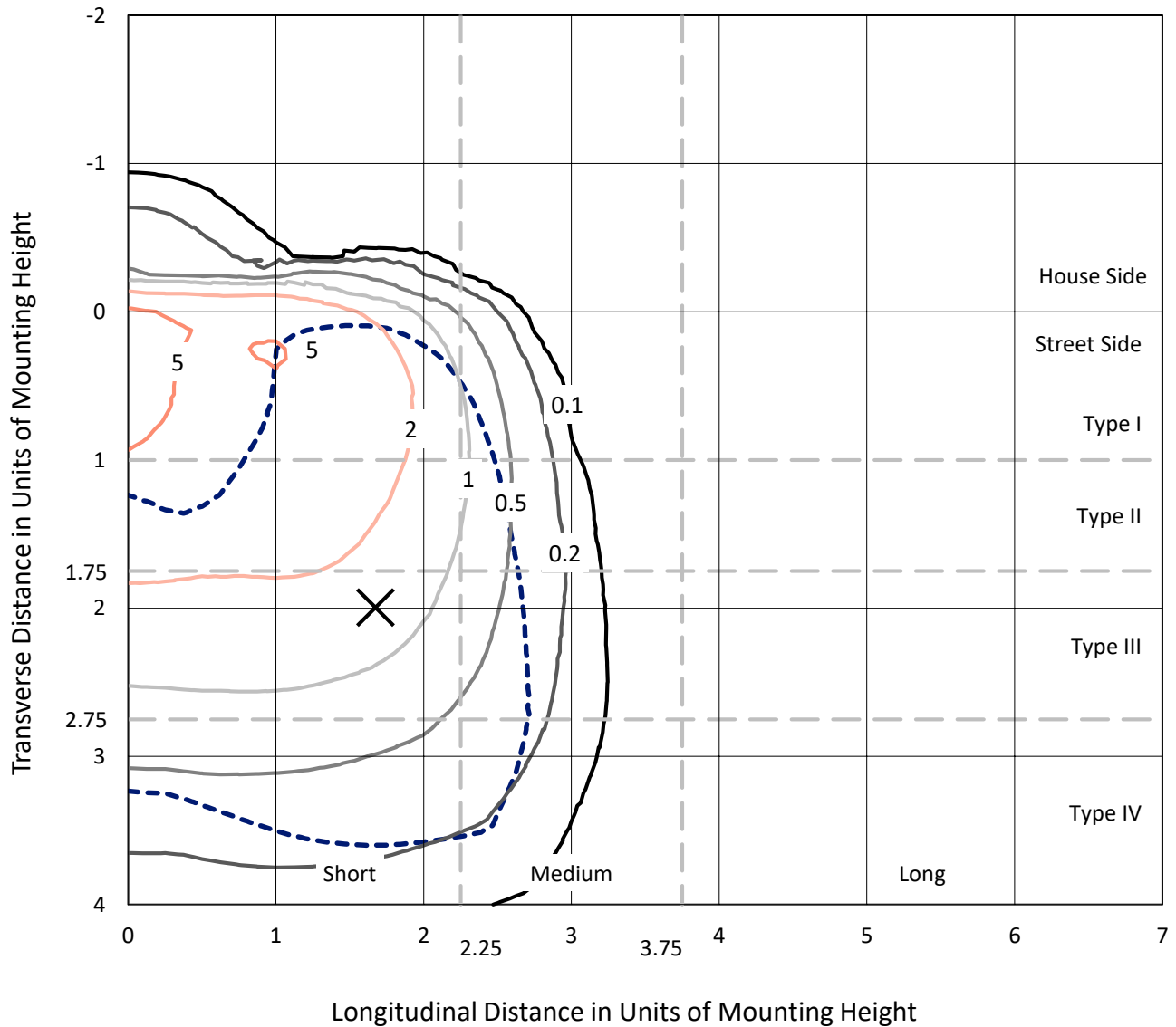
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

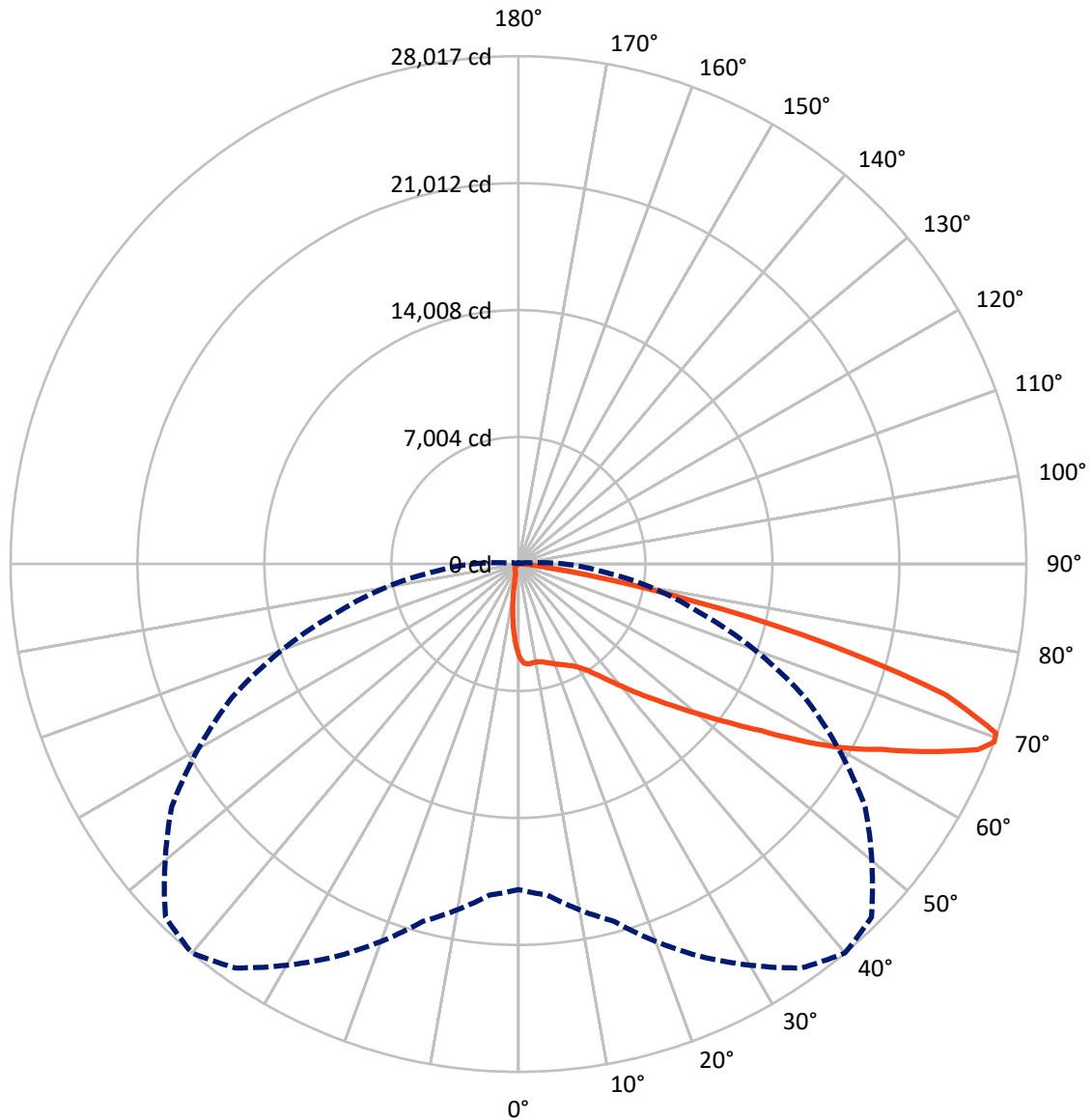
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.2 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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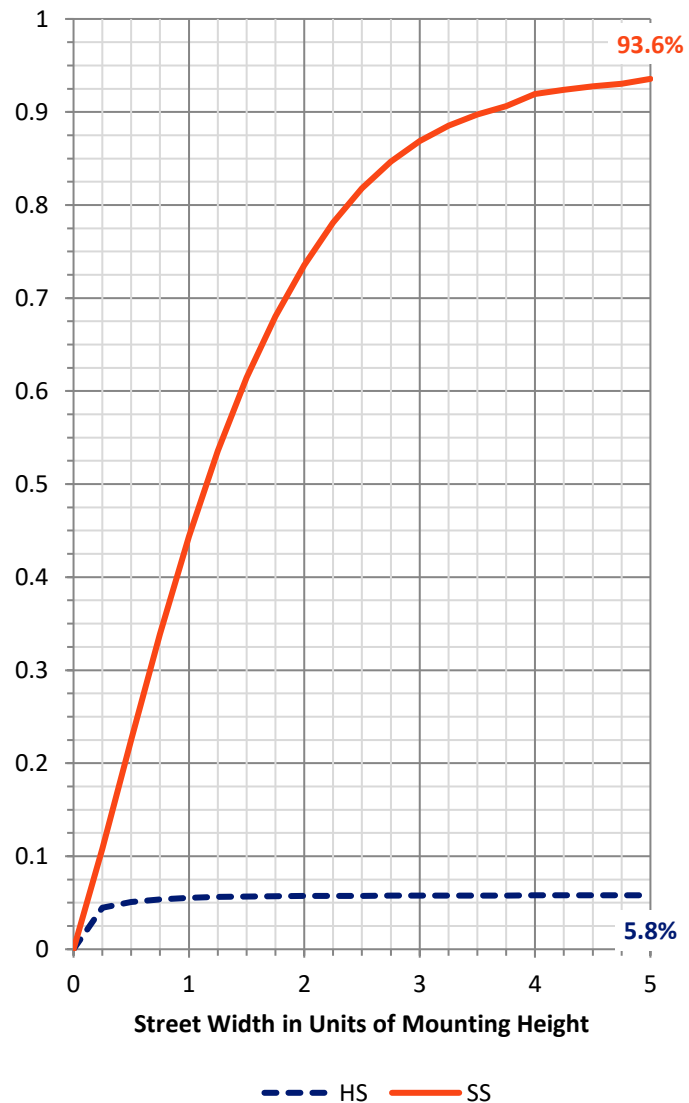
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1994.7	0.0	1994.7
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	32099.8	0.0	32099.8
	% Fixture	94.1	0.0	94.1
Total	Lumens	34094.6	0.0	34094.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	413.0	1.2
10°-20°	1015.7	3.0
20°-30°	1710.8	5.0
30°-40°	2800.5	8.2
40°-50°	4849.1	14.2
50°-60°	7637.8	22.4
60°-70°	9974.6	29.3
70°-80°	5137.4	15.1
80°-90°	555.7	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°	34094.6	100.0
0°-180°	34094.6	100.0



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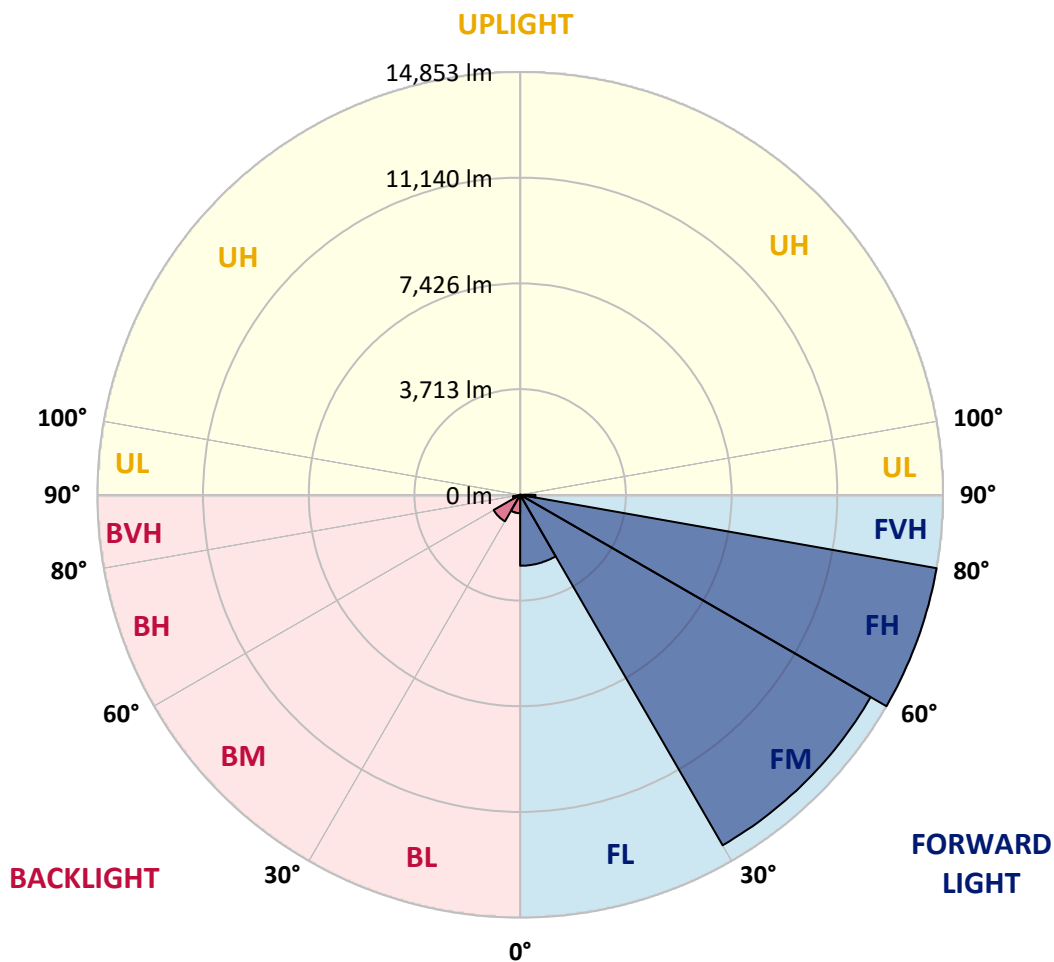
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2493.3	7.3			
FM	(30°-60°)	14215.3	41.7			
FH	(60°-80°)	14853.0	43.6			G5
FVH	(80°-90°)	538.3	1.6			G4/750
BL	(0°-30°)	646.1	1.9	B2/1000		
BM	(30°-60°)	1072.1	3.1	B2/2500		
