

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: 768853

Luminaire Tested: **BRL-XX-100-HPS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: 768853  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: BRL-XX-100-HPS  
Description: 100W HPS ROUND ARCHITECTURAL BOLLARD WITH STACKED LOUVERS  
Light Source: 100 WATT HPS COATED ED-17  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 8800 (1 lamp)  
Luminaire Lumens: 3475.2 lumens  
Efficiency: 39.5%  
Efficacy: 34.8 lumens/watt  
Luminous Opening: Point Source (0' x 0' x 0')  
IES Classification: Type V - Medium - Semi-Cutoff  
BUG Rating: B2 - U3 - G3

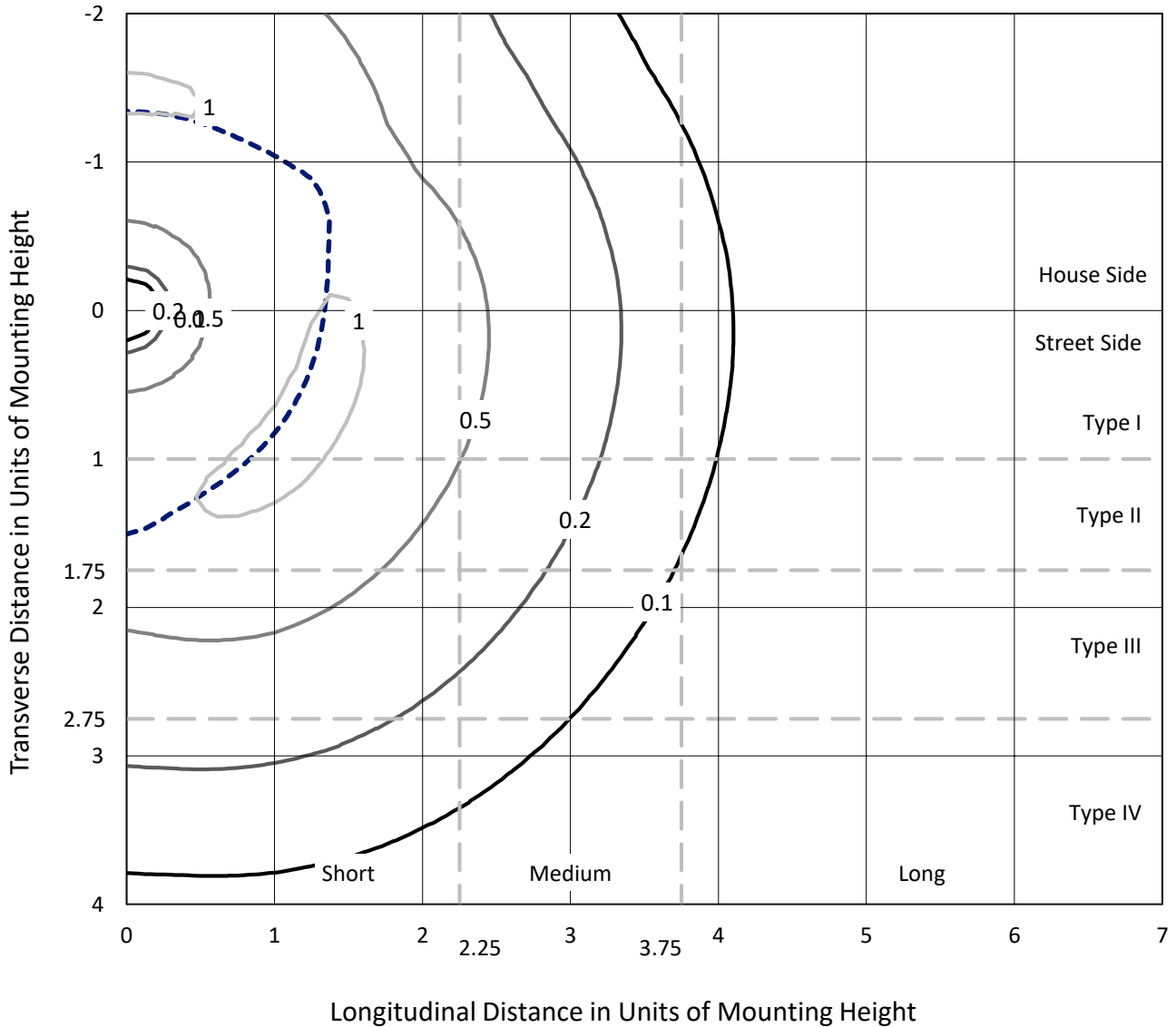
Input Watts (W): 100  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

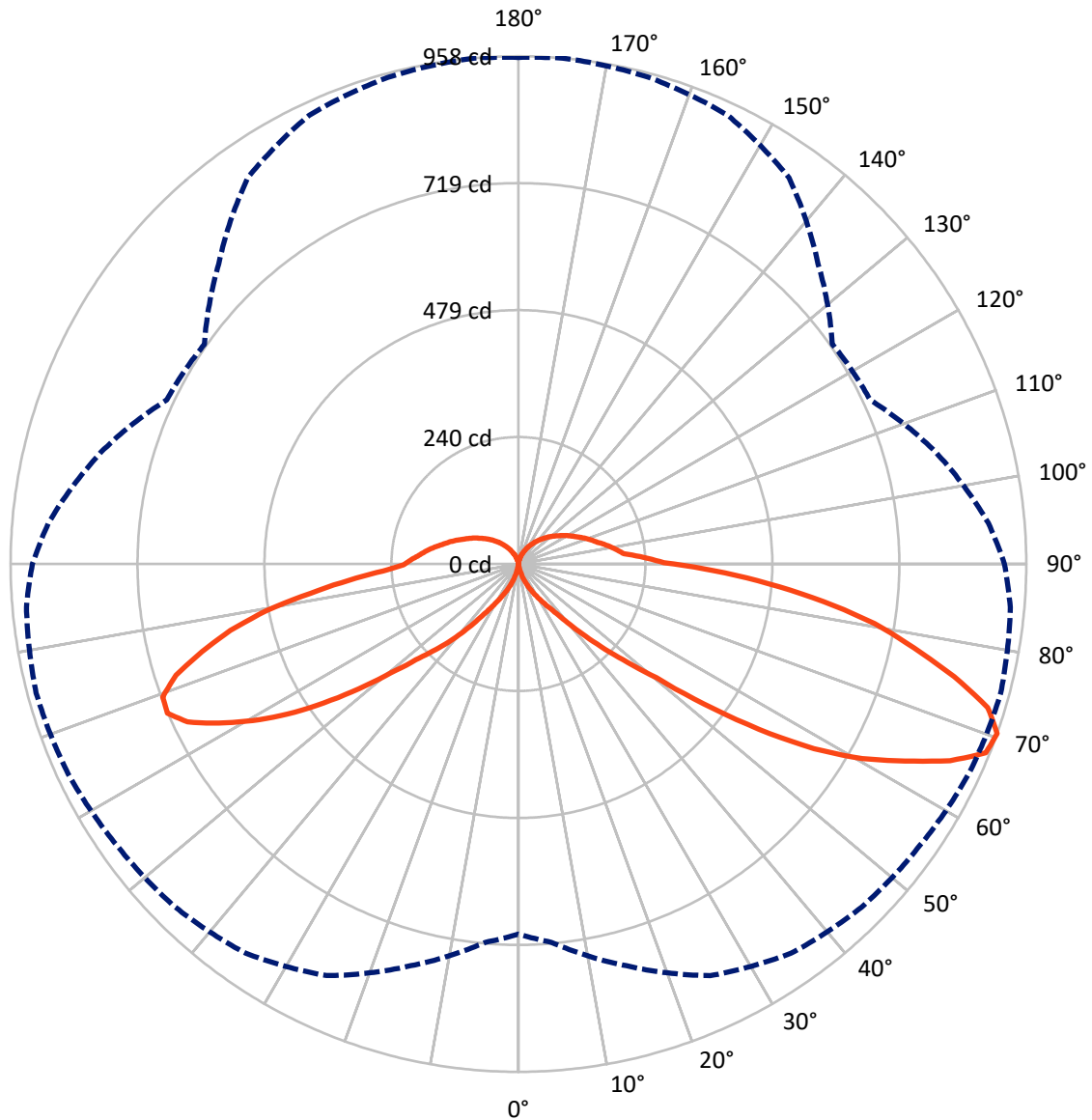
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.1 fc  
 Type V - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 175-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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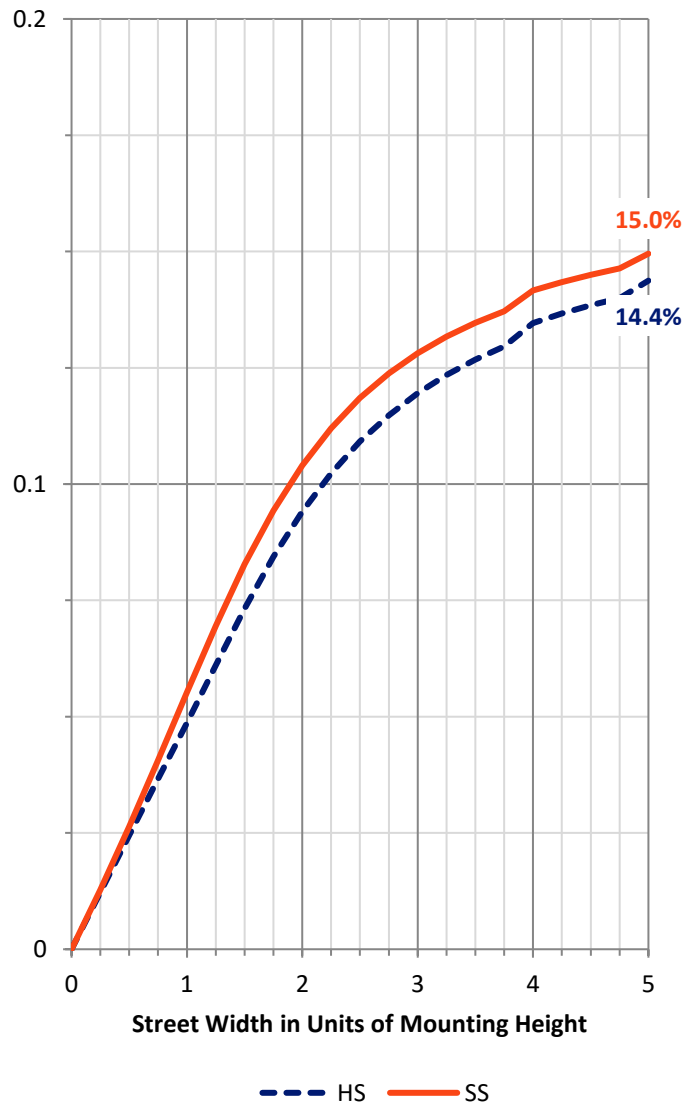
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1380.4	345.1	1725.4
	% Lamp	15.7	3.9	19.6
<b>Street Side</b>	Lumens	1419.9	329.8	1749.7
	% Lamp	16.1	3.7	19.9
<b>Total</b>	Lumens	2800.3	674.9	3475.2
	% Lamp	31.8	7.7	39.5

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.2	0.0	0.0
