

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: P198461

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198461
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-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION WITH SOFTENING GLASS LENS
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6523.2 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type III - 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

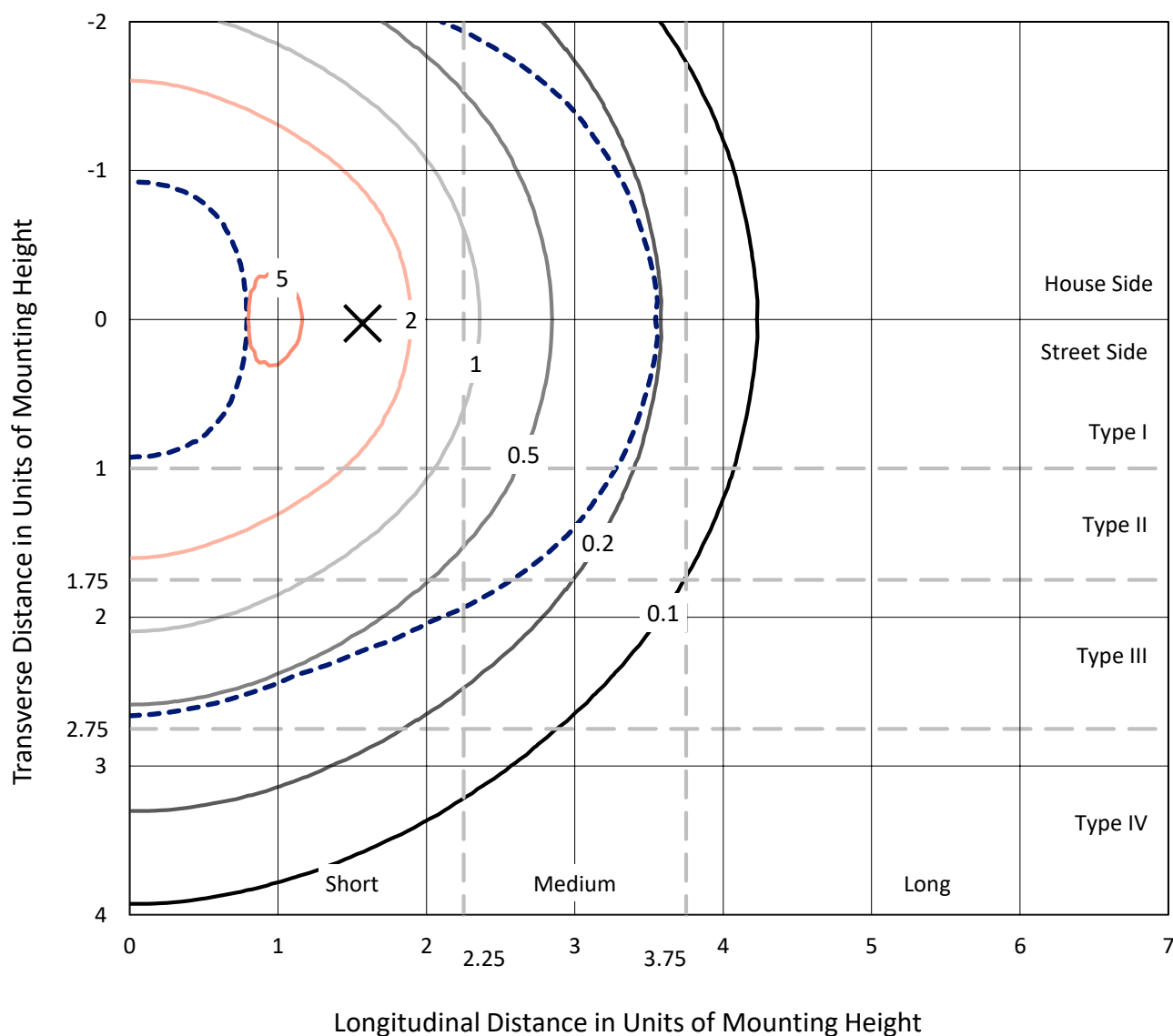