BH	(60°-80°)	259.0	0.8	B1/500		G1/500
BVH	(80°-90°)	17.4	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9
2.5°	5593.1	5562.7	5544.4	5520.1	5489.6	5463.3	5453.1	5378.0	5307.0	5209.6	5098.0
5°	5696.6	5686.5	5654.0	5621.6	5585.0	5544.4	5522.1	5432.8	5331.3	5189.3	4994.5
7.5°	5706.8	5694.6	5654.0	5609.4	5558.6	5509.9	5471.4	5382.1	5288.7	5144.6	4907.2
10°	5690.6	5676.4	5645.9	5597.2	5534.3	5487.6	5449.1	5363.8	5284.7	5154.8	4891.0
12.5°	5672.3	5658.1	5643.9	5619.5	5564.7	5532.3	5499.8	5418.6	5347.6	5238.0	4949.8
15°	5690.6	5682.4	5698.7	5688.5	5658.1	5629.7	5597.2	5524.1	5459.2	5367.9	5057.4
17.5°	5767.7	5767.7	5818.4	5824.5	5796.1	5755.5	5708.8	5635.8	5581.0	5503.8	5185.2
20°	5948.3	5942.2	6007.2	6019.3	5950.3	5887.4	5818.4	5729.1	5686.5	5637.8	5311.1
22.5°	6258.8	6230.4	6268.9	6256.8	6120.8	6023.4	5938.2	5828.6	5806.2	5783.9	5451.1
25°	6662.7	6646.4	6672.8	6553.1	6313.6	6181.7	6080.2	5956.4	5956.4	5978.7	5609.4
27.5°	7249.2	7188.3	7099.0	6887.9	6528.7	6360.3	6250.7	6118.8	6153.3	6236.5	5818.4
30°	7849.9	7782.9	7577.9	7253.2	6790.5	6614.0	6486.1	6348.1	6429.3	6581.5	6098.5
32.5°	8442.5	8367.4	8077.2	7667.2	7166.0	6989.4	6865.6	6713.4	6849.4	7105.1	6508.4
