

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: P821216

Luminaire Tested: **TT-D2-735-24VDC-WQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821216
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D2-735-24VDC-WQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND WIDE DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

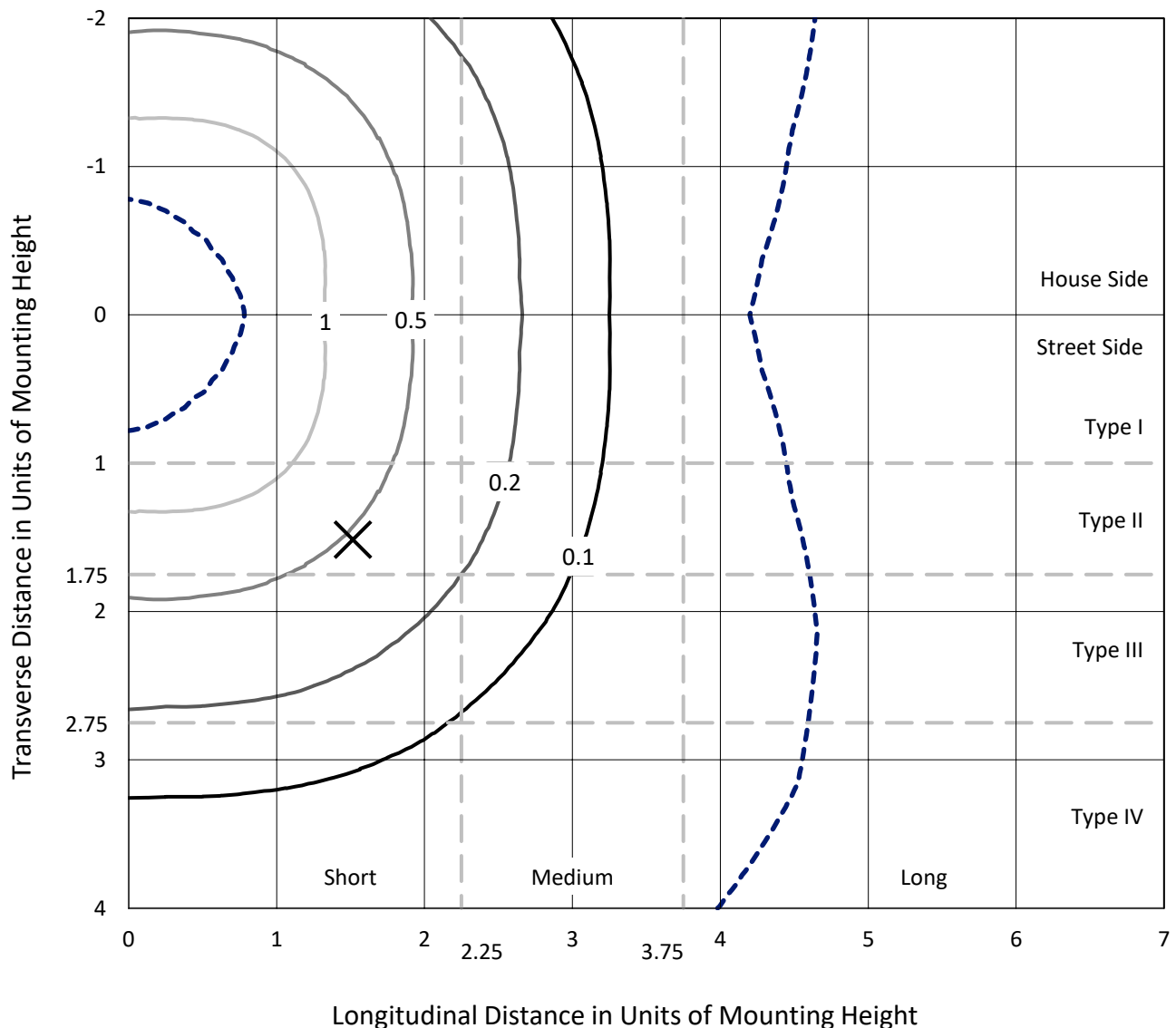
Lumens per Lamp: N/A
Luminaire Lumens: 5819.7 lumens
Efficiency: N/A
Efficacy: 153.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G2

Input Watts (W): 38
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

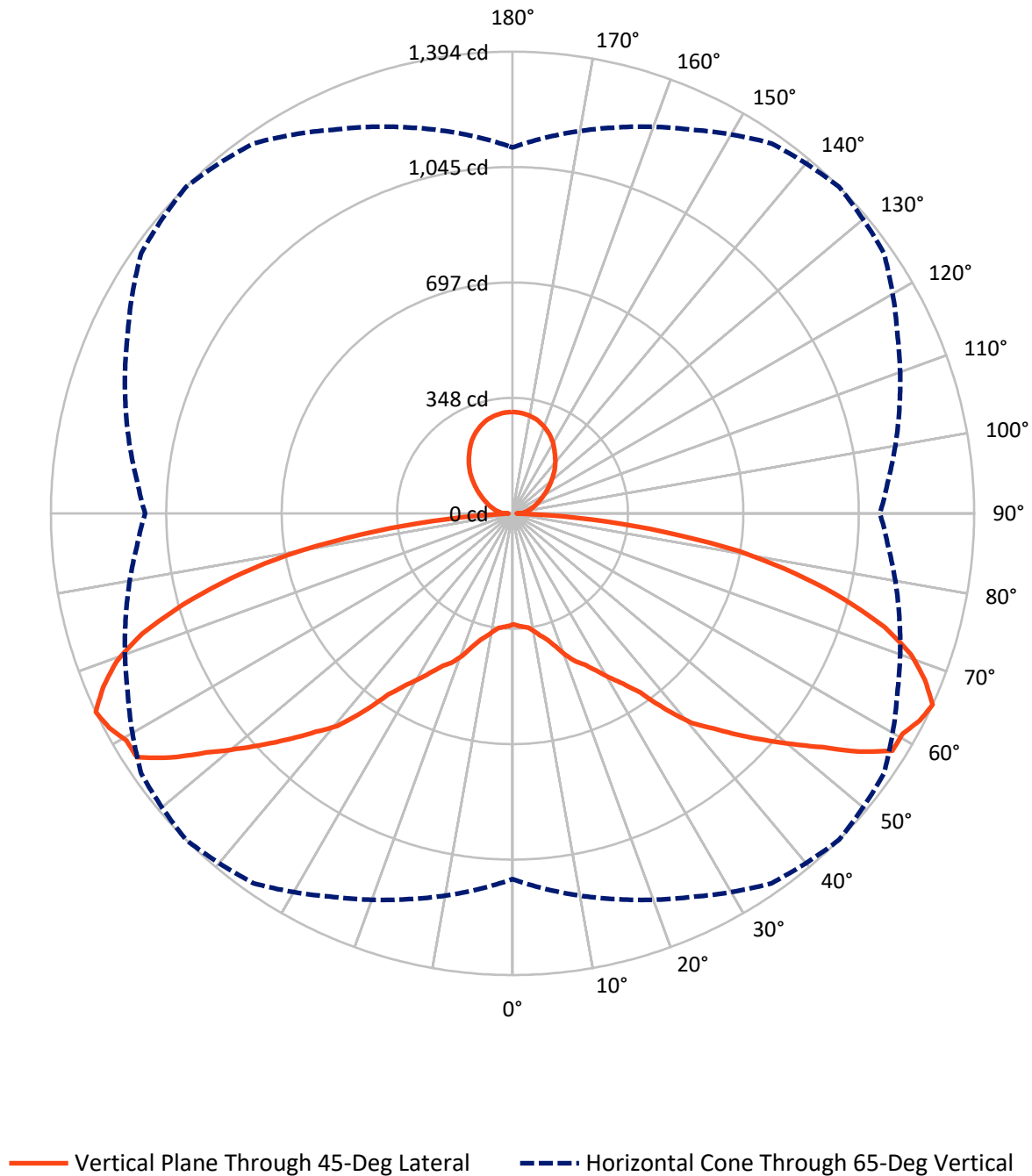
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.7 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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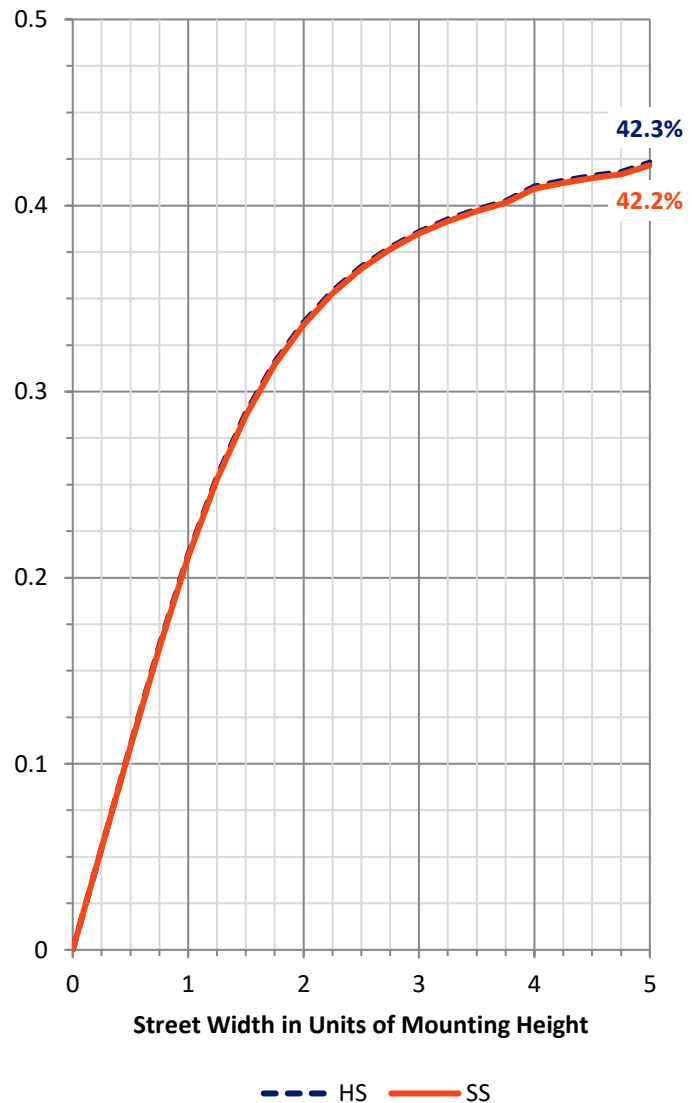
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2494.0	415.9	2909.9
	% Fixture	42.9	7.1	50.0
Street Side	Lumens	2494.0	415.9	2909.9
	% Fixture	42.9	7.1	50.0
Total	Lumens	4988.0	831.7	5819.7
	% Fixture	85.7	14.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.4	0.6
10°-20°	115.0	2.0
20°-30°	236.2	4.1
30°-40°	419.7	7.2
40°-50°	707.5	12.2
50°-60°	1043.6	17.9
60°-70°	1224.8	21.0
70°-80°	954.2	16.4
