

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: P833534

Luminaire Tested: **TTN-D2-735-U-MQ-UPL2**

Issue Date: 5/15/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P833534  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G3-2308-121-4) AND  
Test Lab: INNOVATION CENTER  
Issue Date: 5/15/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TTN-D2-735-U-MQ-UPL2  
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5797.8 lumens  
Efficiency: N/A  
Efficacy: 123.4 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')  
IES Classification: Type V - Short  
BUG Rating: B2 - U4 - G1

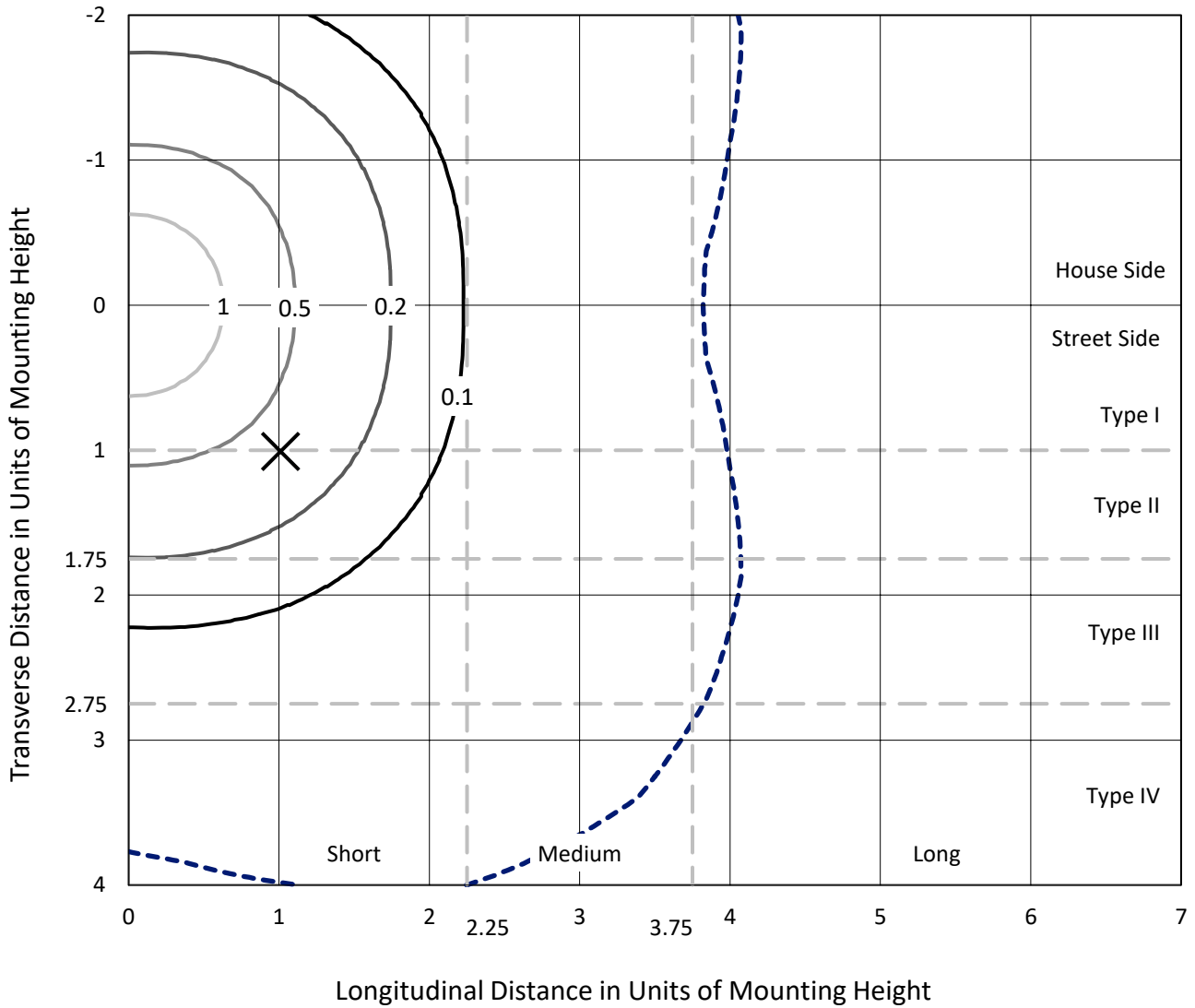
Input Watts (W): 47  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