35°	9016.8	8949.8	8615.0	8132.0	7665.2	7519.1	7405.4	7273.5	7448.1	7805.2	7086.8
37.5°	9662.2	9589.1	9181.2	8657.6	8272.0	8166.5	8083.3	7951.4	8255.8	8779.4	7892.5
40°	10455.7	10331.9	9781.9	9260.3	8974.2	8923.5	8866.6	8848.4	9321.2	10045.7	8966.1
42.5°	11364.9	11161.9	10411.0	9895.6	9745.4	9781.9	9767.7	9848.9	10654.6	11620.6	10273.0
45°	12274.1	12012.3	11111.2	10573.4	10593.7	10721.5	10800.7	11125.4	12324.8	13426.8	11679.4
47.5°	13045.3	12787.5	11782.9	11306.0	11549.6	11801.2	12016.3	12631.3	14041.7	15204.6	12773.3
50°	13704.8	13461.3	12495.3	12111.7	12659.7	13065.6	13414.6	14325.8	15888.5	16558.2	13540.4
52.5°	14244.7	14082.3	13234.0	13035.1	13928.1	14522.7	15034.1	16126.0	17524.2	17658.2	14137.1
55°	14770.3	14654.6	14027.5	14133.0	15417.7	16227.4	16874.8	18035.7	18932.7	18575.5	14709.4
57.5°	15375.1	15269.5	14932.6	15525.2	17376.1	18394.9	19101.1	19728.2	20172.7	19513.1	15249.2
60°	15992.0	15931.1	15939.2	17071.7	19624.7	20602.9	20992.6	21154.9	21390.3	20395.9	15279.7
62.5°	16580.6	16696.2	17089.9	18792.6	21778.0	22528.8	22725.7	22886.0	22610.0	20535.9	14116.8
65°	17577.0	17765.7	18705.4	21096.1	24146.3	24950.0	25152.9	24602.9	22802.8	18725.7	11482.6