10°-20°	6.1	0.2	0.1
20°-30°	26.6	0.8	0.3
30°-40°	72.2	2.1	0.8
40°-50°	187.7	5.4	2.1
50°-60°	470.1	13.5	5.3
60°-70°	806.0	23.2	9.2
70°-80°	789.7	22.7	9.0
80°-90°	441.7	12.7	5.0
90°-100°	222.1	6.4	2.5
100°-110°	163.5	4.7	1.9
110°-120°	117.7	3.4	1.3
120°-130°	80.7	2.3	0.9
130°-140°	51.0	1.5	0.6
140°-150°	27.9	0.8	0.3
150°-160°	12.0	0.3	0.1
160°-170°	3.4	0.1	0.0
170°-180°	0.4	0.0	0.0
0°-90°	2800.3	80.6	31.8
0°-180°	3475.2	100.0	39.5



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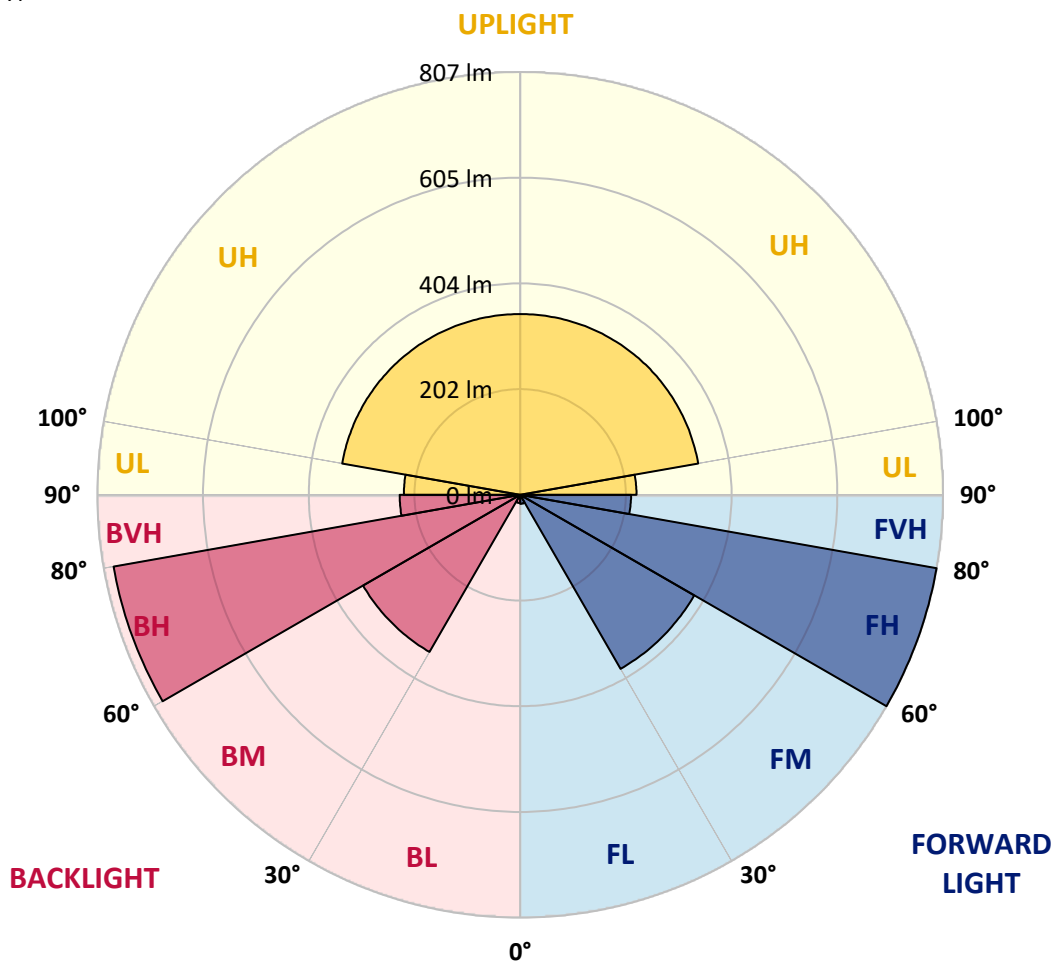
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	17.2	0.2			
FM (30°-60°)	383.7	4.4			
FH (60°-80°)	807.3	9.2			G1/1800
FVH (80°-90°)	211.7	2.4			G2/225
BL (0°-30°)	15.7	0.2	B0/110		
BM (30°-60°)	346.3	3.9	B1/1000		
BH (60°-80°)	788.3	9.0	B2/1000		G1/1800
BVH (80°-90°)	230.0	2.6			G3/500
UL (90°-100°)	222.1	2.5		U3/500	
UH (100°-180°)	345.1	3.9		U3/500	
Trapped Light	5324.8	60.5			

**BUG Rating: B2-U3-G3**

Type V Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
7.5°	2.0	2.0	1.5	1.5	2.0	2.0	1.5	2.0	1.5	2.0	1.0
10°	6.1	6.6	6.6	6.6	7.6	7.1	6.6	7.1	7.1	6.6	6.1
12.5°	12.2	13.2	12.7	13.2	12.7	13.7	13.7	13.7	13.7	12.7	12.2
15°	19.3	19.8	20.4	20.4	20.9	21.4	21.9	21.9	20.4	19.8	19.3
17.5°	28.5	29.0	28.5	29.5	29.5	30.0	29.5	29.5	29.0	28.5	27.5
20°	37.7	38.2	38.7	38.7	38.7	39.2	39.2	38.7	38.7	37.7	37.1
