

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: P821352

Luminaire Tested: **TT-D2-750-24VDC-CQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821352
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-3) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D2-750-24VDC-CQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT WITH UPLIGHT
5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

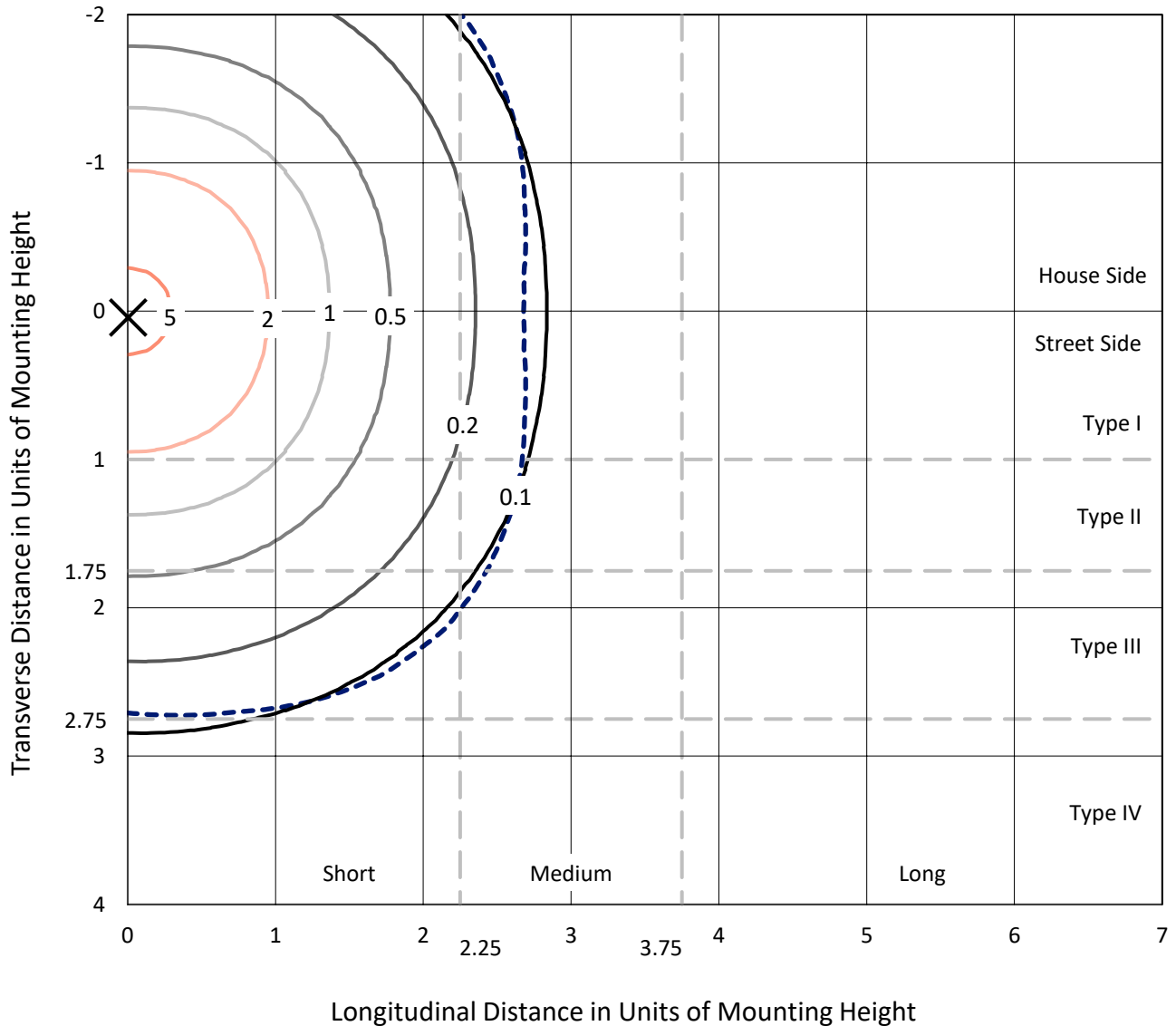
Lumens per Lamp: N/A
Luminaire Lumens: 6115.4 lumens
Efficiency: N/A
Efficacy: 160.9 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

Input Watts (W): 38
Input Voltage (V): NR
Input Current (A_{in}): 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

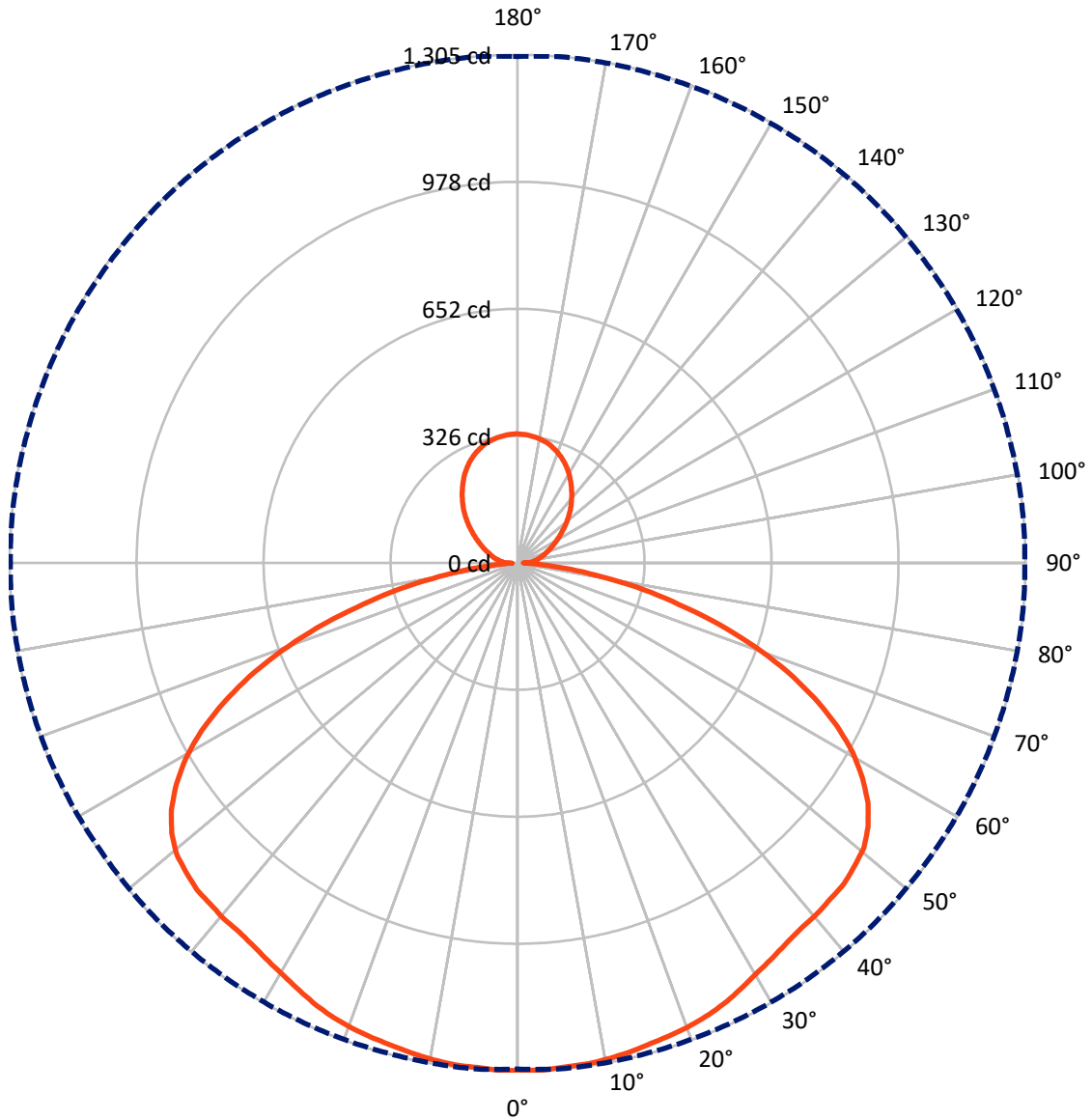
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 5.8 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 2.5-Deg Vertical

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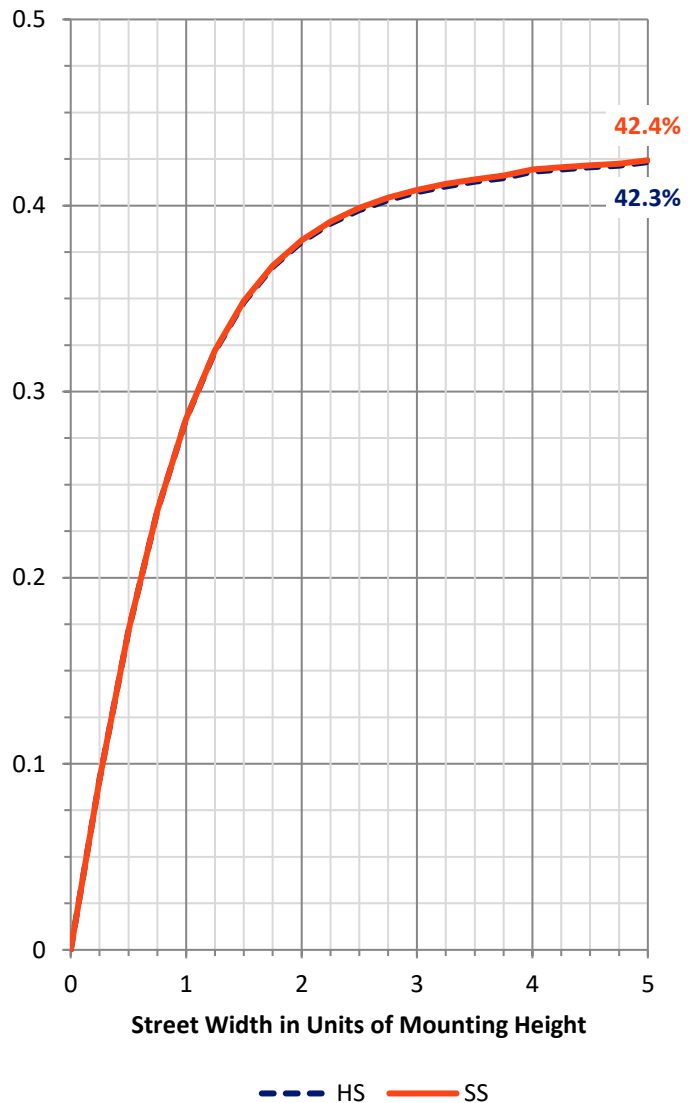
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2607.7	450.0	3057.7
	% Fixture	42.6	7.4	50.0
Street Side	Lumens	2607.7	450.0	3057.7
	% Fixture	42.6	7.4	50.0
Total	Lumens	5215.3	900.0	6115.4
	% Fixture	85.3	14.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.0	2.0