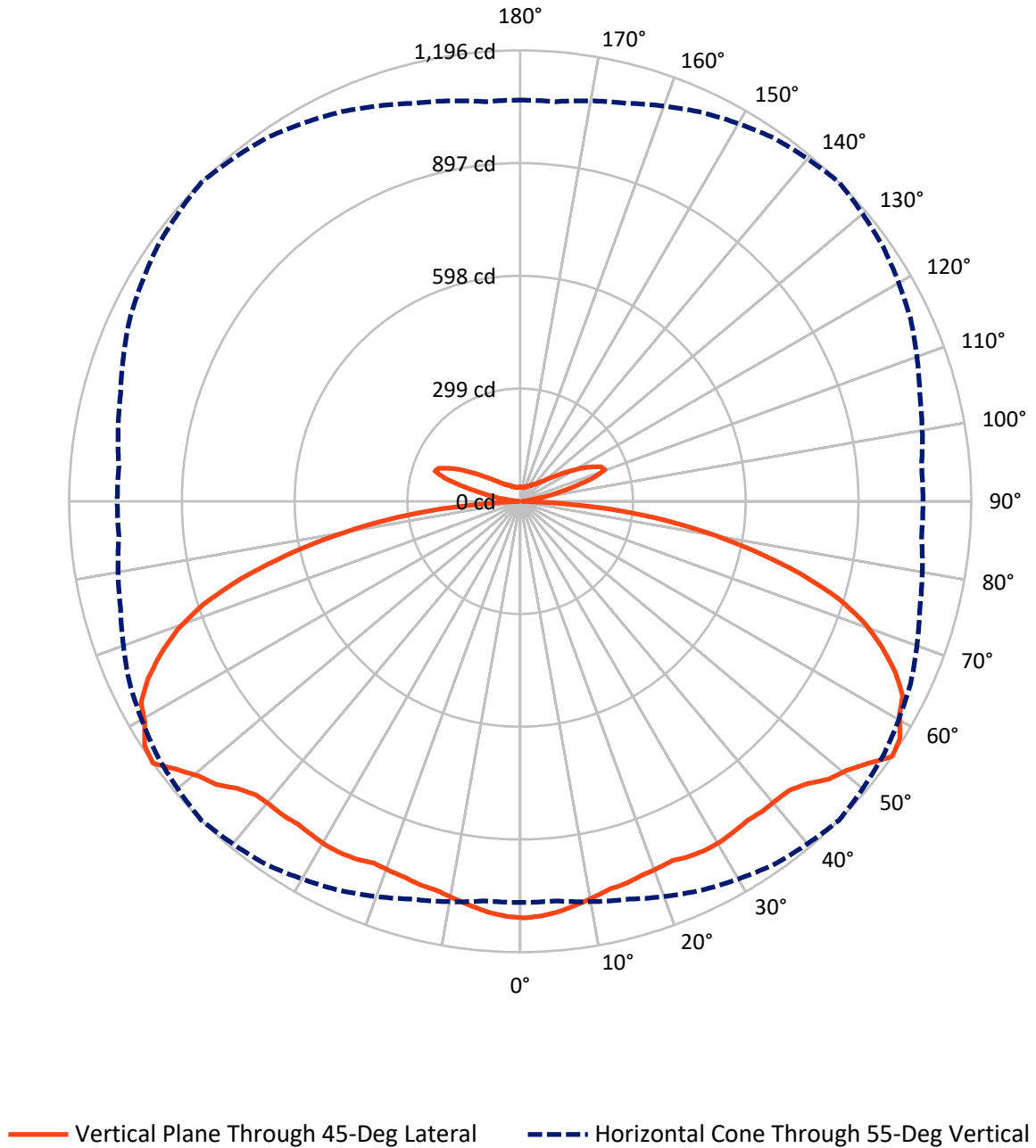
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