67.5°	18064.1	18409.1	20085.4	23243.2	26443.6	27336.6	27261.5	24714.6	20462.9	14279.2	7368.9
69°	17962.6	18329.9	20404.0	23900.8	27206.7	28016.5	27539.5	23348.7	17432.9	10344.1	4523.6
70°	17560.8	17932.2	20239.6	23876.4	27304.1	27945.4	27024.1	21662.3	14739.8	7563.7	2829.0
72.5°	14664.8	14985.4	17968.7	21581.1	25152.9	24631.4	22608.0	15007.7	7182.2	2059.9	637.2
75°	9027.0	9205.6	12893.1	16257.9	18997.6	17658.2	15062.5	7466.3	2141.1	582.5	353.1
77.5°	4769.2	4850.4	7058.4	9583.0	12042.7	9964.6	7720.0	2912.3	986.3	365.3	255.7
80°	2818.9	2879.8	3801.1	4381.6	5211.6	4353.2	3086.8	1787.9	706.2	229.3	227.3
82.5°	1613.4	1652.0	2756.0	2435.3	2053.8	1753.4	1536.3	1694.6	424.2	154.2	235.4
85°	592.6	600.7	1550.5	1852.9	1221.7	726.5	763.1	1404.4	113.6	97.4	184.7
87.5°	276.0	269.9	797.6	1134.5	714.4	460.7	594.6	308.5	44.6	62.9	50.7
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°	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9	5093.9
2.5°	5033.0	4957.9	4822.0	4681.9	4539.9	4430.3	4322.7	4237.5	4209.1	4156.3	4160.4
5°	4878.8	4740.8	4456.7	4168.5	3868.1	3620.5	3387.1	3198.4	3107.1	3013.7	3013.7
7.5°	4744.8	4543.9	4099.5	3630.7	3145.6	2737.7	2370.4	2094.4	1942.2	1820.4	1818.4