10°-20°	363.1	5.9
20°-30°	577.5	9.4
30°-40°	759.6	12.4
40°-50°	929.8	15.2
50°-60°	1007.0	16.5
60°-70°	866.4	14.2
70°-80°	487.1	8.0
80°-90°	100.9	1.6
90°-100°	46.1	0.8
100°-110°	71.4	1.2
110°-120°	99.4	1.6
120°-130°	128.8	2.1
130°-140°	150.0	2.5
140°-150°	152.1	2.5
150°-160°	131.9	2.2
160°-170°	89.0	1.5
170°-180°	31.3	0.5
0°-90°	5215.3	85.3
0°-180°	6115.4	100.0

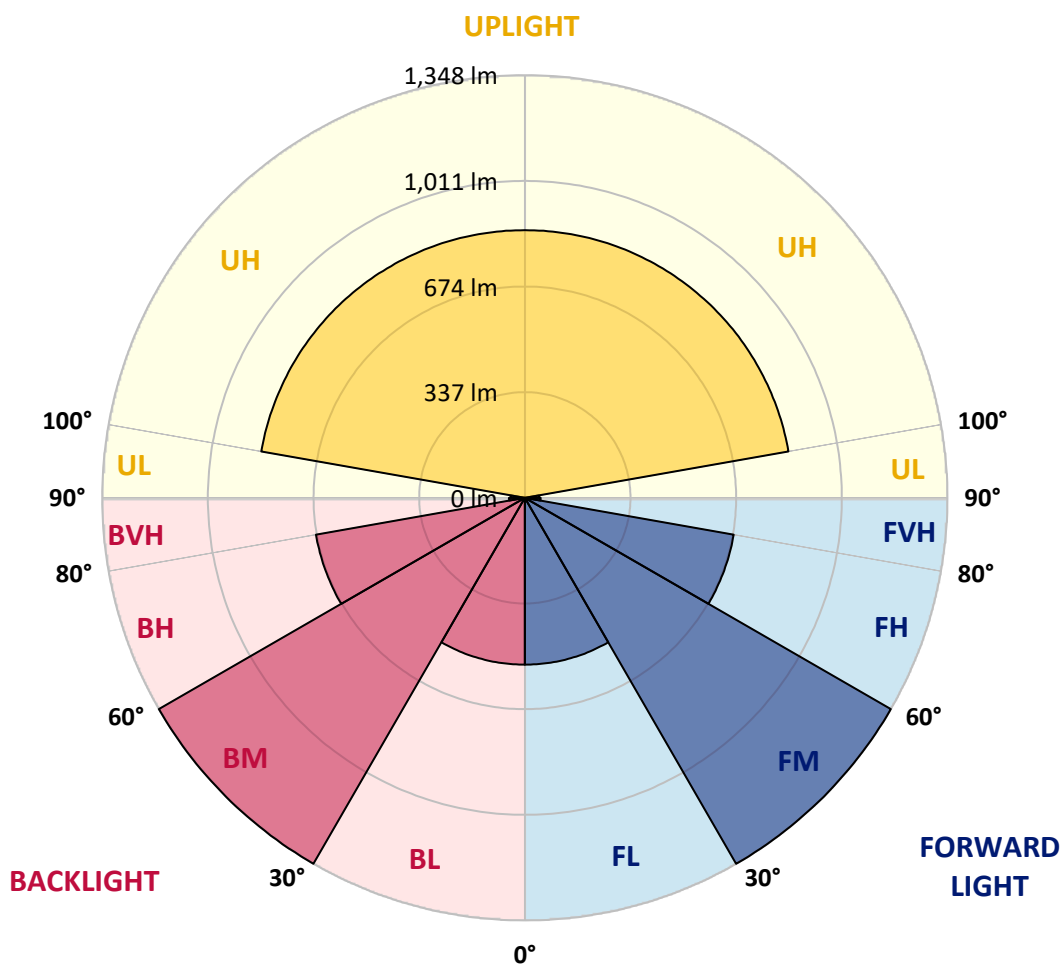


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	532.3	8.7			
FM (30°-60°)	1348.2	22.0			
FH (60°-80°)	676.7	11.1			G1/1800
FVH (80°-90°)	50.4	0.8			G1/100
BL (0°-30°)	532.3	8.7	B2/1000		
BM (30°-60°)	1348.2	22.0	B2/2500		
BH (60°-80°)	676.7	11.1	B2/1000		G1/1800
BVH (80°-90°)	50.4	0.8			G1/100
UL (90°-100°)	46.1	0.8		U2/50	
UH (100°-180°)	853.9	14.0		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°	1303.6	1303.6	1303.6	1303.6	1303.6	1303.6	1303.6	1303.6	1303.6	1303.6	1303.6
2.5°	1300.3	1304.5	1302.8	1302.8	1302.8	1302.8	1301.2	1302.8	1302.8	1303.6	1302.8
5°	1301.2	1300.3	1300.3	1301.2	1301.2	1302.0	1300.3	1301.2	1302.0	1302.0	1302.8
7.5°	1298.7	1299.5	1297.8	1299.5	1297.8	1298.7	1298.7	1299.5	1298.7	1299.5	1301.2
10°	1293.7	1294.5	1293.7	1293.7	1293.7	1295.3	1292.0	1294.5	1293.7	1294.5	1293.7