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

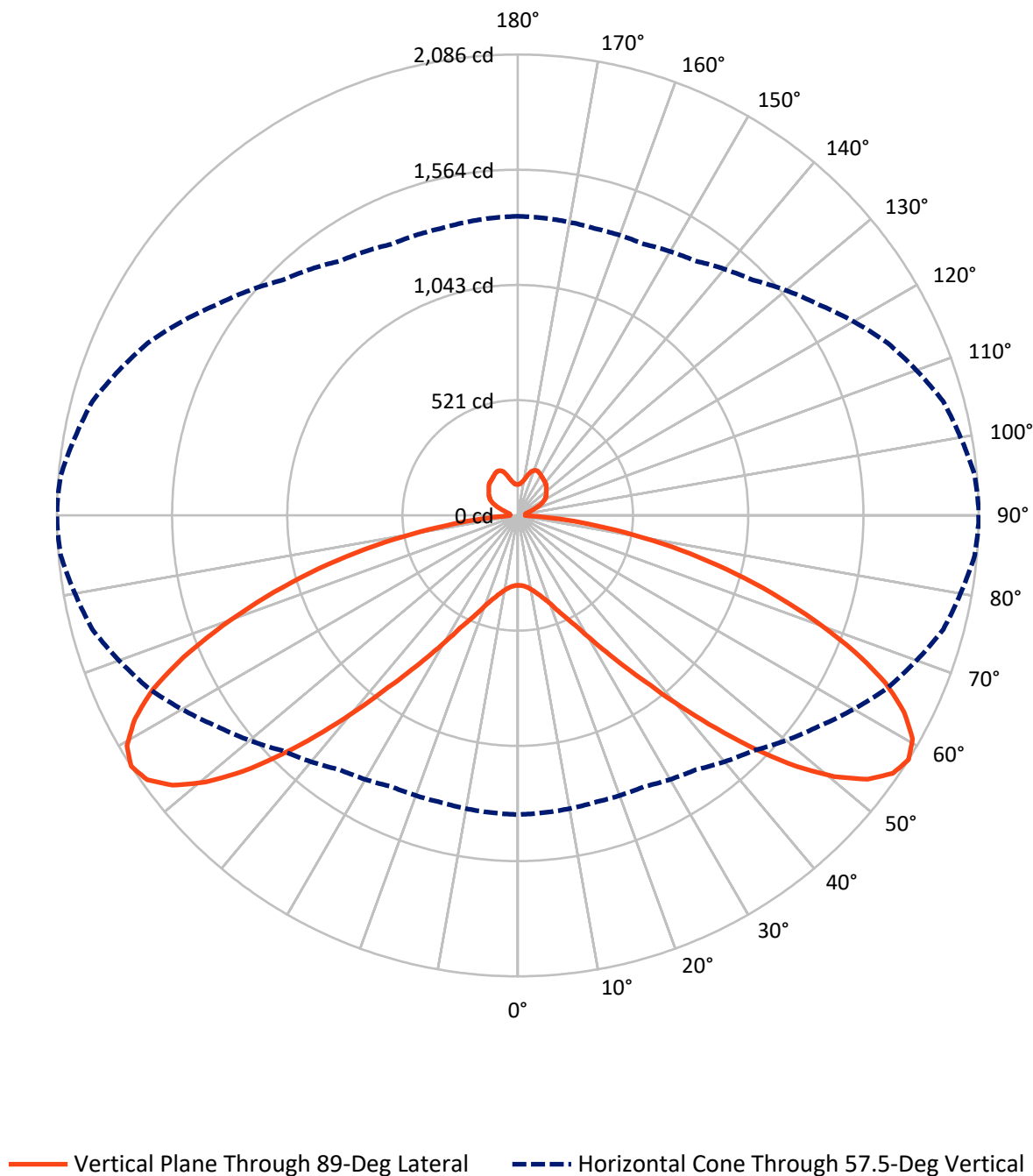


Based on 10 foot mounting height. Maximum calculated value = 5.3 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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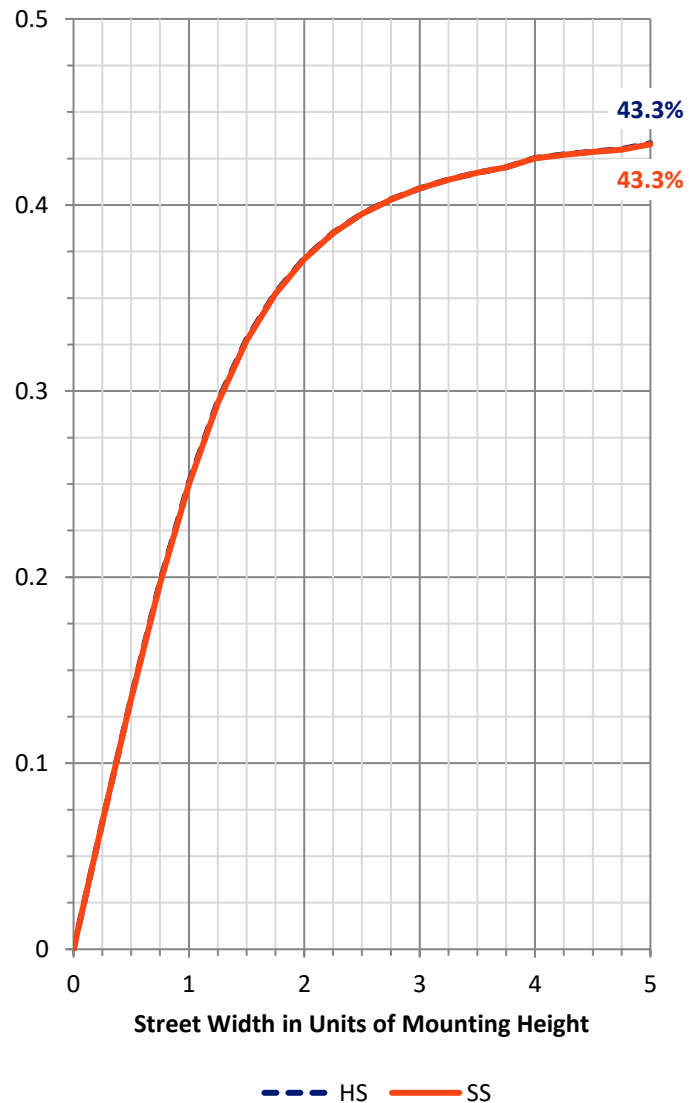
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2849.0	412.7	3261.6
	% Fixture	43.7	6.3	50.0
Street Side	Lumens	2849.0	412.7	3261.6
	% Fixture	43.7	6.3	50.0
Total	Lumens	5697.9	825.3	6523.2
	% Fixture	87.3	12.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.4	0.5
10°-20°	109.6	1.7
20°-30°	245.6	3.8
30°-40°	508.2	7.8
40°-50°	964.7	14.8
50°-60°	1411.7	21.6
60°-70°	1407.4	21.6
70°-80°	837.7	12.8
80°-90°	181.6	2.8
90°-100°	38.4	0.6
100°-110°	59.5	0.9
110°-120°	119.6	1.8
120°-130°	148.9	2.3
130°-140°	153.3	2.4
140°-150°	136.3	2.1
150°-160°	103.9	1.6
160°-170°	51.8	0.8
170°-180°	13.6	0.2
0°-90°	5697.9	87.3
0°-180°	6523.2	100.0