22.5°	45.8	46.8	47.3	47.8	48.3	47.8	47.8	47.3	47.8	46.3	46.3
25°	57.0	57.5	57.5	58.5	58.5	58.0	58.0	58.0	58.0	57.0	56.5
27.5°	68.2	68.7	68.7	69.2	69.2	68.7	68.2	68.7	69.2	68.2	67.7
30°	80.4	80.9	80.9	81.4	81.4	80.9	79.9	80.4	80.9	80.4	79.4
32.5°	95.7	96.2	95.7	96.7	95.7	95.7	94.6	94.1	94.6	93.6	92.6
35°	114.0	114.5	115.5	115.5	114.5	113.5	113.0	112.5	112.0	110.4	110.4
37.5°	138.4	139.9	141.5	142.5	141.5	140.4	138.9	137.9	136.9	135.9	134.3
40°	167.9	168.9	172.5	174.0	174.0	173.5	172.5	171.5	170.5	167.9	165.4
42.5°	198.5	200.0	204.6	208.6	210.7	212.2	210.2	209.1	207.6	203.0	200.5
45°	228.0	230.5	238.7	246.8	251.4	253.4	252.4	250.9	248.8	244.3	240.2
47.5°	261.6	264.6	277.3	290.1	297.7	300.7	300.2	298.2	296.7	291.1	286.0
50°	308.4	316.0	342.0	361.3	371.5	376.6	375.5	373.5	369.9	359.8	352.6
52.5°	371.5	382.2	422.4	453.4	471.7	480.4	481.4	478.8	471.2	456.5	444.8
55°	437.6	451.4	504.8	550.1	574.5	588.3	588.8	587.2	578.1	558.7	546.0
57.5°	501.7	520.1	581.6	637.1	667.1	683.4	684.4	683.9	678.8	658.0	643.2
60°	563.8	582.1	649.8	711.4	747.0	765.3	765.3	764.8	761.8	740.9	724.6
62.5°	617.8	639.7	718.5	786.2	823.9	840.7	841.7	842.2	837.6	819.3	802.0
65°	668.7	692.1	776.5	852.9	892.6	909.9	912.9	916.5	913.9	896.1	878.3
67.5°	699.2	719.5	796.9	872.2	912.9	931.7	938.9	948.5	950.1	936.8	919.0
