

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: P821142

Luminaire Tested: **TT-D2-830-24VDC-WQ-UPL**

Issue Date: 7/23/2020



Test Information

Test Method: LM-79-08
Report Number: P821142
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-D2-830-24VDC-WQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND WIDE DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

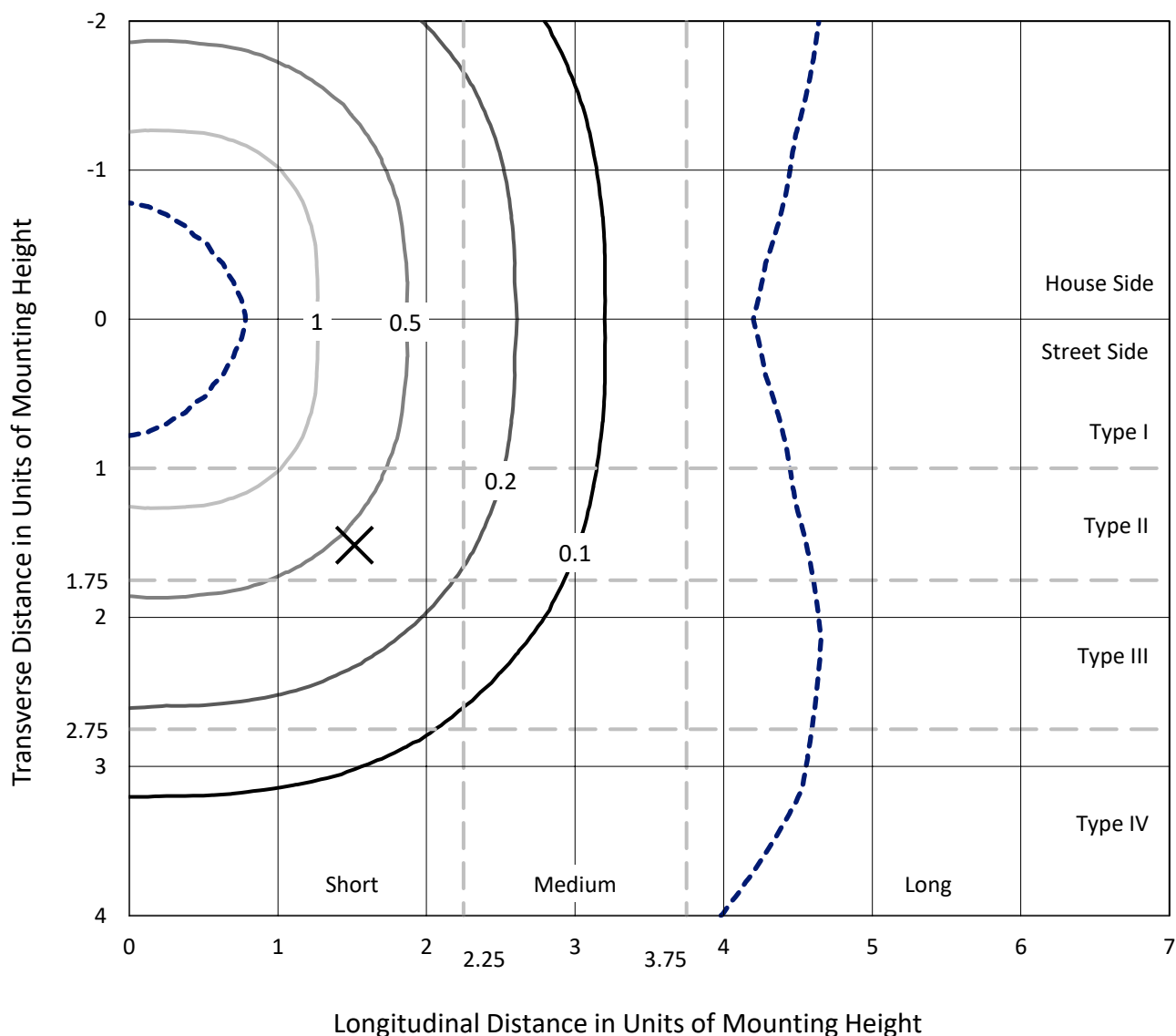
Lumens per Lamp: N/A
Luminaire Lumens: 5530.7 lumens
Efficiency: N/A
Efficacy: 145.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G2