Coefficient of Utilization



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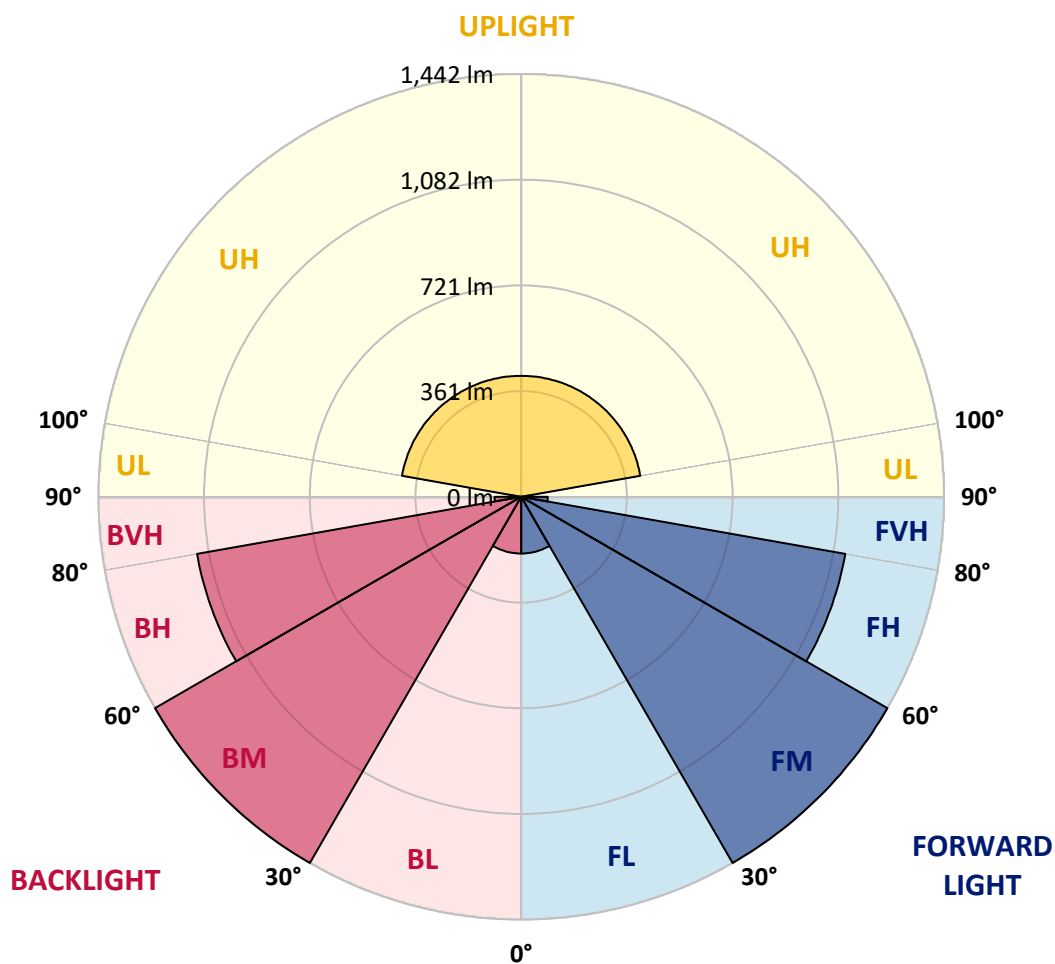
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	193.3	3.0			
FM	(30°-60°)	1442.3	22.1			
FH	(60°-80°)	1122.6	17.2			G1/1800
FVH	(80°-90°)	90.8	1.4			G1/100
BL	(0°-30°)	193.3	3.0	B1/500		
BM	(30°-60°)	1442.3	22.1	B2/2500		
BH	(60°-80°)	1122.6	17.2	B3/2500		G3/2500
BVH	(80°-90°)	90.8	1.4			G1/100
UL	(90°-100°)	38.4	0.6		U2/50	
UH	(100°-180°)	412.7	6.3		U3/500	