80°-90°	253.5	4.4
90°-100°	42.6	0.7
100°-110°	66.0	1.1
110°-120°	91.9	1.6
120°-130°	119.0	2.0
130°-140°	138.7	2.4
140°-150°	140.5	2.4
150°-160°	121.9	2.1
160°-170°	82.2	1.4
170°-180°	28.9	0.5
0°-90°	4988.0	85.7
0°-180°	5819.7	100.0



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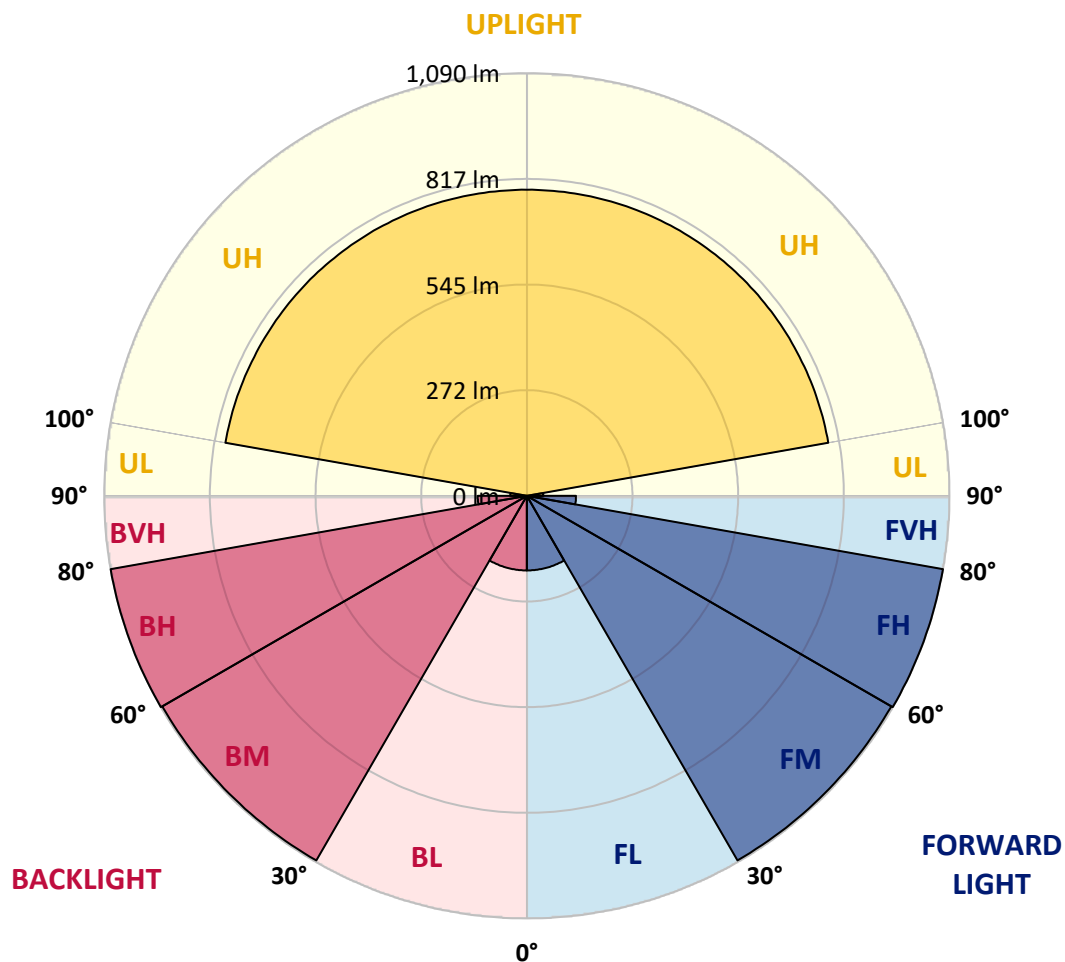
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	192.4	3.3			
FM	(30°-60°)	1085.4	18.7			
FH	(60°-80°)	1089.5	18.7			G1/1800
FVH	(80°-90°)	126.7	2.2			G2/225
BL	(0°-30°)	192.4	3.3	B1/500		
BM	(30°-60°)	1085.4	18.7	B2/2500		
BH	(60°-80°)	1089.5	18.7	B3/2500		G1/1800
BVH	(80°-90°)	126.7	2.2			G2/225
UL	(90°-100°)	42.6	0.7		U2/50	
UH	(100°-180°)	789.1	13.6		U4/1000	

BUG Rating: B3-U4-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	335.4	335.4	335.4	335.4	335.4	335.4	335.4	335.4	335.4	335.4	335.4
2.5°	340.9	340.9	340.9	340.1	340.1	340.1	340.1	340.9	340.9	340.9	340.9
5°	348.8	348.8	347.2	345.6	344.1	344.1	344.8	345.6	346.4	348.0	348.0
7.5°	353.5	353.5	352.7	351.1	348.8	348.8	349.5	351.1	351.9	351.9	351.1
10°	359.7	360.5	362.9	363.7	362.1	362.1	362.9	363.7	362.1	359.7	359.7
12.5°	374.6	375.4	378.5	380.9	380.9	379.3	380.1	381.7	377.8	373.8	374.6
15°	395.8	395.8	396.6	398.9	397.4	395.8	397.4	398.1	395.8	395.0	396.6