70°	698.2	716.5	784.7	856.9	896.6	915.5	925.1	937.3	941.9	931.7	917.0
72.5°	661.5	679.3	743.0	805.0	839.1	855.9	864.6	878.3	890.0	884.9	874.2
75°	605.6	619.8	678.8	727.7	755.7	769.4	777.6	790.3	801.5	802.5	793.3
77.5°	545.5	557.7	611.7	651.9	675.8	687.5	694.1	707.3	716.5	717.0	708.9
80°	475.3	483.4	525.2	558.7	582.7	596.4	604.5	618.3	627.4	627.4	620.3
82.5°	385.7	395.9	430.0	458.5	478.8	489.5	498.2	509.4	519.0	521.1	515.0
85°	314.5	321.1	344.5	363.3	378.6	388.3	397.9	406.6	414.2	417.8	413.2
87.5°	251.4	255.5	268.2	276.3	282.4	291.6	299.7	307.9	313.5	317.5	316.5
90°	215.8	216.8	223.9	225.4	223.4	228.0	233.6	237.1	241.2	245.3	247.3
95°	188.3	190.8	192.9	193.4	190.3	190.3	192.4	194.4	198.5	202.5	203.0
105°	147.6	147.6	148.1	147.1	146.0	146.0	147.1	150.1	152.7	153.7	153.7
115°	113.0	113.0	113.5	114.5	113.5	114.0	114.5	116.0	118.1	118.6	118.6
125°	85.5	85.5	85.5	86.0	86.5	87.0	87.5	88.5	89.6	90.1	89.6
135°	61.1	62.1	62.1	63.1	63.6	64.6	64.1	66.2	66.7	66.7	65.6
145°	40.7	40.7	41.2	41.7	41.7	42.2	42.7	43.3	44.8	44.8	44.8
155°	22.4	22.9	22.9	23.9	23.9	24.9	23.9	24.9	25.4	25.4	25.4
165°	8.1	9.2	8.7	8.7	9.2	9.2	9.7	9.7	9.7	10.2	10.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
175°	1.0	4.1	3.6	1.0	1.0	3.6	1.0	3.6	1.0	1.0	1.0
180°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	1.0	0.5	1.0	1.0	0.5	0.5	0.5	0.5	0.5	1.0
