

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: P821278

Luminaire Tested: **TT-D2-740-24VDC-CQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821278
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-1) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D2-740-24VDC-CQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
4000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

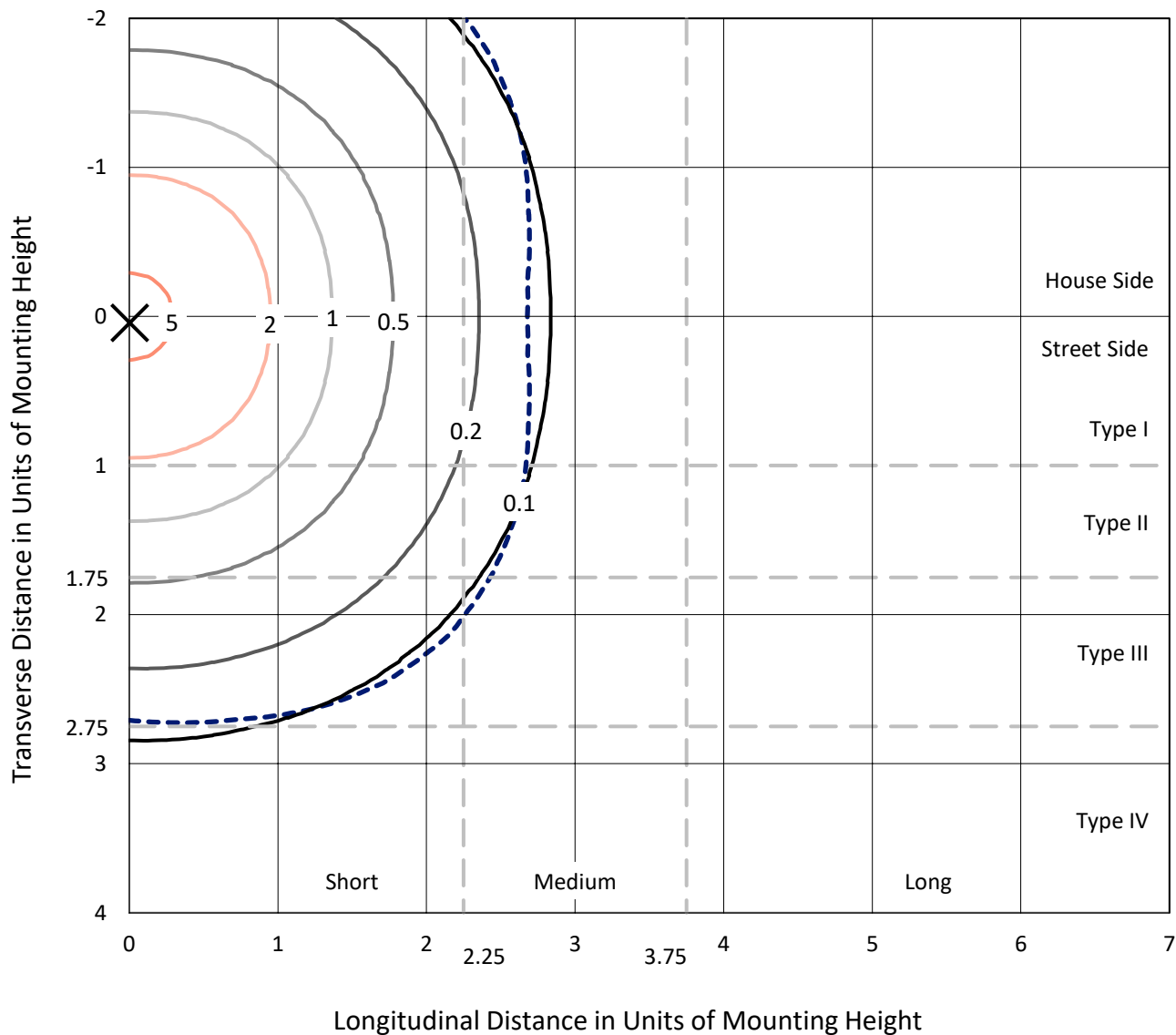
Lumens per Lamp: N/A
Luminaire Lumens: 6100.7 lumens
Efficiency: N/A
Efficacy: 160.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

Input Watts (W): 38
Input Voltage (V): NR
Input Current (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

