

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: P198480

Luminaire Tested: **TT-C4-LED-E1-WQ-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198480
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-WQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
WIDE DISTRIBUTION
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7677.8 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - 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



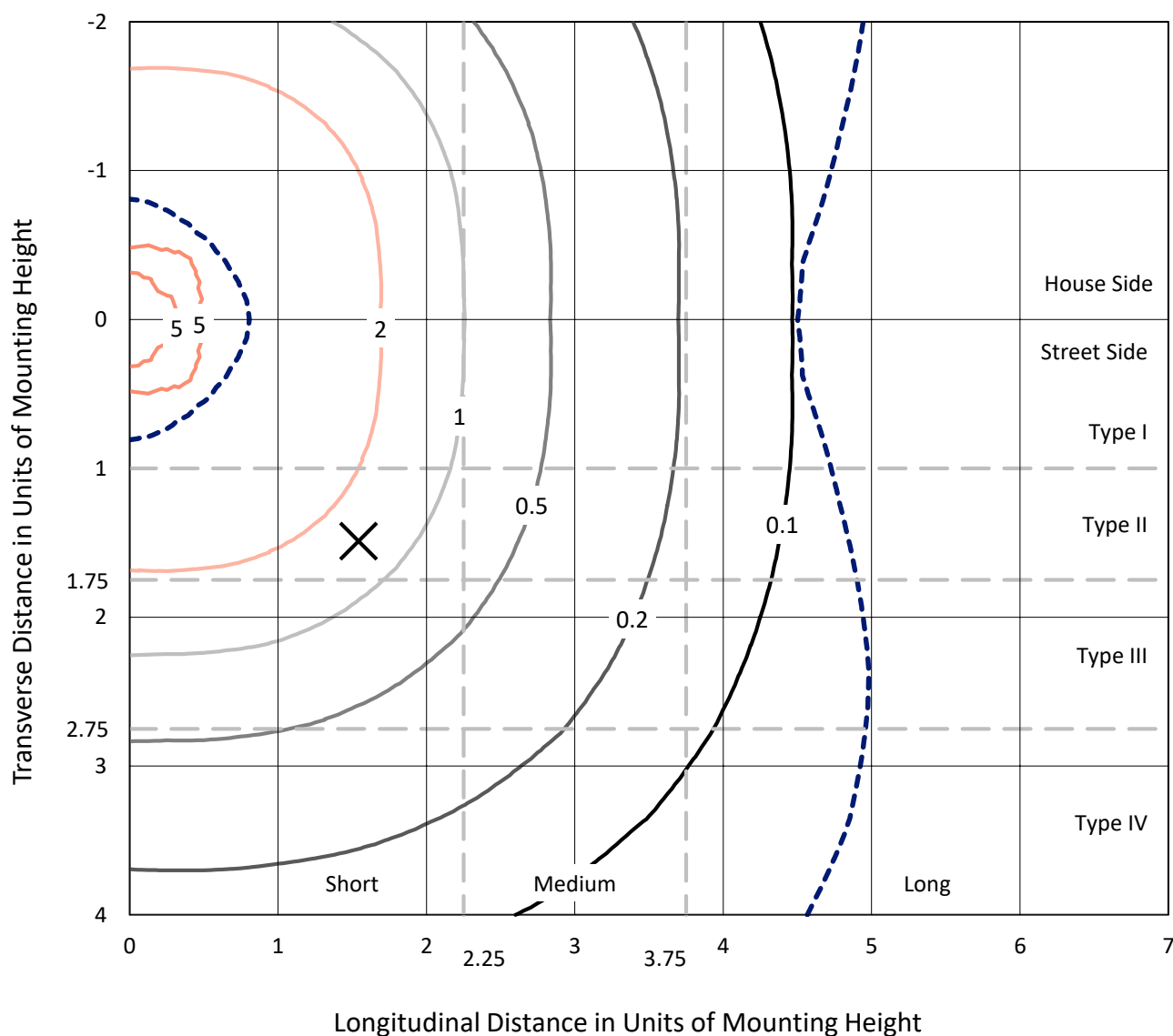
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

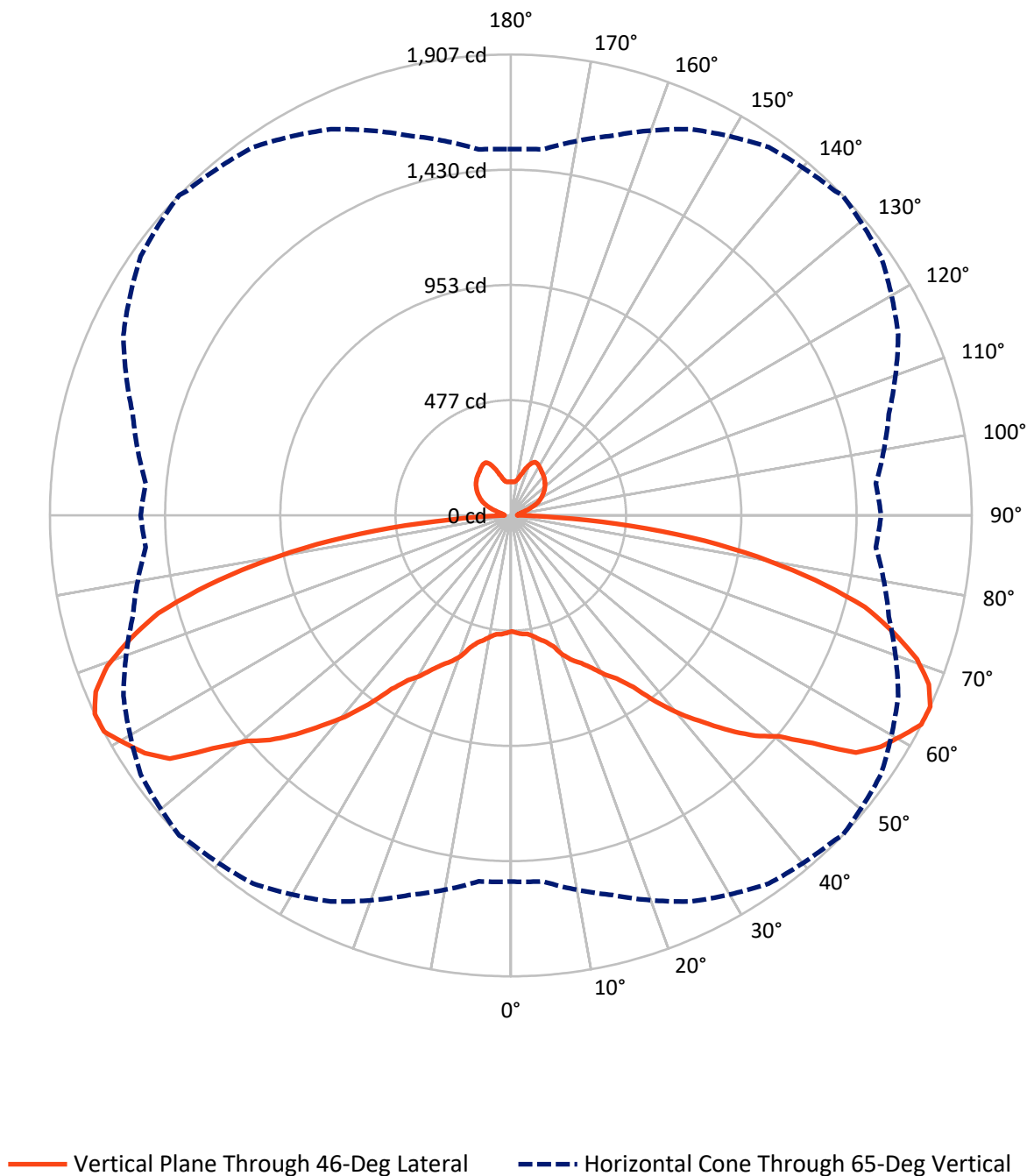


Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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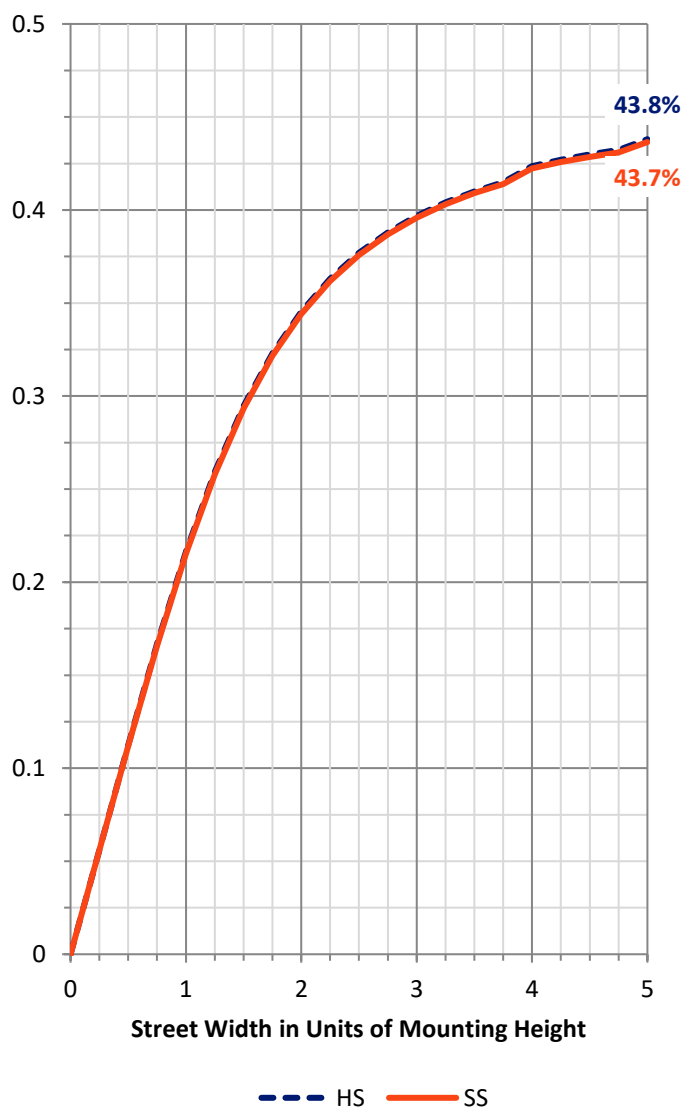
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3426.3	412.6	3838.9
	% Fixture	44.6	5.4	50.0
Street Side	Lumens	3426.3	412.6	3838.9
	% Fixture	44.6	5.4	50.0
Total	Lumens	6852.6	825.3	7677.8
	% Fixture	89.3	10.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.5	0.6
10°-20°	158.1	2.1
20°-30°	318.2	4.1
30°-40°	554.0	7.2
40°-50°	936.9	12.2
50°-60°	1396.6	18.2
60°-70°	1671.4	21.8
70°-80°	1353.2	17.6
80°-90°	416.7	5.4
90°-100°	38.4	0.5
100°-110°	59.5	0.8
110°-120°	119.6	1.6
120°-130°	148.9	1.9
130°-140°	153.3	2.0
140°-150°	136.3	1.8
150°-160°	103.9	1.4