10°	4694.1	4422.2	3801.1	3129.4	2453.6	1897.5	1461.2	1181.1	1037.0	943.7	939.6
12.5°	4716.4	4379.5	3571.8	2666.7	1818.4	1219.7	846.3	665.7	604.8	576.4	576.4
15°	4781.4	4367.4	3342.5	2214.1	1284.6	763.1	562.2	513.4	509.4	509.4	509.4
17.5°	4860.5	4371.4	3107.1	1773.7	874.7	545.9	485.0	478.9	483.0	483.0	483.0
20°	4941.7	4373.4	2853.4	1365.8	617.0	474.9	456.6	454.6	458.7	458.7	460.7
22.5°	5041.1	4383.6	2599.7	1020.8	509.4	448.5	434.3	434.3	436.3	436.3	434.3
25°	5154.8	4403.9	2335.9	757.0	464.7	430.2	418.1	416.0	418.1	416.0	414.0
27.5°	5296.8	4432.3	2041.6	592.6	444.4	412.0	401.8	401.8	399.8	397.8	395.7
30°	5475.4	4464.8	1710.8	503.3	424.2	395.7	385.6	383.6	381.5	377.5	377.5
32.5°	5747.4	4535.8	1384.1	456.6	401.8	373.4	365.3	365.3	361.2	357.2	355.2
35°	6165.4	4675.8	1091.8	428.2	377.5	349.1	338.9	338.9	334.9	332.8	330.8
37.5°	6743.8	4888.9	848.3	401.8	353.1	322.7	312.5	310.5	306.4	302.4	300.4
40°	7513.0	5152.8	667.7	377.5	328.8	296.3	288.2	284.1	276.0	269.9	269.9
42.5°	8479.0	5453.1	541.9	351.1	300.4	271.9	265.9	259.8	245.6	239.5	237.4
45°	9489.7	5723.0	458.7	320.7	271.9	247.6	243.5	233.4	215.1	209.0	209.0
47.5°	10218.2	5785.9	403.9	292.2	245.6	221.2	219.2	200.9	184.7	180.6	178.6