BUG Rating: B3-U4-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	89°
0°	316.2	316.2	316.2	316.2	316.2	316.2	316.2	316.2	316.2	316.2	316.2
2.5°	318.6	318.6	318.6	318.6	317.4	317.4	317.4	317.4	317.4	317.4	317.4
5°	323.3	323.3	322.2	323.3	322.2	322.2	322.2	322.2	322.2	322.2	322.2
7.5°	330.5	330.5	330.5	330.5	330.5	330.5	329.3	330.5	329.3	329.3	329.3
10°	343.5	342.3	343.5	342.3	342.3	341.1	341.1	341.1	341.1	341.1	341.1
12.5°	360.1	360.1	360.1	358.9	357.7	357.7	356.5	356.5	356.5	355.3	356.5
15°	382.6	383.7	380.2	379.0	379.0	376.6	375.5	376.6	375.5	374.3	375.5
17.5°	409.8	411.0	408.6	406.3	403.9	402.7	401.5	400.3	400.3	400.3	399.1
20°	445.3	445.3	443.0	438.2	434.7	432.3	432.3	431.1	431.1	432.3	428.8
22.5°	485.6	484.4	482.1	479.7	474.9	470.2	467.8	466.7	466.7	469.0	470.2
25°	535.4	536.5	529.4	524.7	520.0	511.7	510.5	511.7	512.9	512.9	515.2
27.5°	586.3	588.7	582.7	575.6	568.5	565.0	562.6	565.0	567.3	570.9	569.7
30°	646.7	645.5	644.3	633.7	625.4	621.8	624.2	631.3	637.2	645.5	646.7
32.5°	711.8	714.2	705.9	697.6	694.1	690.5	694.1	709.5	726.0	730.8	736.7
35°	788.8	784.1	779.3	773.4	767.5	767.5	785.3	803.0	829.1	846.9	846.9
37.5°	867.0	863.4	855.1	846.9	846.9	858.7	876.5	920.3	958.2	984.2	973.6
40°	947.5	942.8	940.4	930.9	932.1	960.6	998.5	1052.9	1107.4	1144.1	1137.0
42.5°	1029.3	1030.4	1022.1	1018.6	1029.3	1061.2	1127.6	1201.0	1269.7	1315.9	1317.1
45°	1113.3	1113.3	1107.4	1105.1	1125.2	1173.8	1256.7	1357.3	1449.7	1503.0	1508.9
47.5°	1190.3	1189.1	1184.4	1183.2	1217.6	1275.6	1379.8	1508.9	1622.6	1681.9	1697.3
50°	1256.7	1257.8	1250.7	1256.7	1287.5	1364.4	1490.0	1646.3	1776.6	1851.2	1858.3
52.5°	1308.8	1310.0	1301.7	1306.4	1347.9	1436.7	1576.5	1751.7	1893.9	1973.2	1982.7
55°	1344.3	1339.6	1333.6	1340.8	1388.1	1486.4	1639.2	1821.6	1969.7	2052.6	2059.7
57.5°	1353.8	1350.2	1344.3	1353.8	1404.7	1505.4	1662.9	1846.5	1993.4	2076.3	2085.7
60°	1339.6	1339.6	1332.5	1343.1	1394.1	1492.4	1646.3	1824.0	1963.8	2039.6	2052.6
62.5°	1302.9	1302.9	1294.6	1302.9	1351.4	1442.6	1589.5	1754.1	1880.8	1947.2	1962.6
65°	1234.2	1233.0	1228.2	1230.6	1270.9	1357.3	1491.2	1640.4	1750.6	1809.8	1829.9
67.5°	1134.7	1131.1	1126.4	1131.1	1160.7	1237.7	1360.9	1491.2	1582.4	1639.2	1644.0
70°	1007.9	1004.4	998.5	996.1	1026.9	1088.5	1188.0	1302.9	1378.7	1420.1	1424.8
72.5°	857.5	862.3	857.5	850.4	870.5	925.0	1007.9	1095.6	1158.4	1196.3	1202.2
75°	709.5	710.6	698.8	696.4	711.8	746.2	813.7	881.2	935.7	967.7	977.1
77.5°	549.6	549.6	538.9	533.0	541.3	570.9	617.1	671.6	716.6	736.7	753.3
80°	395.6	395.6	386.1	371.9	380.2	395.6	437.0	466.7	502.2	524.7	527.1
82.5°	247.5	244.0	246.4	235.7	238.1	242.8	268.9	289.0	310.3	322.2	323.3
85°	129.1	124.4	122.0	116.1	112.5	120.8	132.7	146.9	151.6	162.3	158.7
87.5°	40.3	37.9	36.7	36.7	33.2	35.5	36.7	39.1	45.0	45.0	47.4
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	38.2
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	48.8
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	59.8
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	74.8

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	89°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.2
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	113.6
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	129.8
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	142.6
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	150.6
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	158.4
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	163.6
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	169.4
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	176.6
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.2
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.2
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	201.8
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	205.6
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	210.8
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	215.8
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.2
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	219.6
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	215.6
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	191.6
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	173.6
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	159.8
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	150.6
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	143.8
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

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CANDELA DISTRIBUTION (continued):

	90°
0°	316.2
2.5°	317.4
5°	322.2
7.5°	329.3
10°	341.1
12.5°	355.3
15°	375.5
17.5°	400.3
20°	428.8
22.5°	466.7
25°	512.9
27.5°	567.3
30°	645.5
32.5°	733.2
35°	839.7
37.5°	985.4
40°	1135.9
42.5°	1325.4
45°	1508.9
47.5°	1697.3
50°	1854.8
52.5°	1979.2
55°	2063.2
57.5°	2085.7
60°	2049.0
62.5°	1959.0
65°	1827.5
67.5°	1644.0
70°	1432.0
72.5°	1198.6
75°	966.5
77.5°	748.5
80°	527.1
82.5°	332.8
85°	158.7
87.5°	50.9
90°	34.0
92.5°	36.0
95°	38.0
97.5°	36.0
100°	37.0
102.5°	41.0
105°	49.0
107.5°	60.0
110°	75.0

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CANDELA DISTRIBUTION (continued):

	90°
112.5°	94.0
115°	113.0
117.5°	129.0
120°	142.0
122.5°	150.0
125°	158.0
127.5°	163.0
130°	169.0
132.5°	176.0
135°	184.0
137.5°	190.0
140°	195.0
142.5°	198.0
145°	202.0
147.5°	206.0
150°	211.0
152.5°	216.0
155°	219.0
157.5°	219.0
160°	215.0
162.5°	207.0
165°	192.0
167.5°	174.0
170°	160.0
172.5°	151.0
175°	144.0
177.5°	141.0
180°	140.0

(END OF REPORT)