12.5°	1284.6	1288.7	1287.1	1288.7	1288.7	1288.7	1286.2	1287.9	1288.7	1288.7	1288.7
15°	1280.4	1281.2	1278.8	1282.1	1282.9	1283.7	1280.4	1282.1	1282.1	1282.9	1283.7
17.5°	1271.3	1275.4	1274.6	1277.1	1276.3	1278.8	1277.9	1277.1	1276.3	1277.9	1276.3
20°	1264.7	1268.8	1268.0	1270.5	1271.3	1273.8	1271.3	1271.3	1268.8	1269.6	1272.1
22.5°	1258.0	1259.7	1259.7	1262.2	1262.2	1264.7	1262.2	1261.3	1261.3	1260.5	1263.0
25°	1247.2	1248.1	1247.2	1249.7	1251.4	1253.1	1252.2	1250.6	1249.7	1249.7	1248.9
27.5°	1229.8	1233.2	1234.8	1238.1	1239.0	1241.4	1238.1	1238.1	1236.5	1234.8	1235.6
30°	1216.6	1218.2	1218.2	1225.7	1225.7	1229.8	1225.7	1224.9	1224.0	1223.2	1221.5
32.5°	1204.1	1206.6	1209.1	1214.9	1219.1	1220.7	1218.2	1216.6	1212.4	1209.9	1209.1
35°	1194.2	1195.0	1200.0	1208.3	1213.2	1217.4	1214.1	1209.9	1204.1	1200.0	1203.3
37.5°	1186.7	1187.5	1195.0	1205.8	1214.9	1218.2	1213.2	1206.6	1197.5	1192.5	1190.9
40°	1180.1	1185.1	1193.3	1208.3	1218.2	1223.2	1219.1	1209.9	1196.7	1186.7	1185.9
42.5°	1176.8	1179.2	1191.7	1209.1	1223.2	1229.8	1224.0	1211.6	1195.0	1183.4	1182.6
45°	1168.5	1175.9	1187.5	1209.9	1225.7	1234.0	1225.7	1209.9	1190.0	1176.8	1174.3
47.5°	1161.8	1164.3	1182.6	1208.3	1227.3	1234.0	1225.7	1205.8	1180.9	1163.5	1161.8