50°	10672.8	5662.1	359.2	263.8	221.2	196.9	190.8	168.4	158.3	154.2	152.2
52.5°	10979.3	5440.9	322.7	239.5	198.9	174.5	160.3	144.1	136.0	131.9	131.9
55°	11224.8	5128.4	286.2	217.2	180.6	156.3	136.0	123.8	115.7	111.6	111.6
57.5°	11293.9	4704.2	249.6	198.9	162.4	138.0	115.7	107.6	97.4	95.4	95.4
60°	10792.6	3939.1	221.2	176.6	146.1	119.7	101.5	91.3	81.2	79.1	77.1
62.5°	9471.4	3048.2	194.8	156.3	127.9	103.5	87.3	75.1	67.0	67.0	67.0
65°	7224.8	2043.6	170.5	136.0	111.6	87.3	75.1	60.9	56.8	56.8	58.9
67.5°	4324.7	1112.1	146.1	115.7	95.4	73.1	62.9	52.8	50.7	52.8	52.8
69°	2534.8	653.5	131.9	103.5	83.2	64.9	54.8	46.7	50.7	52.8	52.8
70°	1564.7	440.4	121.8	93.4	75.1	58.9	50.7	44.6	48.7	50.7	50.7
72.5°	436.3	227.3	97.4	73.1	60.9	48.7	40.6	40.6	46.7	48.7	48.7
75°	284.1	168.4	75.1	54.8	46.7	38.6	34.5	38.6	44.6	46.7	46.7
77.5°	235.4	138.0	60.9	44.6	38.6	36.5	32.5	34.5	40.6	42.6	42.6
80°	215.1	97.4	48.7	40.6	34.5	32.5	30.4	28.4	36.5	38.6	38.6
82.5°	205.0	77.1	42.6	36.5	32.5	28.4	26.4	28.4	32.5	34.5	36.5
85°	127.9	50.7	38.6	34.5	28.4	26.4	26.4	26.4	30.4	32.5	32.5
87.5°	46.7	40.6	34.5	28.4	24.4	24.4	24.4	24.4	26.4	30.4	30.4
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)