

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: P198448

Luminaire Tested: **TT-C4-LED-E1-RW-CG-LWR-LW-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198448
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-C4-LED-E1-RW-CG-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION WITH CLEAR GLASS LENS AND LumaWatt WIRELESS
SENSOR
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5889.6 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U4 - G3

Input Watts (W): 75.4
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

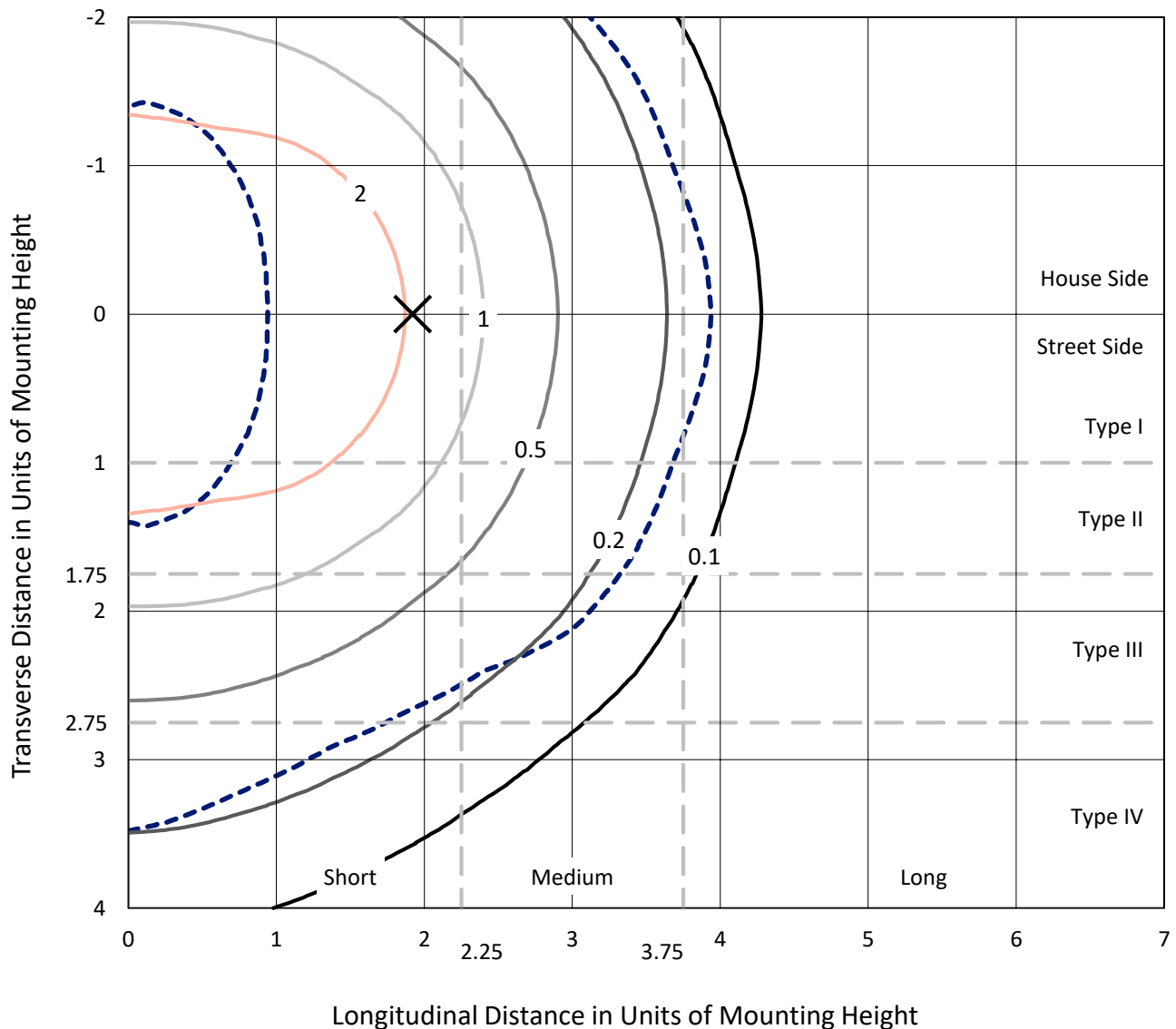


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

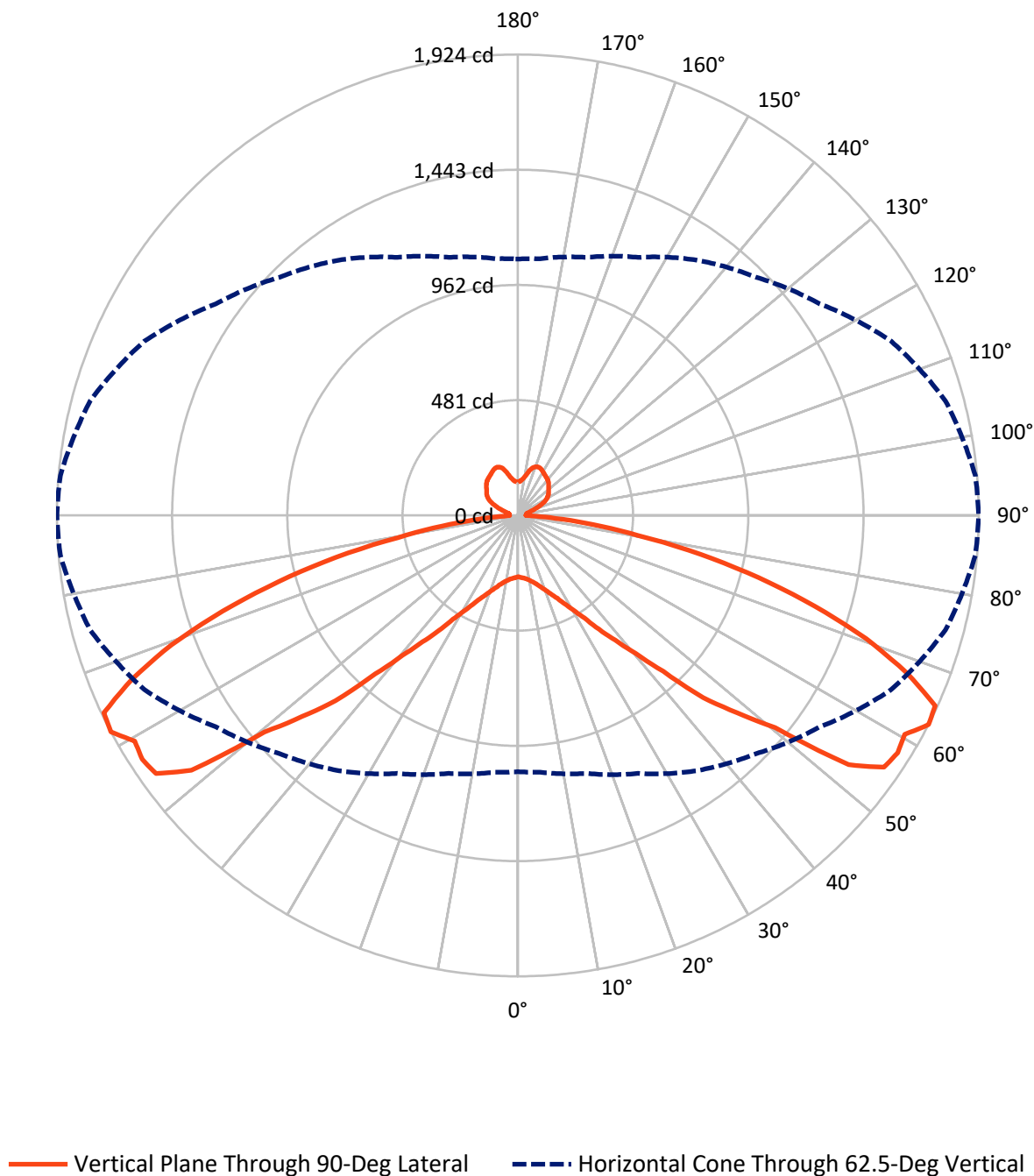


Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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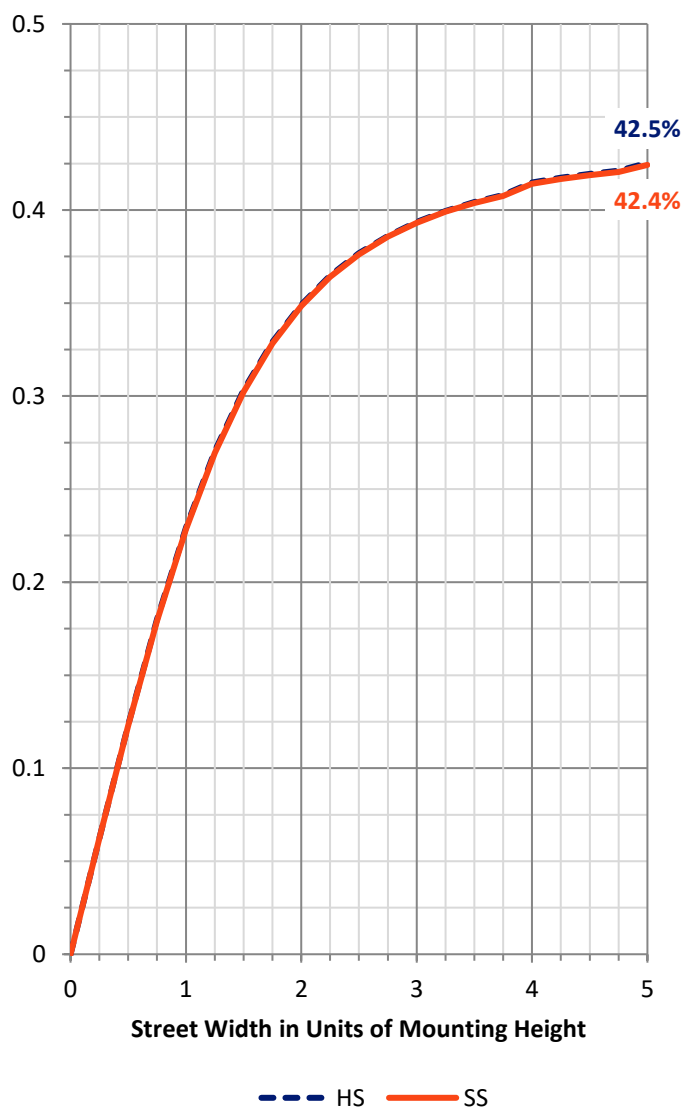
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2532.1	412.7	2944.8
	% Fixture	43.0	7.0	50.0
Street Side	Lumens	2532.1	412.7	2944.8
	% Fixture	43.0	7.0	50.0
Total	Lumens	5064.2	825.3	5889.6
	% Fixture	86.0	14.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.5	0.4
10°-20°	87.1	1.5
20°-30°	186.1	3.2
30°-40°	361.9	6.1
40°-50°	682.3	11.6
50°-60°	1166.0	19.8
60°-70°	1404.1	23.8
70°-80°	944.9	16.0
80°-90°	206.5	3.5
90°-100°	38.4	0.7
100°-110°	59.5	1.0
110°-120°	119.6	2.0
120°-130°	148.9	2.5
130°-140°	153.3	2.6
140°-150°	136.3	2.3
150°-160°	103.9	1.8
160°-170°	51.8	0.9
170°-180°	13.6	0.2
0°-90°	5064.2	86.0
0°-180°	5889.6	100.0