160°-170°	51.8	0.7
170°-180°	13.6	0.2
0°-90°	6852.6	89.3
0°-180°	7677.8	100.0

Coefficient of Utilization



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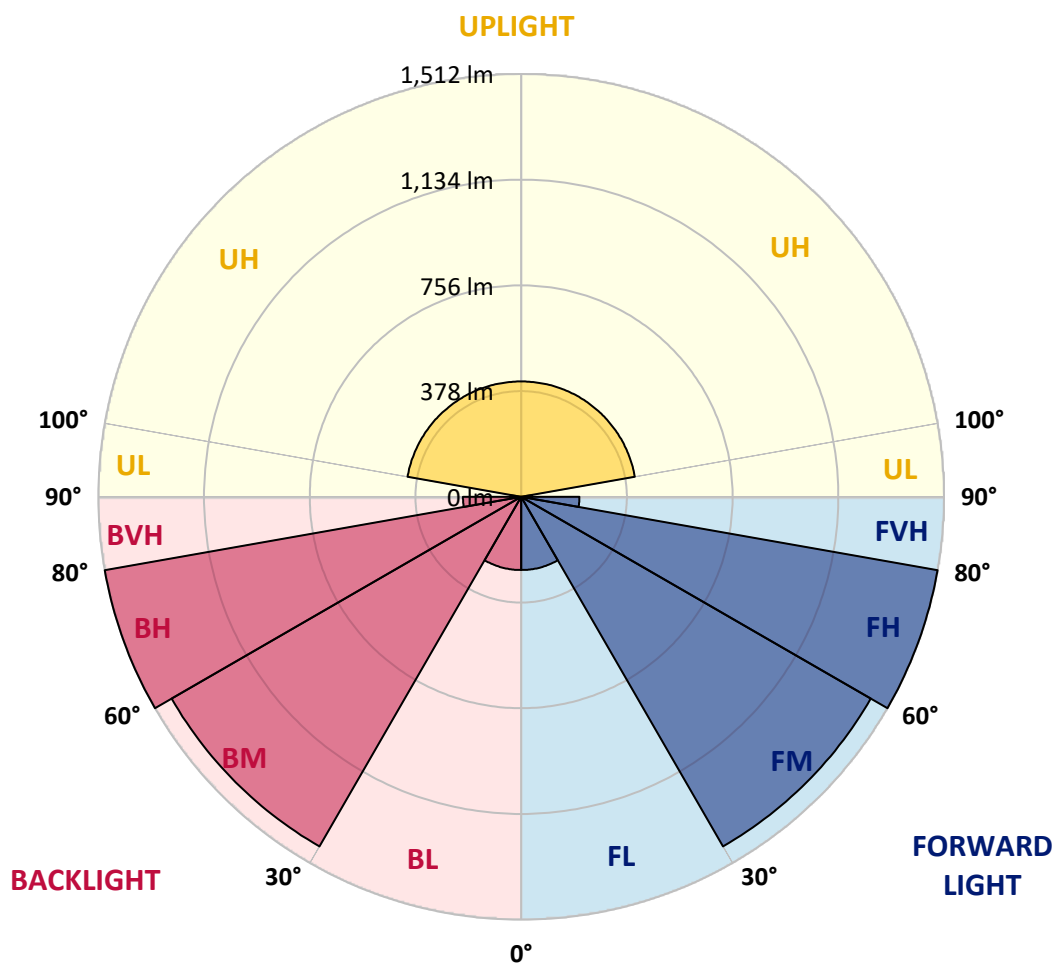
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	261.9	3.4			
FM	(30°-60°)	1443.8	18.8			
FH	(60°-80°)	1512.3	19.7			G1/1800
FVH	(80°-90°)	208.3	2.7			G2/225
BL	(0°-30°)	261.9	3.4	B1/500		
BM	(30°-60°)	1443.8	18.8	B2/2500		
BH	(60°-80°)	1512.3	19.7	B3/2500		G1/1800
BVH	(80°-90°)	208.3	2.7			G2/225
UL	(90°-100°)	38.4	0.5		U2/50	
UH	(100°-180°)	412.6	5.4		U3/500	

BUG Rating: B3-U4-G2

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7
2.5°	488.0	486.8	486.8	486.8	486.8	486.8	486.8	486.8	486.8	486.8	488.0
5°	496.3	496.3	495.1	493.9	493.9	492.7	492.7	492.7	493.9	495.1	495.1
7.5°	499.8	498.6	498.6	497.5	496.3	496.3	495.1	496.3	497.5	498.6	498.6
10°	506.9	508.1	509.3	510.5	511.7	510.5	508.1	510.5	510.5	509.3	506.9
12.5°	523.5	523.5	527.1	530.6	530.6	529.4	525.9	530.6	529.4	525.9	523.5
15°	546.0	547.2	547.2	550.8	548.4	546.0	542.5	548.4	548.4	546.0	544.8
17.5°	578.0	575.6	572.1	574.4	576.8	576.8	569.7	576.8	572.1	569.7	573.3
20°	613.5	612.3	611.2	613.5	623.0	619.4	615.9	620.6	614.7	606.4	608.8
22.5°	640.8	643.1	646.7	650.2	659.7	657.3	650.2	658.5	649.1	646.7	639.6