17.5°	424.0	424.0	419.3	423.2	424.0	423.2	424.8	420.9	418.5	421.6	423.2
20°	454.6	451.4	449.1	452.2	458.5	456.1	459.3	450.6	448.3	449.9	450.6
22.5°	474.2	476.5	478.1	479.6	488.3	485.1	488.3	478.9	477.3	474.2	471.8
25°	497.7	500.0	509.4	504.7	510.2	505.5	509.4	503.9	507.1	497.7	497.7
27.5°	524.3	529.0	534.5	532.2	539.2	536.9	539.2	531.4	532.2	528.2	526.7
30°	560.4	560.4	558.8	563.5	576.0	574.5	575.3	565.1	558.0	558.8	561.9
32.5°	596.4	591.7	594.1	608.2	616.0	612.9	614.4	609.7	594.1	590.9	593.3
35°	630.1	637.2	642.7	654.4	665.4	663.8	663.0	655.2	645.0	632.5	628.6
37.5°	682.6	690.5	705.4	726.5	746.1	750.0	739.8	729.7	706.1	688.1	678.7
40°	751.6	752.4	769.6	810.4	828.4	831.5	826.1	808.8	772.8	752.4	751.6
42.5°	811.9	806.5	834.7	869.2	885.6	887.2	883.3	869.2	834.7	805.7	811.2
45°	859.0	859.0	892.7	920.1	946.8	953.0	946.0	916.2	893.5	859.8	857.4
47.5°	902.1	913.8	942.0	975.8	1013.4	1022.0	1013.4	978.1	939.7	914.6	901.3
50°	953.8	967.9	988.3	1040.8	1083.1	1094.9	1082.3	1043.9	988.3	967.1	959.3
52.5°	1014.2	1025.9	1058.0	1123.9	1155.2	1172.5	1162.3	1125.4	1059.6	1027.5	1021.2
55°	1086.3	1075.3	1125.4	1188.9	1246.9	1269.7	1249.3	1190.5	1133.3	1075.3	1086.3
57.5°	1123.1	1110.6	1181.1	1241.4	1322.2	1351.9	1326.9	1246.1	1181.1	1114.5	1122.3