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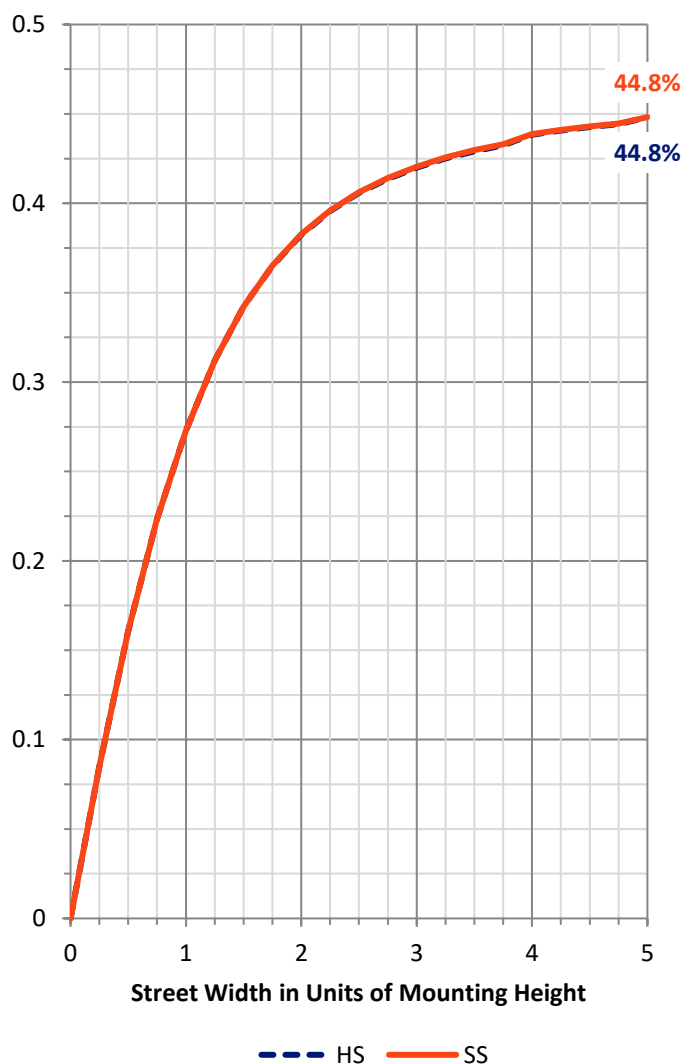
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2627.4	271.5	2898.9
	% Fixture	45.3	4.7	50.0
<b>Street Side</b>	Lumens	2627.4	271.5	2898.9
	% Fixture	45.3	4.7	50.0
<b>Total</b>	Lumens	5254.8	543.0	5797.8
	% Fixture	90.6	9.4	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.5	1.8
10°-20°	297.0	5.1
20°-30°	480.1	8.3
30°-40°	649.6	11.2
40°-50°	813.7	14.0
50°-60°	997.1	17.2
60°-70°	999.5	17.2
70°-80°	721.3	12.4
80°-90°	193.1	3.3
90°-100°	12.1	0.2
100°-110°	123.2	2.1
110°-120°	180.1	3.1
120°-130°	104.5	1.8
130°-140°	55.4	1.0
140°-150°	32.9	0.6
150°-160°	20.2	0.3
160°-170°	11.0	0.2
170°-180°	3.6	0.1
0°-90°	5254.8	90.6
0°-180°	5797.8	100.0