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

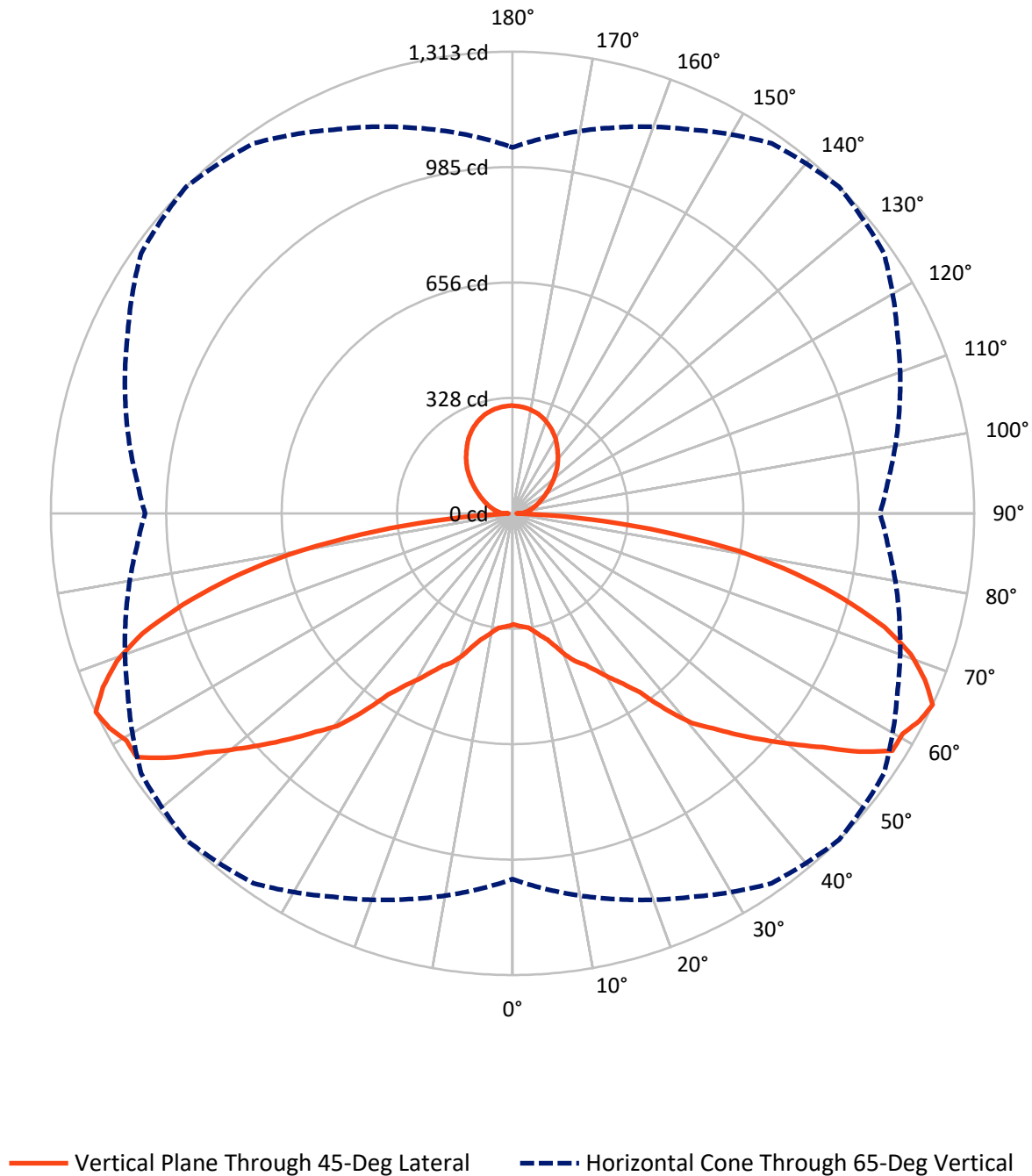
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.6 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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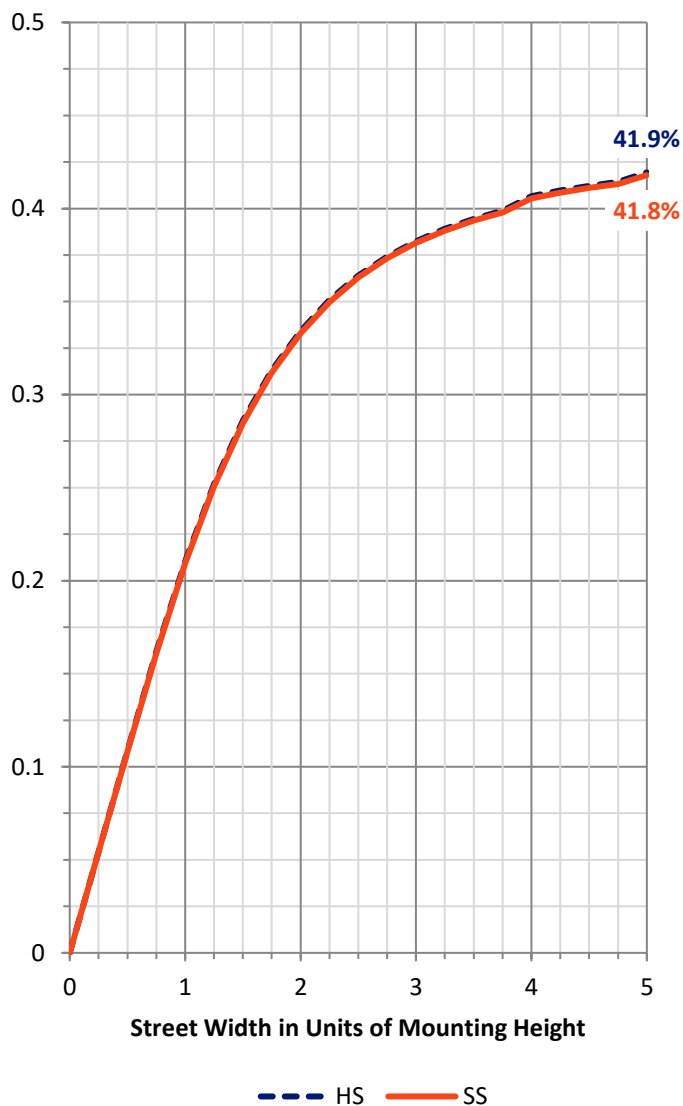
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2349.5	415.9	2765.4
	% Fixture	42.5	7.5	50.0
Street Side	Lumens	2349.5	415.9	2765.4
	% Fixture	42.5	7.5	50.0
Total	Lumens	4699.0	831.7	5530.7
	% Fixture	85.0	15.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.5	0.6
10°-20°	108.4	2.0
20°-30°	222.5	4.0
30°-40°	395.4	7.1
40°-50°	666.5	12.1
50°-60°	983.1	17.8
60°-70°	1153.8	20.9
70°-80°	898.9	16.3
80°-90°	239.0	4.3
90°-100°	42.6	0.8
100°-110°	66.0	1.2
110°-120°	91.9	1.7
120°-130°	119.0	2.2
130°-140°	138.7	2.5
140°-150°	140.5	2.5
150°-160°	121.9	2.2
160°-170°	82.2	1.5
170°-180°	28.9	0.5
0°-90°	4699.0	85.0
0°-180°	5530.7	100.0

