

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: P198458

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198458
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-SG-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION WITH SOFTENING 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: 5954.6 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U4 - G2

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

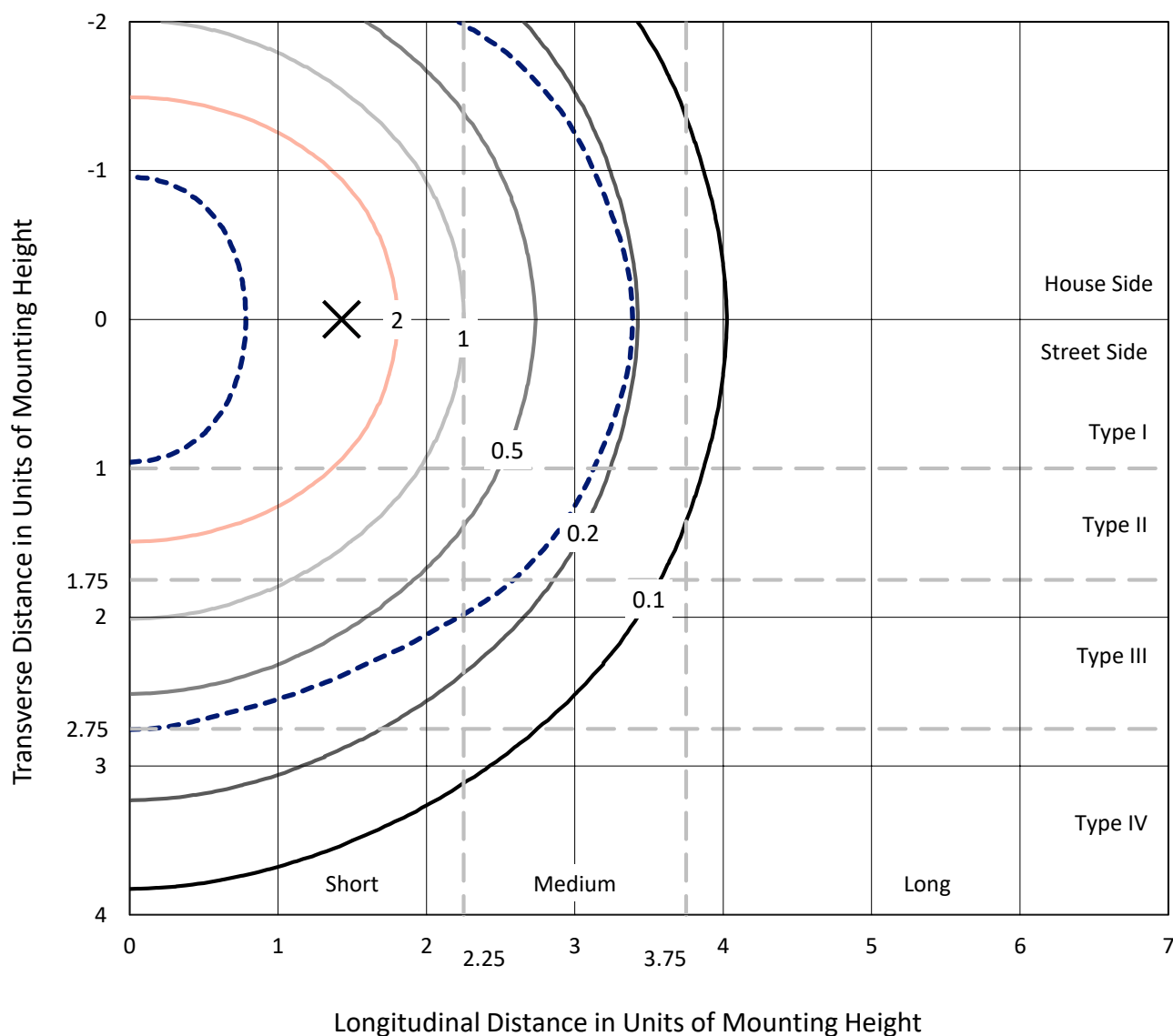


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

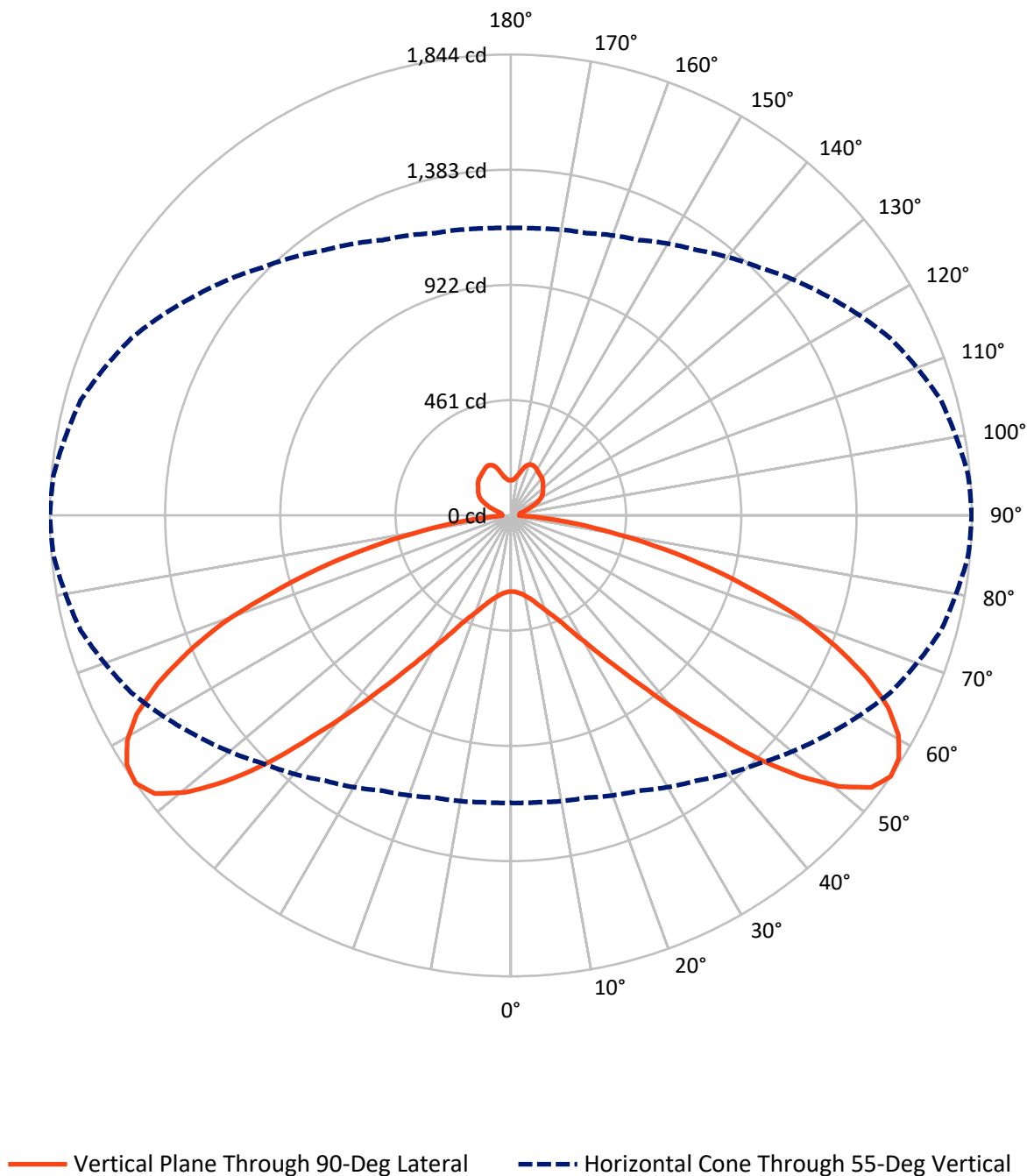


Based on 10 foot mounting height. Maximum calculated value = 4.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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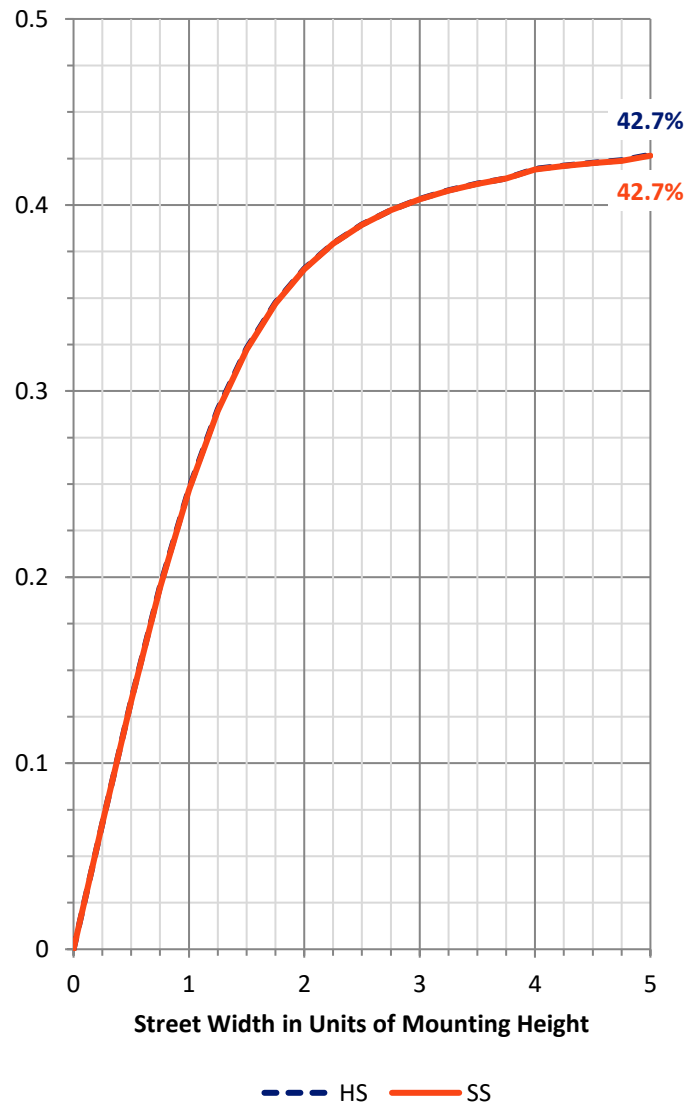
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2564.6	412.7	2977.3
	% Fixture	43.1	6.9	50.0
Street Side	Lumens	2564.6	412.7	2977.3
	% Fixture	43.1	6.9	50.0
Total	Lumens	5129.3	825.3	5954.6
	% Fixture	86.1	13.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	0.5
10°-20°	104.6	1.8
20°-30°	228.5	3.8
30°-40°	459.6	7.7
40°-50°	868.5	14.6
50°-60°	1281.1	21.5
60°-70°	1261.9	21.2
70°-80°	734.8	12.3
80°-90°	160.0	2.7
90°-100°	38.4	0.6
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	1.7
160°-170°	51.8	0.9
170°-180°	13.6	0.2
0°-90°	5129.3	86.1
0°-180°	5954.6	100.0