50°	1146.1	1151.9	1170.1	1197.5	1219.9	1226.5	1216.6	1190.0	1161.8	1142.8	1139.4
52.5°	1122.0	1127.0	1148.6	1182.6	1204.1	1211.6	1196.7	1168.5	1135.3	1112.1	1112.1
55°	1084.7	1092.2	1114.6	1149.4	1176.8	1183.4	1166.0	1136.1	1098.8	1075.6	1074.8
57.5°	1039.9	1044.9	1069.0	1107.1	1133.6	1143.6	1126.2	1093.0	1055.7	1028.3	1025.8
60°	981.9	988.5	1014.2	1050.7	1078.1	1086.4	1071.4	1038.3	1000.1	971.1	971.1
62.5°	912.2	919.7	945.4	982.7	1010.9	1023.3	1002.6	971.1	931.3	903.1	900.6
65°	830.9	837.6	860.8	899.8	928.8	937.9	922.2	889.0	850.8	824.3	821.8
67.5°	739.7	748.8	772.1	805.2	830.1	841.7	831.8	801.9	762.1	734.7	732.3
70°	641.0	647.7	665.9	696.6	724.8	733.1	718.2	698.3	660.9	636.1	632.7
72.5°	535.7	541.5	556.5	585.5	605.4	616.2	607.9	582.2	552.3	531.6	534.9
75°	429.6	428.7	445.3	466.1	484.3	491.8	486.0	469.4	442.0	424.6	423.8
77.5°	323.4	331.7	337.5	354.9	369.9	375.7	367.4	354.1	333.4	319.3	321.8
80°	227.2	222.2	233.0	243.8	253.8	259.6	254.6	247.1	233.0	222.2	220.6
82.5°	139.3	135.2	140.1	150.1	156.7	158.4	159.2	150.1	144.3	136.0	137.7
85°	61.4	62.2	66.3	73.0	73.8	74.6	74.6	73.0	66.3	65.5	63.9
87.5°	14.9	14.9	15.8	18.2	18.2	19.1	19.1	16.6	15.8	14.1	14.9
90°	32.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
92.5°	37.6	37.1	37.1	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6