10°	5.6	5.6	4.6	4.6	4.6	5.1	5.1	4.6	4.6	5.1
12.5°	11.7	11.2	10.2	10.2	9.7	9.7	10.2	10.2	10.7	11.2
15°	19.3	17.8	17.8	17.3	16.8	17.3	17.3	17.3	18.3	18.3
17.5°	27.5	26.0	25.4	24.9	24.9	25.4	25.4	25.4	27.0	25.4
20°	36.6	35.6	34.6	33.6	34.1	34.1	35.1	34.6	34.6	34.6
22.5°	45.3	44.3	42.7	42.7	43.3	43.3	43.3	43.3	43.8	43.8
25°	55.5	54.4	53.4	52.9	52.9	53.4	53.4	53.4	52.9	52.9
27.5°	67.2	65.6	64.1	64.1	63.1	63.6	64.1	63.6	63.6	63.1
30°	78.9	76.8	75.8	74.3	75.8	75.3	74.8	74.8	74.8	74.3
32.5°	92.1	90.6	88.5	88.5	88.5	88.5	88.0	87.5	87.5	86.5
35°	109.4	106.4	103.8	103.8	103.3	103.3	102.3	101.3	101.3	100.8
37.5°	133.3	129.8	125.7	124.2	124.7	124.2	123.1	121.6	121.6	121.1
40°	163.3	158.8	153.2	150.1	151.1	151.1	150.6	149.6	150.1	149.6
42.5°	198.5	191.8	183.7	178.6	181.7	184.2	185.2	185.7	186.2	186.2
45°	237.1	227.0	214.7	209.1	214.7	221.9	224.9	228.5	229.0	229.0
47.5°	279.4	266.1	249.3	242.2	251.9	263.6	272.2	274.8	277.3	277.8
50°	343.0	322.1	294.6	287.0	303.8	322.6	333.3	334.8	337.4	337.9
52.5°	432.0	399.0	359.3	350.6	376.6	408.6	424.4	433.6	438.1	438.6
55°	529.7	486.0	431.0	418.8	460.0	501.2	526.7	541.4	550.1	551.6
57.5°	623.9	569.9	502.8	490.0	543.5	597.9	630.0	645.8	657.5	658.5
60°	702.8	640.7	567.4	555.7	616.2	683.9	717.5	736.8	745.5	744.0
62.5°	779.1	709.9	624.9	614.2	684.4	758.2	793.3	813.2	818.3	817.2