Coefficient of Utilization



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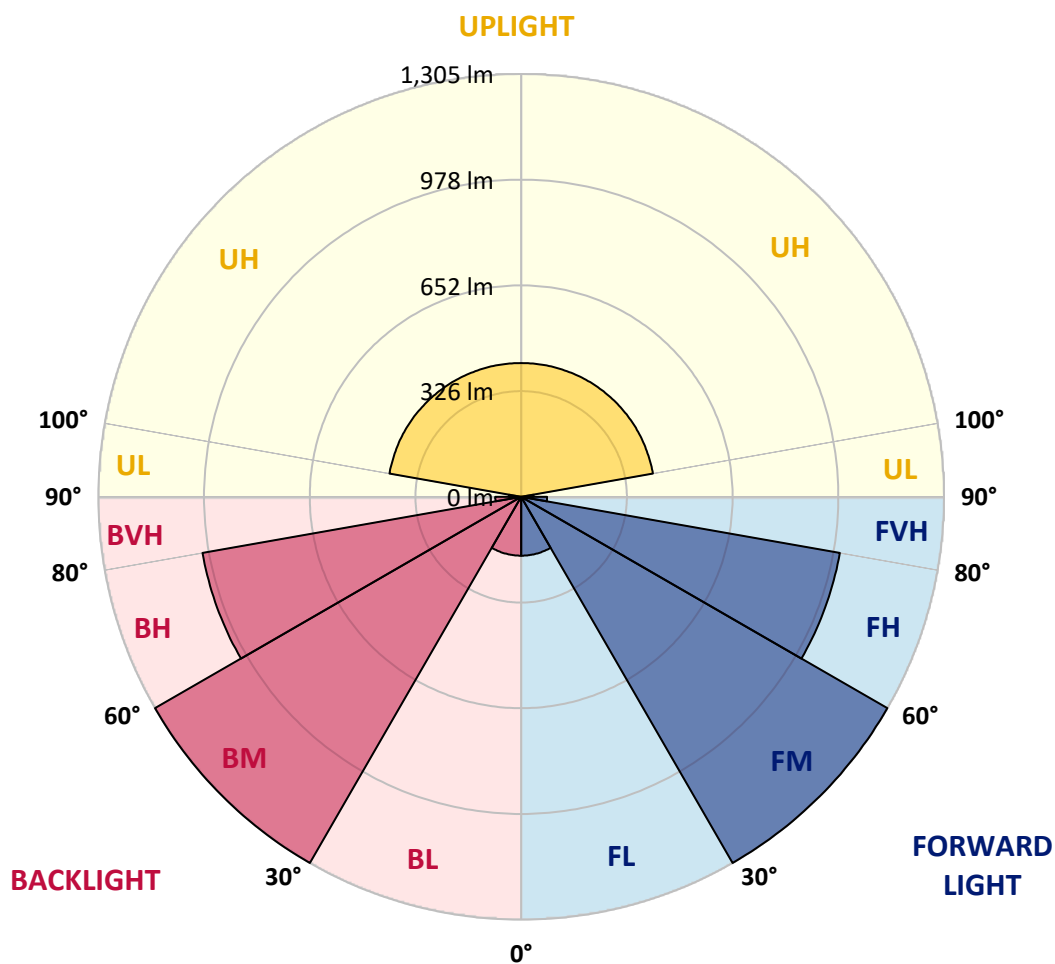
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	181.7	3.1			
FM	(30°-60°)	1304.6	21.9			
FH	(60°-80°)	998.4	16.8			G1/1800
FVH	(80°-90°)	80.0	1.3			G1/100
BL	(0°-30°)	181.7	3.1	B1/500		
BM	(30°-60°)	1304.6	21.9	B2/2500		
BH	(60°-80°)	998.4	16.8	B2/1000		G2/1000
BVH	(80°-90°)	80.0	1.3			G1/100
UL	(90°-100°)	38.4	0.6		U2/50	
UH	(100°-180°)	412.7	6.9		U3/500	