25°	675.1	673.9	683.4	683.4	689.3	685.8	677.5	689.3	679.9	683.4	672.7
27.5°	709.5	708.3	715.4	715.4	726.0	724.9	714.2	726.0	715.4	713.0	709.5
30°	748.5	746.2	747.4	756.8	772.2	772.2	762.8	768.7	756.8	745.0	743.8
32.5°	790.0	785.3	792.4	807.8	816.1	813.7	804.2	813.7	810.1	790.0	785.3
35°	830.3	836.2	849.2	862.3	877.6	880.0	871.7	876.5	863.4	848.0	836.2
37.5°	897.8	907.3	923.8	954.6	978.3	985.4	978.3	976.0	957.0	922.7	906.1
40°	992.5	994.9	1017.4	1063.6	1088.5	1093.2	1080.2	1083.7	1061.2	1023.3	987.8
42.5°	1069.5	1066.0	1106.2	1147.7	1173.8	1184.4	1170.2	1174.9	1144.1	1107.4	1068.3
45°	1132.3	1135.9	1177.3	1218.8	1260.2	1280.3	1269.7	1261.4	1216.4	1174.9	1140.6
47.5°	1190.3	1206.9	1235.3	1295.7	1347.9	1370.4	1362.1	1350.2	1302.9	1234.2	1208.1
50°	1263.8	1274.4	1308.8	1386.9	1435.5	1443.8	1436.7	1436.7	1391.7	1312.3	1276.8
52.5°	1343.1	1344.3	1395.2	1475.8	1537.4	1570.5	1564.6	1548.0	1477.0	1407.1	1349.0
55°	1437.9	1424.8	1504.2	1588.3	1680.7	1735.2	1732.8	1697.3	1600.1	1507.8	1430.8
57.5°	1491.2	1493.5	1565.8	1692.5	1781.4	1796.8	1805.0	1783.7	1710.3	1568.2	1507.8
60°	1503.0	1531.4	1597.8	1737.5	1807.4	1852.4	1854.8	1819.3	1742.3	1607.2	1543.3
62.5°	1507.8	1542.1	1623.8	1735.2	1853.6	1897.4	1905.7	1869.0	1744.6	1627.4	1533.8
65°	1514.9	1519.6	1626.2	1762.4	1859.5	1897.4	1906.9	1869.0	1768.3	1619.1	1516.0