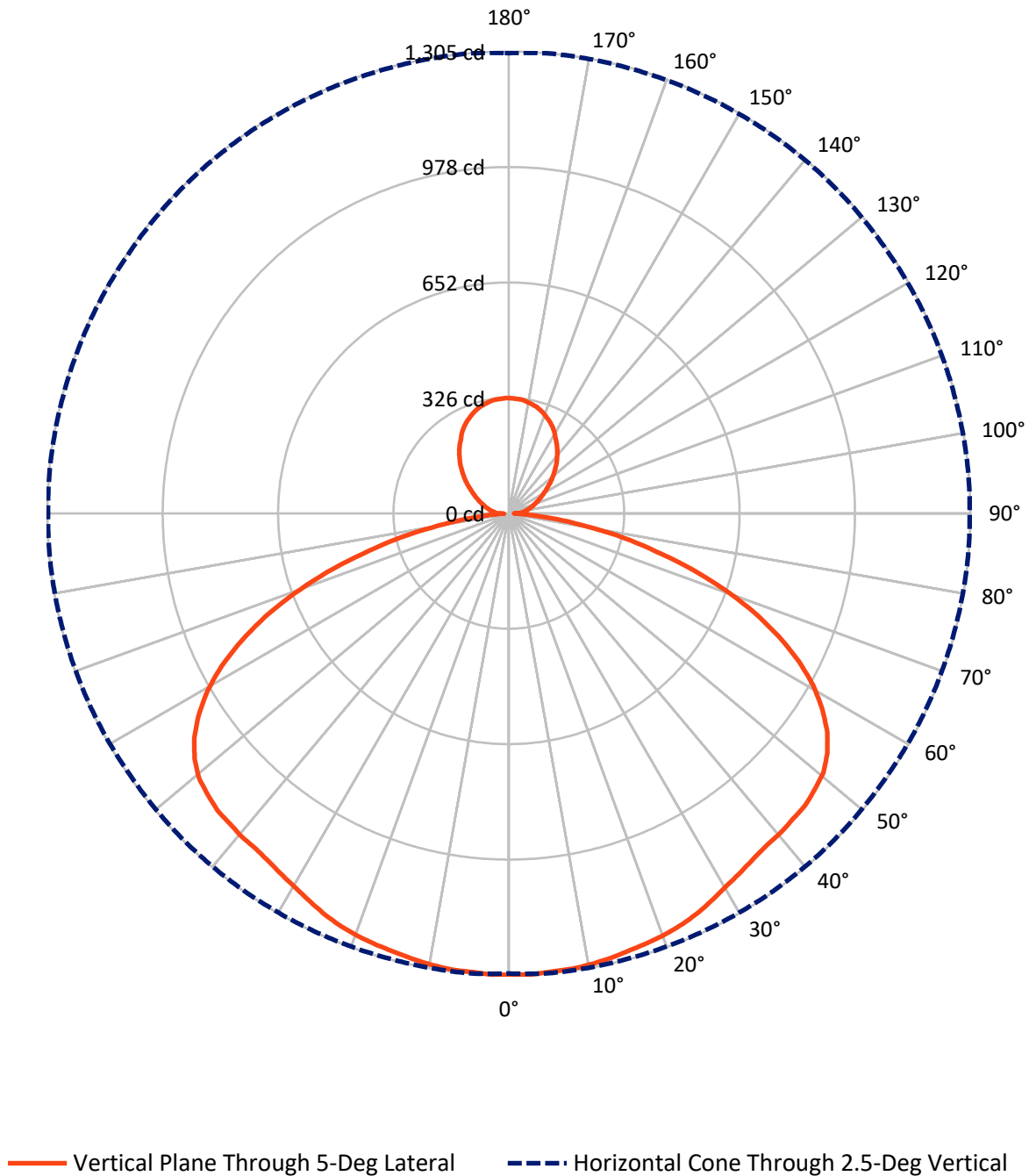
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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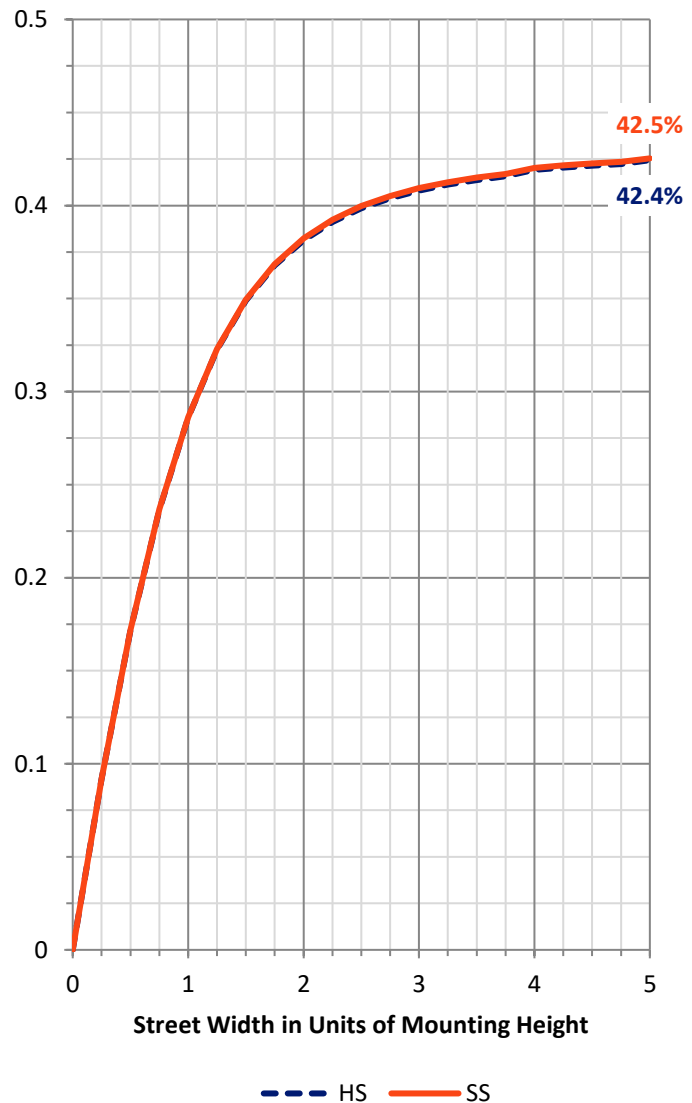
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2607.6	442.7	3050.4
	% Fixture	42.7	7.3	50.0
Street Side	Lumens	2607.6	442.7	3050.4
	% Fixture	42.7	7.3	50.0
Total	Lumens	5215.3	885.5	6100.7
	% Fixture	85.5	14.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.0	2.0
10°-20°	363.1	6.0
20°-30°	577.5	9.5
30°-40°	759.6	12.5
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°	100.8	1.7
90°-100°	45.4	0.7
100°-110°	70.3	1.2
110°-120°	97.7	1.6
120°-130°	126.6	2.1
130°-140°	147.6	2.4
140°-150°	149.5	2.5
150°-160°	129.8	2.1
160°-170°	87.7	1.4
170°-180°	30.8	0.5
0°-90°	5215.3	85.5
0°-180°	6100.7	100.0