Coefficient of Utilization



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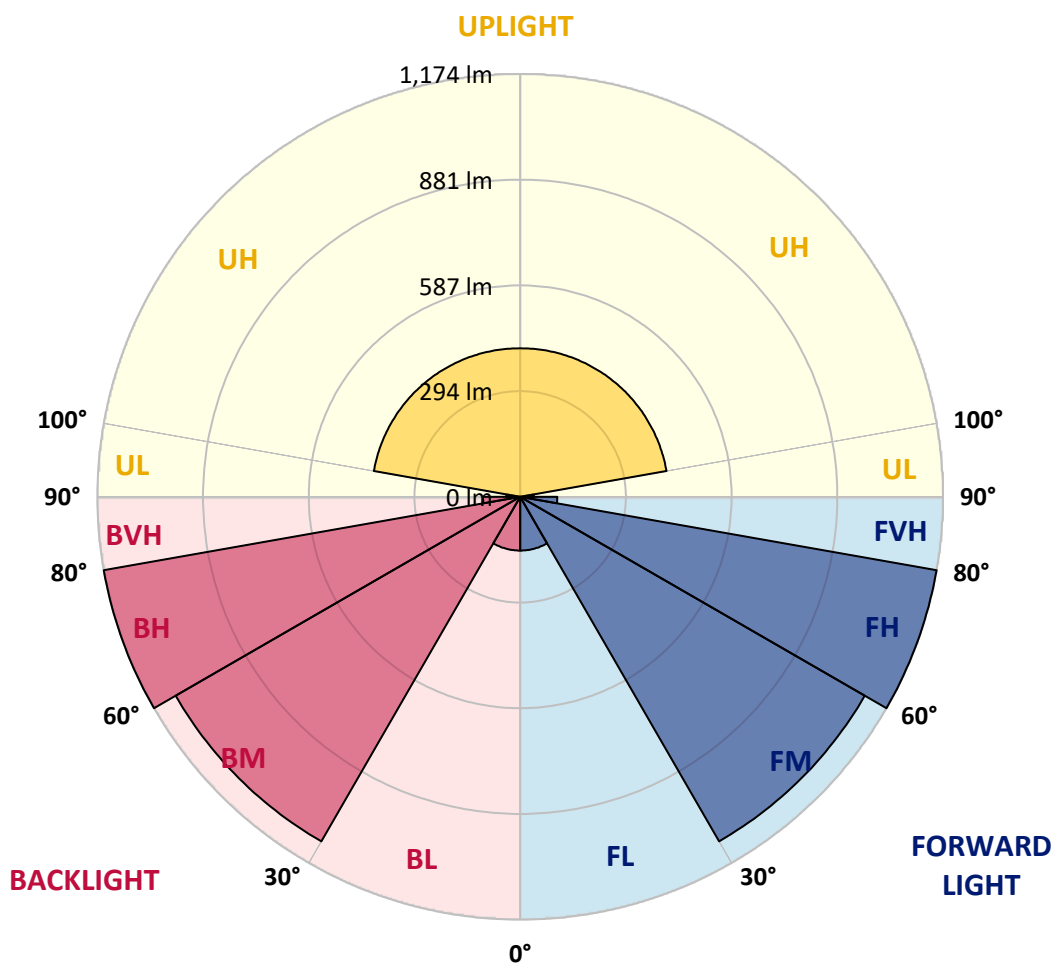
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	149.3	2.5			
FM	(30°-60°)	1105.1	18.8			
FH	(60°-80°)	1174.5	19.9			G1/1800
FVH	(80°-90°)	103.3	1.8			G2/225
BL	(0°-30°)	149.3	2.5	B1/500		
BM	(30°-60°)	1105.1	18.8	B2/2500		
BH	(60°-80°)	1174.5	19.9	B3/2500		G3/2500
BVH	(80°-90°)	103.3	1.8			G2/225
UL	(90°-100°)	38.4	0.7		U2/50	
UH	(100°-180°)	412.7	7.0		U3/500	