95°	42.7	42.7	42.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
97.5°	48.3	48.3	48.3	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
100°	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
102.5°	60.5	60.5	60.5	60.5	60.5	60.5	60.5	61.0	60.5	60.5	60.5
105°	67.1	67.1	67.1	67.1	67.1	67.1	67.1	68.1	67.1	67.1	67.1
107.5°	74.2	74.2	74.7	74.7	74.7	74.7	74.7	75.2	74.7	74.7	74.7
110°	81.3	81.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	89.9	89.9	90.9	90.9	90.9	90.9	91.4	91.4	90.9	90.9	90.9
115°	98.6	98.6	99.6	99.6	99.6	99.6	100.6	100.6	99.6	99.6	99.6
117.5°	108.8	108.8	109.2	109.8	109.8	109.8	110.8	110.8	109.8	109.8	109.8
120°	118.9	118.9	118.9	119.9	119.9	119.9	121.0	121.0	119.9	119.9	119.9
122.5°	130.6	130.6	131.1	131.6	131.6	131.6	132.6	132.6	132.1	132.1	131.6
125°	142.3	142.3	143.3	143.3	143.3	143.3	144.3	144.3	144.3	144.3	143.3
127.5°	155.0	155.0	156.0	156.0	156.0	156.0	157.0	157.0	157.0	157.0	156.0
130°	167.7	167.7	168.7	168.7	168.7	168.7	169.7	169.7	169.7	169.7	168.7
132.5°	180.9	180.9	181.4	181.4	181.4	181.9	182.4	182.4	182.4	182.4	181.9
135°	194.1	194.1	194.1	194.1	194.1	195.1	195.1	195.1	195.1	195.1	195.1
137.5°	206.8	206.3	206.8	206.3	206.8	207.3	207.3	207.3	207.3	207.3	207.3