BUG Rating: B2-U4-G2

Type III Short



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CATALOG NUMBER: TT-C4-LED-E1-RW-SG-LWR-LW-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	304.4	304.4	304.4	304.4	304.4	304.4	304.4	304.4	304.4	304.4	304.4
2.5°	306.8	306.8	306.8	306.8	305.6	306.8	305.6	305.6	305.6	305.6	305.6
5°	310.3	311.5	310.3	310.3	310.3	310.3	310.3	310.3	309.1	309.1	310.3
7.5°	318.6	318.6	318.6	318.6	317.4	318.6	317.4	317.4	317.4	317.4	317.4
10°	330.5	330.5	330.5	330.5	329.3	329.3	329.3	328.1	328.1	328.1	328.1
12.5°	344.7	345.8	345.8	344.7	343.5	343.5	342.3	342.3	342.3	342.3	341.1
15°	366.0	364.8	364.8	362.4	362.4	360.1	361.2	360.1	358.9	357.7	358.9
17.5°	387.3	388.5	388.5	386.1	384.9	383.7	381.4	381.4	380.2	381.4	381.4
20°	420.5	420.5	418.1	415.7	412.2	411.0	408.6	408.6	406.3	408.6	408.6
22.5°	453.6	453.6	451.3	450.1	445.3	441.8	440.6	439.4	438.2	440.6	438.2
25°	495.1	495.1	492.7	488.0	483.2	482.1	478.5	478.5	479.7	480.9	476.1
27.5°	537.7	538.9	536.5	533.0	528.2	523.5	523.5	524.7	525.9	530.6	529.4
30°	589.8	588.7	585.1	580.4	578.0	574.4	575.6	580.4	585.1	589.8	589.8
32.5°	643.1	642.0	640.8	636.0	634.8	633.7	639.6	649.1	658.5	662.1	668.0
35°	700.0	700.0	698.8	695.2	697.6	703.5	713.0	730.8	745.0	761.6	761.6
37.5°	762.8	760.4	761.6	761.6	767.5	778.2	800.7	835.0	864.6	881.2	881.2
40°	827.9	824.4	825.5	831.5	842.1	868.2	907.3	954.6	1002.0	1023.3	1030.4
42.5°	890.7	887.1	891.9	897.8	923.8	964.1	1022.1	1094.4	1161.9	1195.1	1193.9
45°	948.7	951.1	957.0	971.2	1009.1	1068.3	1151.2	1248.4	1336.0	1375.1	1389.3
47.5°	1006.7	1007.9	1016.2	1041.1	1094.4	1169.0	1269.7	1398.8	1495.9	1542.1	1559.9
50°	1061.2	1063.6	1077.8	1113.3	1176.1	1266.1	1390.5	1527.9	1634.5	1689.0	1704.4
52.5°	1109.8	1112.2	1128.7	1172.6	1247.2	1351.4	1481.7	1622.6	1735.2	1797.9	1807.4
55°	1150.1	1152.4	1169.0	1215.2	1295.7	1403.5	1536.2	1675.9	1781.4	1837.0	1844.1
57.5°	1173.8	1174.9	1192.7	1240.1	1319.4	1420.1	1548.0	1683.0	1775.4	1825.2	1831.1
60°	1174.9	1177.3	1193.9	1236.5	1310.0	1402.3	1524.3	1645.1	1729.2	1774.2	1781.4
62.5°	1153.6	1154.8	1169.0	1202.2	1265.0	1345.5	1458.0	1567.0	1642.8	1686.6	1694.9
65°	1105.1	1105.1	1112.2	1137.0	1185.6	1254.3	1350.2	1450.9	1520.8	1561.1	1565.8
67.5°	1024.5	1024.5	1025.7	1042.3	1075.4	1129.9	1211.7	1295.7	1358.5	1398.8	1404.7
70°	921.5	920.3	910.8	921.5	942.8	989.0	1061.2	1125.2	1176.1	1208.1	1229.4
72.5°	791.2	786.4	779.3	777.0	798.3	838.6	897.8	941.6	970.0	1004.4	1006.7
75°	639.6	637.2	627.7	627.7	649.1	681.0	728.4	758.0	772.2	794.7	799.5
77.5°	477.3	476.1	479.7	480.9	492.7	527.1	554.3	575.6	572.1	586.3	591.0
80°	334.0	336.4	336.4	335.2	347.0	360.1	389.7	395.6	390.9	395.6	395.6
82.5°	212.0	210.8	208.5	212.0	221.5	232.1	244.0	245.2	248.7	245.2	247.5
85°	106.6	105.4	107.8	109.0	113.7	119.6	130.3	132.7	126.7	126.7	124.4
87.5°	36.7	39.1	36.7	37.9	37.9	43.8	42.6	42.6	42.6	42.6	45.0
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)