65°	852.4	774.0	678.8	668.7	750.1	832.5	871.2	889.5	894.6	894.6
67.5°	892.1	812.7	720.1	711.9	792.3	882.4	927.2	944.0	951.1	949.6
70°	890.0	815.2	732.3	723.1	799.9	890.0	934.3	950.6	958.2	955.7
72.5°	850.3	784.2	711.4	704.8	775.5	862.0	908.3	921.1	926.1	925.1
75°	776.0	722.1	658.5	653.9	720.1	796.4	836.6	846.3	849.3	847.8
77.5°	697.7	653.4	594.4	591.3	653.9	718.5	750.1	759.7	763.3	763.3
80°	611.2	576.0	528.2	526.2	581.6	637.6	667.6	677.8	681.4	681.9
82.5°	506.8	478.8	440.7	440.2	487.0	535.8	565.4	576.0	580.1	580.1
85°	407.6	386.7	360.3	360.3	394.9	434.1	458.5	469.2	472.7	473.2
87.5°	314.5	304.3	289.5	290.6	313.0	337.9	355.2	364.9	369.4	370.5
90°	247.8	245.3	240.2	241.2	251.9	263.1	269.2	271.7	274.3	274.8
95°	203.0	202.0	199.0	199.0	203.0	205.6	205.1	202.5	200.0	199.5
105°	153.7	154.2	154.2	154.2	155.2	155.7	154.7	154.7	154.2	153.7
115°	118.6	118.1	118.1	118.6	119.1	119.6	119.6	119.6	119.6	119.1
125°	89.6	88.5	88.5	89.1	90.1	90.6	91.6	91.1	91.6	90.6
135°	65.6	65.6	65.6	65.6	66.7	67.2	67.7	67.2	67.7	68.2
145°	43.8	43.8	43.3	43.8	44.3	45.3	45.8	45.8	46.3	45.8
155°	25.4	25.4	25.4	26.0	26.0	26.5	26.5	27.0	27.0	26.5
165°	10.2	10.2	10.7	10.7	10.2	10.2	11.2	11.7	11.2	11.2



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
175°	1.0	1.0	5.6	1.0	1.0	1.0	5.6	5.1	1.0	1.0
180°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

(END OF REPORT)