140°	219.5	218.5	219.5	218.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5
142.5°	231.2	230.7	231.2	230.2	231.2	231.2	231.2	231.2	231.2	231.2	231.2
145°	242.9	242.9	242.9	241.9	242.9	242.9	242.9	242.9	242.9	242.9	242.9
147.5°	255.1	254.6	255.1	254.1	255.1	255.1	255.1	255.1	255.1	255.1	255.1
150°	267.3	266.3	267.3	266.3	267.3	267.3	267.3	267.3	267.3	267.3	267.3
152.5°	277.0	276.5	277.5	276.5	277.0	277.0	277.5	277.0	277.0	277.0	277.0
155°	286.6	286.6	287.6	286.6	286.6	286.6	287.6	286.6	286.6	286.6	286.6
157.5°	294.8	294.8	295.8	294.8	294.8	294.8	295.8	294.8	294.8	294.8	294.8
160°	302.9	302.9	303.9	302.9	302.9	302.9	303.9	302.9	302.9	302.9	302.9
162.5°	309.5	309.5	310.5	309.5	309.5	309.5	310.5	309.5	309.5	309.5	309.5
165°	316.1	316.1	317.1	316.1	316.1	316.1	317.1	316.1	316.1	316.1	316.1
167.5°	320.2	320.2	321.2	320.2	320.2	320.2	321.2	320.2	320.2	320.2	320.2
170°	324.2	324.2	325.2	324.2	324.2	324.2	325.2	324.2	324.2	324.2	324.2
172.5°	326.8	326.8	327.8	326.8	327.2	326.8	327.8	326.8	326.8	326.8	326.8
175°	329.3	329.3	330.3	329.3	330.3	329.3	330.3	329.3	329.3	329.3	329.3
177.5°	330.3	330.3	330.8	330.3	330.8	330.3	330.8	330.3	330.3	330.3	330.3
180°	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3

(END OF REPORT)