**Coefficient of Utilization**

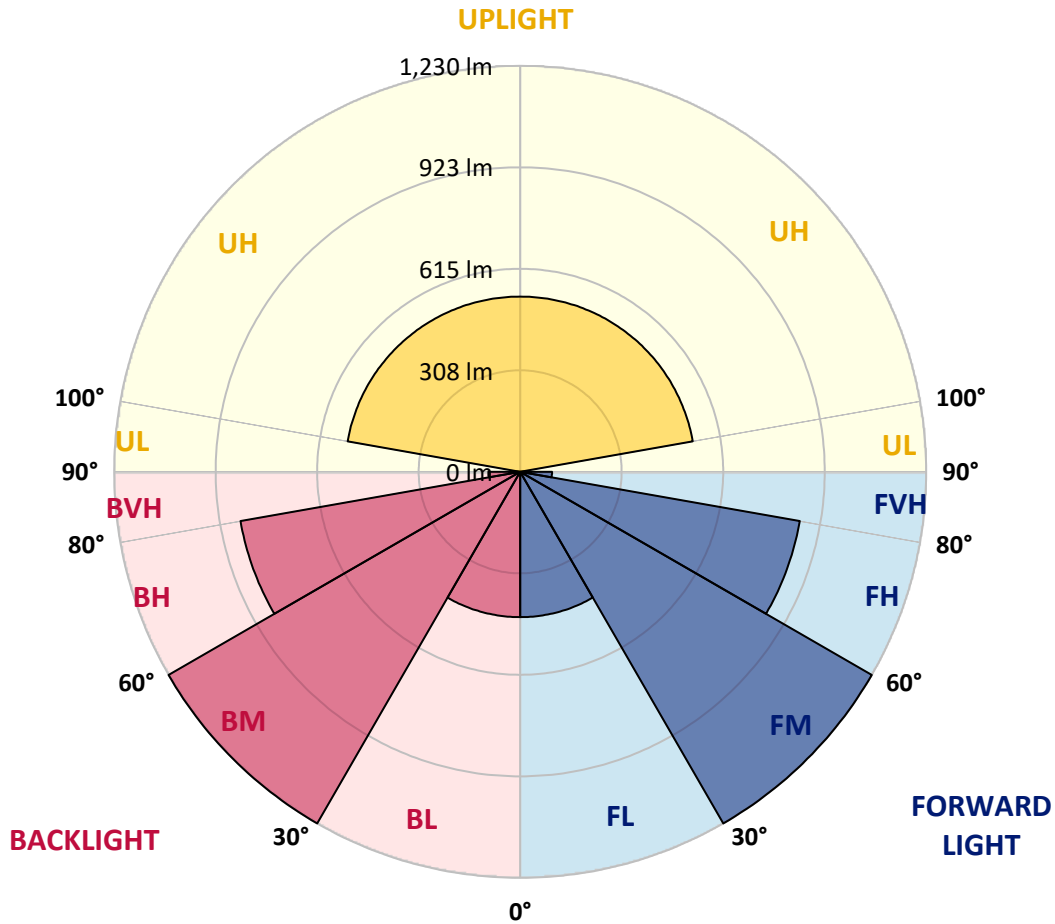


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	440.3	7.6			
FM (30°-60°)	1230.2	21.2			
FH (60°-80°)	860.4	14.8			G1/1800
FVH (80°-90°)	96.5	1.7			G1/100
BL (0°-30°)	440.3	7.6	B1/500		
BM (30°-60°)	1230.2	21.2	B2/2500		
BH (60°-80°)	860.4	14.8	B2/1000		G1/1800
BVH (80°-90°)	96.5	1.7			G1/100
UL (90°-100°)	12.1	0.2		U2/50	
UH (100°-180°)	530.9	9.2		U4/1000	