BUG Rating: B3-U4-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	255.8	255.8	255.8	255.8	255.8	255.8	255.8	255.8	255.8	255.8	255.8
2.5°	258.2	258.2	258.2	258.2	258.2	258.2	259.4	259.4	259.4	259.4	259.4
5°	261.8	261.8	262.9	262.9	264.1	264.1	264.1	264.1	262.9	262.9	262.9
7.5°	267.7	267.7	268.9	270.0	270.0	268.9	268.9	267.7	267.7	267.7	267.7
10°	277.2	277.2	278.3	278.3	277.2	277.2	277.2	276.0	276.0	276.0	276.0
12.5°	287.8	289.0	290.2	289.0	287.8	286.6	286.6	285.4	285.4	285.4	285.4
15°	303.2	305.6	304.4	304.4	303.2	300.8	299.7	298.5	298.5	298.5	298.5
17.5°	326.9	326.9	323.3	321.0	318.6	317.4	316.2	315.1	315.1	315.1	315.1
20°	351.8	350.6	347.0	343.5	339.9	338.7	335.2	334.0	335.2	334.0	334.0
22.5°	381.4	380.2	375.5	371.9	367.2	362.4	361.2	357.7	356.5	355.3	356.5
25°	411.0	412.2	408.6	405.1	398.0	393.2	388.5	386.1	383.7	382.6	382.6
27.5°	445.3	447.7	445.3	438.2	431.1	427.6	420.5	418.1	416.9	418.1	418.1
30°	482.1	483.2	479.7	476.1	469.0	460.7	456.0	457.2	457.2	460.7	459.6
32.5°	527.1	525.9	521.1	518.8	511.7	504.6	502.2	503.4	508.1	510.5	510.5
35°	576.8	573.3	568.5	563.8	557.9	553.1	554.3	563.8	578.0	581.5	583.9
37.5°	626.6	620.6	620.6	613.5	608.8	612.3	619.4	637.2	647.9	664.5	660.9
40°	672.7	673.9	671.6	665.6	664.5	676.3	691.7	714.2	741.4	758.0	756.8
42.5°	715.4	726.0	718.9	720.1	726.0	745.0	769.9	813.7	868.2	889.5	889.5
45°	762.8	775.8	769.9	773.4	790.0	819.6	872.9	959.4	1034.0	1084.9	1084.9
47.5°	811.3	823.2	820.8	827.9	857.5	909.6	991.4	1099.1	1173.8	1223.5	1230.6
50°	872.9	868.2	869.4	887.1	938.1	1013.9	1118.1	1224.7	1347.9	1377.5	1391.7
52.5°	926.2	912.0	920.3	949.9	1023.3	1112.2	1241.3	1429.6	1600.1	1718.6	1728.1
55°	970.0	959.4	976.0	1017.4	1112.2	1229.4	1397.6	1628.6	1769.5	1841.8	1854.8
57.5°	1007.9	1003.2	1030.4	1083.7	1204.5	1347.9	1518.4	1705.6	1803.9	1859.5	1869.0
60°	1042.3	1045.8	1075.4	1146.5	1276.8	1408.3	1545.7	1703.2	1801.5	1845.3	1854.8
62.5°	1069.5	1075.4	1114.5	1188.0	1300.5	1405.9	1538.6	1719.8	1847.7	1916.4	1923.5
65°	1087.3	1093.2	1137.0	1188.0	1293.4	1395.2	1582.4	1736.3	1831.1	1901.0	1914.0
67.5°	1089.7	1097.9	1124.0	1166.6	1255.5	1345.5	1506.6	1617.9	1693.7	1736.3	1748.2
70°	1075.4	1073.1	1082.6	1100.3	1153.6	1215.2	1351.4	1434.3	1488.8	1532.6	1543.3
72.5°	1021.0	1017.4	994.9	974.8	994.9	1043.5	1160.7	1216.4	1253.1	1288.6	1295.7
75°	916.7	900.2	844.5	816.1	810.1	852.8	942.8	978.3	992.5	1032.8	1037.5
77.5°	733.2	726.0	678.7	628.9	624.2	650.2	718.9	734.3	722.5	766.3	779.3
80°	535.4	525.9	480.9	444.2	434.7	452.4	492.7	496.3	488.0	509.3	509.3
82.5°	342.3	332.8	313.9	286.6	266.5	277.2	307.9	307.9	307.9	313.9	317.4
85°	176.5	172.9	158.7	145.7	138.6	140.9	151.6	152.8	158.7	162.3	157.5
87.5°	49.7	52.1	49.7	43.8	42.6	41.5	46.2	47.4	50.9	53.3	55.7
90°	36.0	36.0	36.0	34.0	29.0	26.0	28.0	32.0	34.0	34.0	34.0
92.5°	40.0	39.0	38.0	34.0	29.0	27.0	28.0	32.0	35.0	36.0	36.0
95°	44.0	43.0	41.0	36.0	32.0	30.0	30.0	34.0	37.0	39.0	38.0
97.5°	42.0	42.0	40.0	37.0	35.0	33.0	33.0	34.0	36.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	36.0	38.0	38.0	37.0	37.0
102.5°	51.0	51.0	49.0	46.0	44.0	42.0	43.0	44.0	42.0	41.0	41.0
105°	60.0	60.0	57.0	54.0	53.0	52.0	54.0	53.0	49.0	48.0	49.0
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	60.0
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	75.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.0
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	113.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	129.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	142.0
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	150.0
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	158.0
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	163.0
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	169.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	176.0
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.0
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.0
140°	229.0	226.0	216.0	200.0	207.0	213.0	212.0	217.0	209.0	195.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	218.0	220.0	223.0	211.0	198.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	223.0	230.0	227.0	211.0	201.0	202.0
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	206.0
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	211.0
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	216.0
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.0
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	219.0
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	215.0
162.5°	185.0	184.0	193.0	193.0	198.0	198.0	196.0	200.0	204.0	207.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	177.0	176.0	181.0	185.0	190.0	192.0
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	174.0
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	160.0
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	151.0
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	144.0
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	138.0	140.0	140.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)