67.5°	1485.3	1473.4	1567.0	1715.0	1809.8	1854.8	1865.4	1820.4	1718.6	1569.3	1488.8
70°	1378.7	1383.4	1487.6	1628.6	1732.8	1775.4	1782.5	1734.0	1627.4	1498.3	1404.7
72.5°	1266.1	1278.0	1365.6	1507.8	1601.3	1642.8	1655.8	1604.9	1514.9	1382.2	1285.1
75°	1109.8	1132.3	1216.4	1344.3	1437.9	1500.6	1513.7	1447.4	1339.6	1224.7	1131.1
77.5°	936.9	952.3	1032.8	1143.0	1243.6	1275.6	1287.5	1255.5	1148.9	1047.0	959.4
80°	736.7	742.6	824.4	912.0	990.2	1016.2	1034.0	993.7	921.5	829.1	743.8
82.5°	505.7	514.0	572.1	652.6	721.3	732.0	754.5	721.3	653.8	582.7	518.8
85°	262.9	274.8	319.8	363.6	416.9	429.9	437.0	412.2	376.6	318.6	276.0
87.5°	56.9	62.8	69.9	90.0	107.8	123.2	133.8	111.3	88.8	74.6	56.9
90°	36.0	36.0	36.0	34.0	29.0	26.0	26.0	28.0	32.0	34.0	34.0
92.5°	40.0	39.0	38.0	34.0	29.0	27.0	27.0	28.0	32.0	35.0	36.0
95°	44.0	43.0	41.0	36.0	32.0	30.0	30.0	30.0	34.0	37.0	39.0
97.5°	42.0	42.0	40.0	37.0	35.0	33.0	32.8	33.0	34.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	35.8	36.0	38.0	38.0	37.0
102.5°	51.0	51.0	49.0	46.0	44.0	42.0	42.0	43.0	44.0	42.0	41.0
105°	60.0	60.0	57.0	54.0	53.0	52.0	52.0	54.0	53.0	49.0	48.0
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	68.0	66.0	60.0	59.0
110°	86.0	86.0	89.0	85.0	86.0	87.0	86.8	84.0	84.0	78.0	74.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	106.2	102.0	105.0	100.0	95.0