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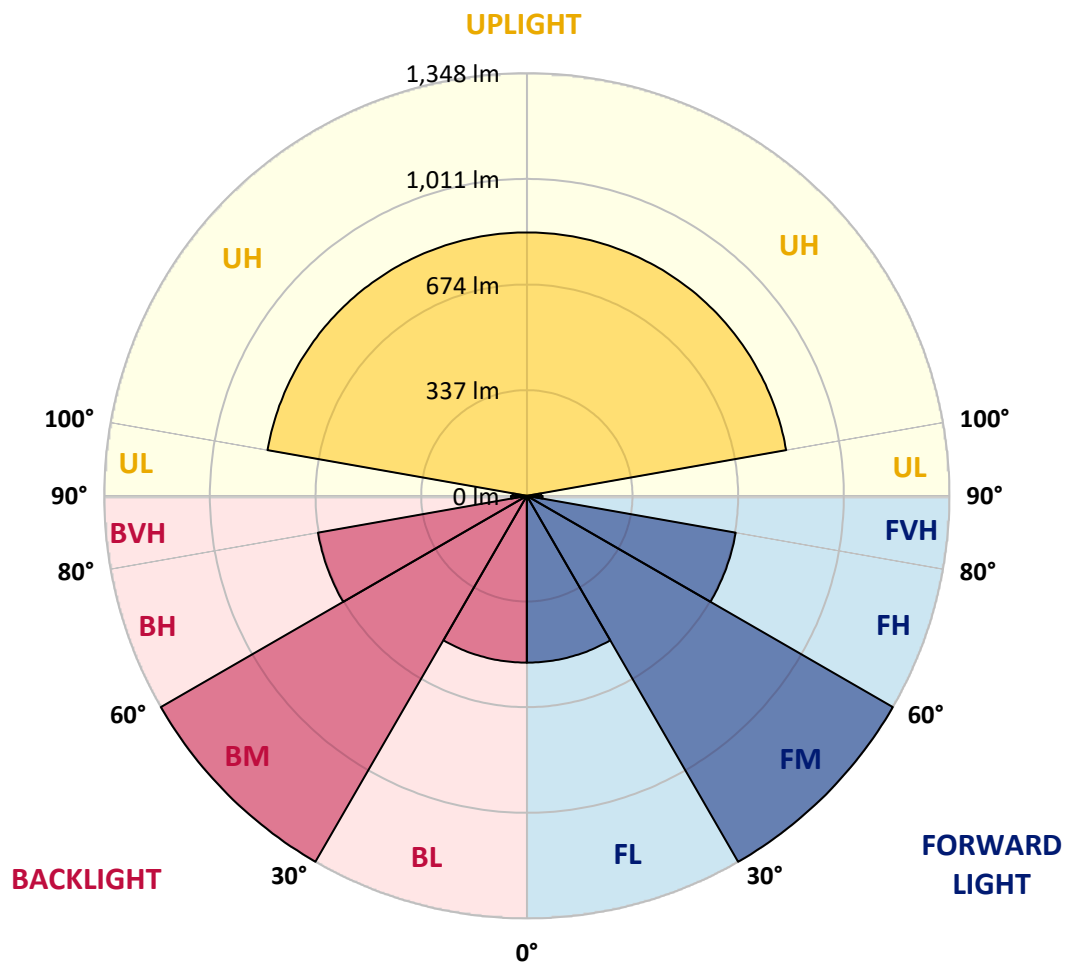
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	532.3	8.7			
FM	(30°-60°)	1348.2	22.1			
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	22.1	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°)	45.4	0.7		U2/50	
UH	(100°-180°)	840.1	13.8		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°	32.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
92.5°	37.0	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
95°	42.0	42.0	42.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
97.5°	48.0	48.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
100°	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
102.5°	60.0	59.0	60.0	60.0	59.0	59.0	59.0	60.0	60.0	60.0	59.0
105°	66.0	66.0	66.0	66.0	66.0	66.0	66.0	67.0	66.0	66.0	66.0
107.5°	73.0	73.0	73.0	74.0	74.0	74.0	74.0	74.0	73.0	74.0	73.0
110°	80.0	80.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	89.0	89.0	89.0	89.0	89.0	90.0	90.0	90.0	90.0	90.0	89.0
115°	97.0	97.0	98.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0
117.5°	107.0	107.0	107.0	107.0	107.0	108.0	108.0	108.0	108.0	108.0	107.0
120°	117.0	117.0	117.0	118.0	118.0	118.0	119.0	119.0	118.0	118.0	118.0
122.5°	129.0	128.0	129.0	129.0	129.0	129.0	130.0	130.0	130.0	130.0	129.0
125°	140.0	140.0	141.0	141.0	141.0	141.0	142.0	142.0	142.0	142.0	141.0
127.5°	153.0	153.0	153.0	153.0	153.0	154.0	154.0	154.0	154.0	154.0	154.0
130°	165.0	165.0	166.0	166.0	166.0	166.0	167.0	167.0	167.0	167.0	166.0
132.5°	179.0	178.0	179.0	178.0	178.0	179.0	179.0	180.0	179.0	180.0	179.0
135°	191.0	191.0	191.0	191.0	191.0	192.0	192.0	192.0	192.0	192.0	192.0
137.5°	204.0	203.0	204.0	203.0	203.0	204.0	204.0	204.0	204.0	204.0	204.0
140°	216.0	215.0	216.0	215.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0
142.5°	228.0	227.0	228.0	227.0	227.0	228.0	228.0	228.0	228.0	228.0	228.0
145°	239.0	239.0	239.0	238.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
147.5°	250.0	249.0	250.0	249.0	249.0	250.0	250.0	250.0	250.0	250.0	250.0
150°	263.0	262.0	263.0	262.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
152.5°	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0
155°	282.0	282.0	283.0	282.0	282.0	282.0	283.0	282.0	282.0	282.0	282.0
157.5°	290.0	290.0	290.0	290.0	290.0	290.0	291.0	291.0	290.0	291.0	290.0
160°	298.0	298.0	299.0	298.0	298.0	298.0	299.0	298.0	298.0	298.0	298.0
162.5°	306.0	305.0	306.0	305.0	306.0	306.0	306.0	306.0	306.0	306.0	306.0
165°	311.0	311.0	312.0	311.0	311.0	311.0	312.0	311.0	311.0	311.0	311.0
167.5°	316.0	315.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0
170°	319.0	319.0	320.0	319.0	319.0	319.0	320.0	319.0	319.0	319.0	319.0
172.5°	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0
175°	324.0	324.0	325.0	324.0	325.0	324.0	325.0	324.0	324.0	324.0	324.0
177.5°	325.0	325.0	326.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0
180°	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0

(END OF REPORT)