Coefficient of Utilization



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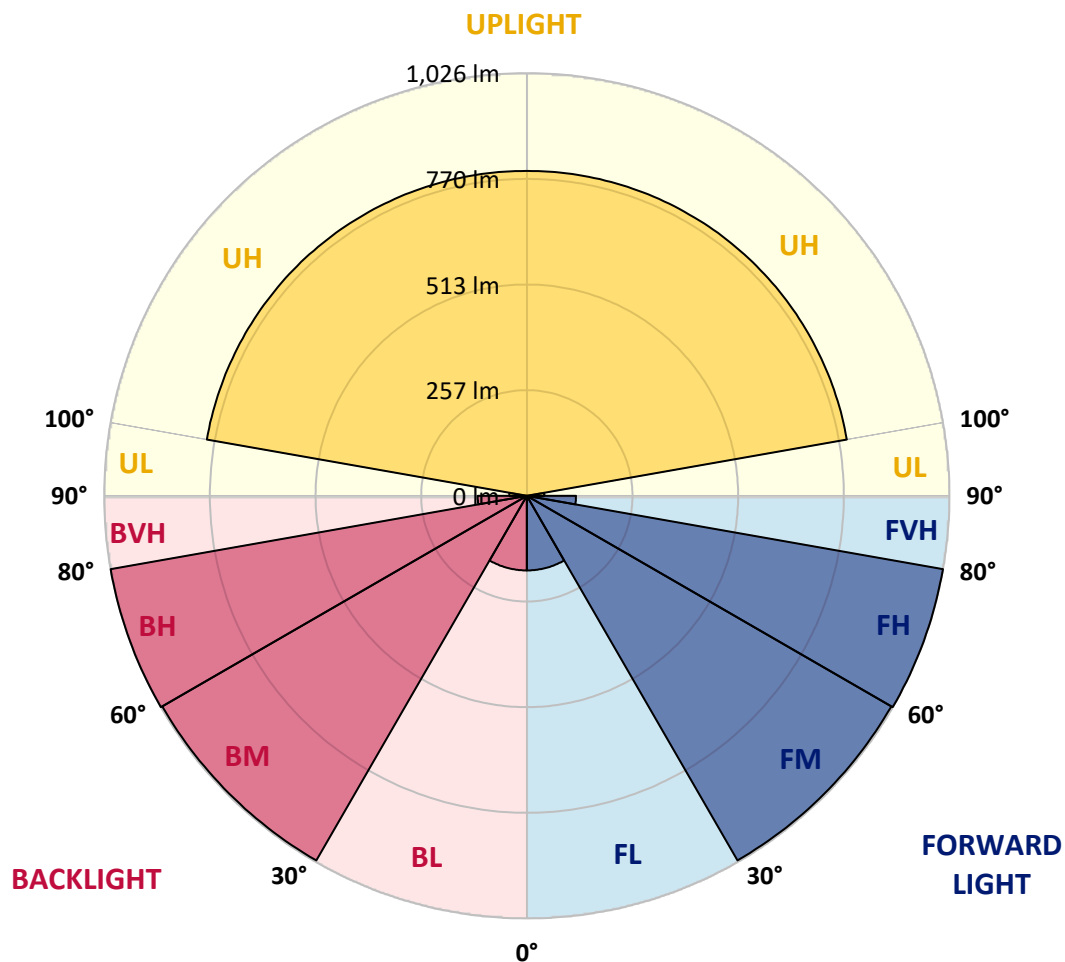
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	181.2	3.3			
FM	(30°-60°)	1022.5	18.5			
FH	(60°-80°)	1026.3	18.6			G1/1800
FVH	(80°-90°)	119.5	2.2			G2/225
BL	(0°-30°)	181.2	3.3	B1/500		
BM	(30°-60°)	1022.5	18.5	B2/2500		
BH	(60°-80°)	1026.3	18.6	B3/2500		G1/1800
BVH	(80°-90°)	119.5	2.2			G2/225
UL	(90°-100°)	42.6	0.8		U2/50	
UH	(100°-180°)	789.1	14.3		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°	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0
2.5°	321.2	321.2	321.2	320.4	320.4	320.4	320.4	321.2	321.2	321.2	321.2
5°	328.5	328.5	327.1	325.6	324.1	324.1	324.8	325.6	326.3	327.8	327.8
7.5°	333.0	333.0	332.2	330.8	328.5	328.5	329.3	330.8	331.5	331.5	330.8
10°	338.9	339.6	341.8	342.6	341.1	341.1	341.8	342.6	341.1	338.9	338.9
12.5°	352.9	353.6	356.6	358.8	358.8	357.3	358.1	359.5	355.9	352.2	352.9
15°	372.8	372.8	373.6	375.8	374.3	372.8	374.3	375.1	372.8	372.1	373.6
17.5°	399.4	399.4	395.0	398.7	399.4	398.7	400.2	396.5	394.2	397.2	398.7
20°	428.2	425.3	423.0	426.0	431.9	429.7	432.6	424.5	422.3	423.8	424.5
22.5°	446.7	448.9	450.4	451.8	460.0	457.0	460.0	451.1	449.6	446.7	444.5
25°	468.8	471.0	479.9	475.5	480.6	476.2	479.9	474.7	477.7	468.8	468.8
27.5°	493.9	498.3	503.5	501.3	507.9	505.7	507.9	500.6	501.3	497.6	496.1
30°	527.9	527.9	526.4	530.8	542.6	541.2	541.9	532.3	525.7	526.4	529.4
32.5°	561.8	557.4	559.6	572.9	580.3	577.3	578.8	574.4	559.6	556.7	558.9
35°	593.6	600.2	605.4	616.5	626.8	625.3	624.6	617.2	607.6	595.8	592.1