**BUG Rating: B2-U4-G1**  
 Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1105.4	1105.4	1105.4	1105.4	1105.4	1105.4	1105.4	1105.4	1105.4	1105.4	1105.4
2.5°	1101.3	1101.3	1101.3	1097.2	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3
5°	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0
7.5°	1080.7	1080.7	1080.7	1080.7	1080.7	1080.7	1080.7	1080.7	1080.7	1080.7	1080.7
10°	1064.2	1064.2	1064.2	1064.2	1068.3	1068.3	1068.3	1068.3	1064.2	1064.2	1064.2
12.5°	1051.8	1051.8	1051.8	1055.9	1055.9	1055.9	1055.9	1055.9	1055.9	1055.9	1051.8
15°	1047.7	1047.7	1047.7	1047.7	1051.8	1051.8	1051.8	1051.8	1047.7	1047.7	1047.7
17.5°	1039.4	1039.4	1039.4	1043.5	1043.5	1043.5	1043.5	1043.5	1039.4	1039.4	1039.4
20°	1031.2	1031.2	1035.3	1035.3	1039.4	1039.4	1039.4	1035.3	1035.3	1031.2	1035.3
22.5°	1031.2	1031.2	1031.2	1035.3	1035.3	1035.3	1035.3	1031.2	1031.2	1031.2	1031.2
25°	1031.2	1031.2	1035.3	1039.4	1039.4	1043.5	1039.4	1035.3	1031.2	1031.2	1031.2
27.5°	1035.3	1035.3	1039.4	1043.5	1043.5	1047.7	1043.5	1039.4	1035.3	1035.3	1035.3
30°	1035.3	1035.3	1039.4	1043.5	1043.5	1047.7	1043.5	1039.4	1035.3	1035.3	1035.3
32.5°	1027.0	1031.2	1035.3	1039.4	1043.5	1043.5	1043.5	1039.4	1035.3	1031.2	1031.2
35°	1022.9	1027.0	1031.2	1035.3	1039.4	1039.4	1039.4	1035.3	1031.2	1027.0	1027.0
37.5°	1018.8	1018.8	1027.0	1031.2	1035.3	1043.5	1039.4	1031.2	1027.0	1022.9	1022.9
40°	1014.7	1018.8	1022.9	1031.2	1035.3	1043.5	1039.4	1031.2	1022.9	1018.8	1018.8
42.5°	1014.7	1014.7	1022.9	1031.2	1039.4	1047.7	1043.5	1035.3	1022.9	1018.8	1014.7
45°	1018.8	1022.9	1035.3	1051.8	1060.0	1068.3	1064.2	1051.8	1031.2	1022.9	1018.8
47.5°	1035.3	1039.4	1051.8	1068.3	1088.9	1101.3	1088.9	1068.3	1051.8	1039.4	1035.3
50°	1043.5	1047.7	1068.3	1088.9	1117.8	1121.9	1117.8	1088.9	1068.3	1047.7	1047.7
52.5°	1060.0	1060.0	1084.8	1121.9	1146.6	1154.9	1146.6	1126.0	1084.8	1064.2	1060.0
55°	1064.2	1064.2	1093.0	1138.4	1175.5	1196.1	1175.5	1142.5	1097.2	1068.3	1068.3
57.5°	1039.4	1047.7	1084.8	1130.1	1175.5	1187.9	1175.5	1134.3	1088.9	1051.8	1047.7
60°	1010.5	1022.9	1055.9	1109.5	1142.5	1154.9	1146.6	1109.5	1060.0	1022.9	1018.8
62.5°	981.7	998.2	1035.3	1076.5	1126.0	1138.4	1126.0	1076.5	1035.3	998.2	981.7
65°	919.8	936.3	989.9	1039.4	1084.8	1093.0	1088.9	1039.4	989.9	936.3	928.0
67.5°	857.9	870.3	907.4	985.8	1022.9	1035.3	1027.0	981.7	911.5	870.3	866.2
70°	791.9	804.3	837.3	911.5	948.7	969.3	952.8	911.5	837.3	804.3	800.2
72.5°	705.3	721.8	758.9	824.9	862.0	882.7	866.2	824.9	758.9	717.7	709.4
75°	602.2	614.6	659.9	713.6	750.7	767.2	754.8	717.7	659.9	614.6	610.4
77.5°	490.8	503.2	544.5	598.1	618.7	635.2	622.8	593.9	544.5	503.2	499.1