115°	121.0	122.0	128.0	128.0	129.0	124.0	123.2	121.0	125.0	123.0	116.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	135.8	138.0	141.0	139.0	133.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	147.2	150.0	153.0	148.0	145.0
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	158.0	159.0	162.0	155.0	153.0
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.8	167.0	168.0	163.0	160.0
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	177.4	176.0	175.0	173.0	166.0
130°	187.0	188.0	191.0	179.0	186.0	186.0	185.4	183.0	183.0	184.0	171.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	194.2	190.0	192.0	192.0	179.0
135°	210.0	210.0	209.0	192.0	199.0	201.0	200.2	196.0	201.0	199.0	185.0
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	207.0	203.0	210.0	204.0	191.0
140°	229.0	226.0	216.0	200.0	207.0	213.0	212.8	212.0	217.0	209.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	218.0	218.0	220.0	223.0	211.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	223.0	223.4	230.0	227.0	211.0	201.0
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	229.8	239.0	229.0	212.0	204.0
150°	224.0	221.0	220.0	214.0	222.0	235.0	235.8	242.0	232.0	214.0	210.0
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	241.0	242.0	235.0	219.0	215.0
155°	208.0	207.0	219.0	224.0	237.0	243.0	242.2	238.0	234.0	224.0	220.0
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	234.0	228.0	229.0	226.0	222.0
160°	199.0	198.0	210.0	213.0	219.0	219.0	218.4	215.0	219.0	221.0	218.0
162.5°	185.0	184.0	193.0	193.0	198.0	198.0	197.6	196.0	200.0	204.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	177.0	176.6	176.0	181.0	185.0	190.0
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	158.8	160.0	165.0	168.0	172.0
170°	142.0	141.0	145.0	144.0	147.0	147.0	147.0	148.0	152.0	155.0	159.0
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	140.8	141.0	145.0	146.0	149.0
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.8	138.0	141.0	141.0	143.0
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	138.8	138.0	140.0	140.0	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°	479.7
2.5°	486.8
5°	495.1
7.5°	498.6
10°	506.9
12.5°	522.3
15°	546.0
17.5°	575.6
20°	607.6
22.5°	636.0
25°	670.4
27.5°	709.5
30°	749.7
32.5°	782.9
35°	829.1
37.5°	904.9
40°	996.1
42.5°	1069.5
45°	1129.9
47.5°	1197.4
50°	1265.0
52.5°	1351.4
55°	1436.7
57.5°	1480.5
60°	1507.8
62.5°	1529.1
65°	1531.4
67.5°	1469.9
70°	1376.3
72.5°	1269.7
75°	1113.3
77.5°	948.7
80°	736.7
82.5°	517.6
85°	271.2
87.5°	53.3
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)