37.5°	643.1	650.4	664.5	684.4	702.9	706.5	696.9	687.3	665.2	648.2	639.4
40°	708.0	708.8	725.0	763.4	780.4	783.3	778.2	761.9	728.0	708.8	708.0
42.5°	764.9	759.7	786.3	818.8	834.3	835.7	832.1	818.8	786.3	759.0	764.1
45°	809.2	809.2	840.9	866.8	891.9	897.8	891.1	863.1	841.7	809.9	807.7
47.5°	849.8	860.8	887.4	919.2	954.6	962.7	954.6	921.4	885.2	861.6	849.0
50°	898.5	911.8	931.0	980.4	1020.3	1031.4	1019.6	983.4	931.0	911.0	903.7
52.5°	955.3	966.4	996.7	1058.7	1088.2	1104.5	1094.9	1060.2	998.2	967.9	962.0
55°	1023.3	1012.9	1060.2	1120.0	1174.6	1196.0	1176.8	1121.5	1067.6	1012.9	1023.3
57.5°	1058.0	1046.2	1112.6	1169.5	1245.5	1273.6	1249.9	1173.9	1112.6	1049.8	1057.2
60°	1060.9	1066.1	1116.3	1209.3	1261.7	1273.6	1266.2	1216.0	1118.5	1070.5	1056.5
62.5°	1052.1	1083.8	1126.6	1222.6	1269.9	1298.7	1273.6	1224.1	1131.1	1089.0	1052.8
65°	1040.3	1072.0	1135.5	1203.4	1283.9	1312.7	1289.1	1207.1	1138.4	1072.0	1044.7
67.5°	1019.6	1008.5	1086.8	1177.6	1247.7	1264.7	1249.9	1179.0	1086.0	1007.0	1021.8
70°	953.9	944.3	1011.5	1111.1	1178.3	1201.9	1184.2	1112.6	1012.9	946.5	955.3
72.5°	856.4	859.4	924.3	1019.6	1091.9	1106.7	1097.1	1018.8	928.0	863.1	851.2
75°	742.7	750.1	812.1	898.5	964.2	973.1	963.5	902.2	811.4	754.5	739.0
77.5°	610.6	621.6	671.8	758.2	801.8	821.7	806.2	760.4	675.5	624.6	609.1
80°	473.2	476.9	512.4	581.8	639.4	652.6	637.9	584.0	516.8	478.4	467.3
82.5°	310.1	316.0	347.7	400.9	438.5	434.9	438.5	396.5	351.4	314.5	296.1
85°	138.1	149.9	171.3	196.4	220.7	227.4	220.7	199.3	171.3	146.9	144.0
87.5°	9.6	11.1	13.3	14.0	15.5	11.8	11.8	11.8	10.3	11.8	9.6
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)