80°	371.2	383.6	420.7	462.0	482.6	499.1	486.7	457.8	420.7	383.6	379.5
82.5°	243.4	255.7	288.7	321.7	342.3	358.8	346.5	317.6	292.8	255.7	251.6
85°	103.1	115.5	144.4	177.4	193.9	210.4	198.0	173.2	144.4	119.6	115.5
87.5°	8.2	12.4	12.4	16.5	12.4	20.6	12.4	12.4	12.4	12.4	12.4
90°	4.6	4.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.6	4.6
92.5°	4.6	4.6	4.6	6.5	7.4	6.5	7.4	5.6	5.6	4.6	4.6
95°	5.6	5.6	6.5	8.4	10.2	11.1	11.1	6.5	6.5	5.6	5.6
97.5°	7.4	8.4	8.4	10.2	16.7	30.7	18.6	9.3	9.3	8.4	7.4
100°	12.1	13.0	13.0	23.2	49.2	66.0	47.4	24.2	17.7	13.0	13.0
102.5°	39.0	40.9	50.2	75.3	111.5	101.3	85.5	80.8	55.7	44.6	42.7
105°	99.4	98.5	105.9	125.4	156.1	153.3	141.2	128.2	110.6	102.2	102.2
107.5°	131.0	131.0	137.5	154.2	177.4	207.2	210.0	166.3	145.9	136.6	135.6
110°	147.7	147.7	153.3	167.2	197.9	239.7	237.8	205.3	180.2	168.2	166.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	151.4	152.4	159.8	181.2	214.6	233.2	224.8	211.8	200.7	191.4	189.5
115°	157.0	157.0	165.4	185.8	204.4	211.8	202.5	192.3	184.9	181.2	183.0
117.5°	155.1	157.9	159.8	170.9	183.0	188.6	183.9	170.0	164.4	162.6	159.8
120°	144.0	144.0	145.9	151.4	157.9	160.7	158.9	149.6	144.9	144.0	142.1
122.5°	128.2	129.1	128.2	131.0	135.6	138.4	136.6	129.1	127.3	127.3	125.4
125°	112.4	112.4	111.5	113.3	116.1	115.2	116.1	112.4	111.5	111.5	110.6
127.5°	101.3	100.3	98.5	99.4	100.3	100.3	101.3	97.5	98.5	99.4	98.5
130°	90.1	90.1	88.3	88.3	88.3	86.4	88.3	86.4	87.3	88.3	89.2
132.5°	79.9	79.9	77.1	76.2	76.2	76.2	77.1	76.2	78.0	79.9	79.9
135°	71.5	71.5	68.7	69.7	69.7	68.7	69.7	68.7	70.6	71.5	71.5
137.5°	65.0	65.0	63.2	63.2	63.2	62.2	63.2	63.2	64.1	66.0	66.9
140°	59.5	59.5	58.5	58.5	57.6	58.5	58.5	58.5	59.5	60.4	60.4
142.5°	56.7	55.7	54.8	53.9	54.8	54.8	54.8	53.9	54.8	56.7	56.7
145°	52.0	52.0	51.1	51.1	51.1	52.0	51.1	51.1	52.0	52.0	53.0
147.5°	49.2	49.2	48.3	49.2	49.2	49.2	49.2	48.3	49.2	49.2	50.2
150°	48.3	47.4	46.5	47.4	47.4	46.5	46.5	46.5	46.5	47.4	47.4
152.5°	45.5	45.5	44.6	45.5	44.6	44.6	44.6	44.6	44.6	45.5	46.5
155°	43.7	43.7	42.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
157.5°	41.8	42.7	41.8	41.8	41.8	41.8	41.8	41.8	41.8	42.7	42.7
160°	40.9	40.9	40.9	40.9	39.9	39.9	39.9	40.9	40.9	40.9	41.8
162.5°	39.9	39.9	39.9	39.9	39.0	39.0	39.0	39.0	39.9	39.9	40.9
165°	39.9	39.0	39.0	39.0	38.1	38.1	38.1	38.1	39.0	39.9	39.0
167.5°	38.1	38.1	38.1	38.1	38.1	37.2	37.2	38.1	38.1	38.1	39.0
170°	38.1	38.1	37.2	37.2	37.2	37.2	37.2	37.2	37.2	37.2	38.1
172.5°	38.1	38.1	38.1	38.1	37.2	37.2	37.2	37.2	37.2	38.1	38.1
175°	38.1	38.1	38.1	38.1	37.2	37.2	37.2	38.1	38.1	38.1	37.2
177.5°	38.1	38.1	38.1	38.1	37.2	38.1	38.1	38.1	38.1	38.1	38.1
180°	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1

(END OF REPORT)