60°	1126.2	1131.7	1185.0	1283.8	1339.4	1351.9	1344.1	1290.8	1187.4	1136.4	1121.5
62.5°	1116.8	1150.5	1196.0	1297.9	1348.0	1378.6	1351.9	1299.4	1200.7	1156.0	1117.6
65°	1104.3	1138.0	1205.4	1277.5	1362.9	1393.5	1368.4	1281.4	1208.5	1138.0	1109.0
67.5°	1082.3	1070.6	1153.7	1250.1	1324.5	1342.5	1326.9	1251.6	1152.9	1069.0	1084.7
70°	1012.6	1002.4	1073.7	1179.5	1250.8	1275.9	1257.1	1181.1	1075.3	1004.7	1014.2
72.5°	909.1	912.3	981.2	1082.3	1159.1	1174.8	1164.6	1081.6	985.2	916.2	903.6
75°	788.4	796.3	862.1	953.8	1023.6	1033.0	1022.8	957.7	861.3	801.0	784.5
77.5°	648.1	659.9	713.2	804.9	851.1	872.3	855.8	807.2	717.1	663.0	646.6
80°	502.4	506.3	543.9	617.6	678.7	692.8	677.1	619.9	548.6	507.9	496.1
82.5°	329.2	335.4	369.1	425.6	465.5	461.6	465.5	420.9	373.1	333.9	314.3
85°	146.6	159.1	181.8	208.5	234.3	241.4	234.3	211.6	181.8	156.0	152.8
87.5°	10.2	11.8	14.1	14.9	16.5	12.5	12.5	12.5	11.0	12.5	10.2
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	84.0
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	92.0
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	101.4
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	110.8
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	121.6
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	132.4
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	144.2
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	155.9
132.5°	167.2	167.2	167.6	167.6	167.6	168.1	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3	180.3
137.5°	191.2	190.6	191.2	190.6	191.2	191.6	191.6	191.6	191.6	191.6	191.6
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	202.9
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	235.8
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	247.0
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	256.0
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	264.9
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	272.4
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	279.9
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	286.0
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	292.1
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	295.8
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	299.6
172.5°	302.0	302.0	302.8	302.0	302.4	302.0	302.8	302.0	302.0	302.0	302.0
175°	304.3	304.3	305.2	304.3	305.2	304.3	305.2	304.3	304.3	304.3	304.3
177.5°	305.2	305.2	305.7	305.2	305.7	305.2	305.7	305.2	305.2	305.2	305.2
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2

(END OF REPORT)