

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: P198445

Luminaire Tested: **TT-C4-LED-E1-RW-8030-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198445
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-8030-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION
Light Source: (160) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5369.4 lumens
Efficiency: N/A
Efficacy: 71.2 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

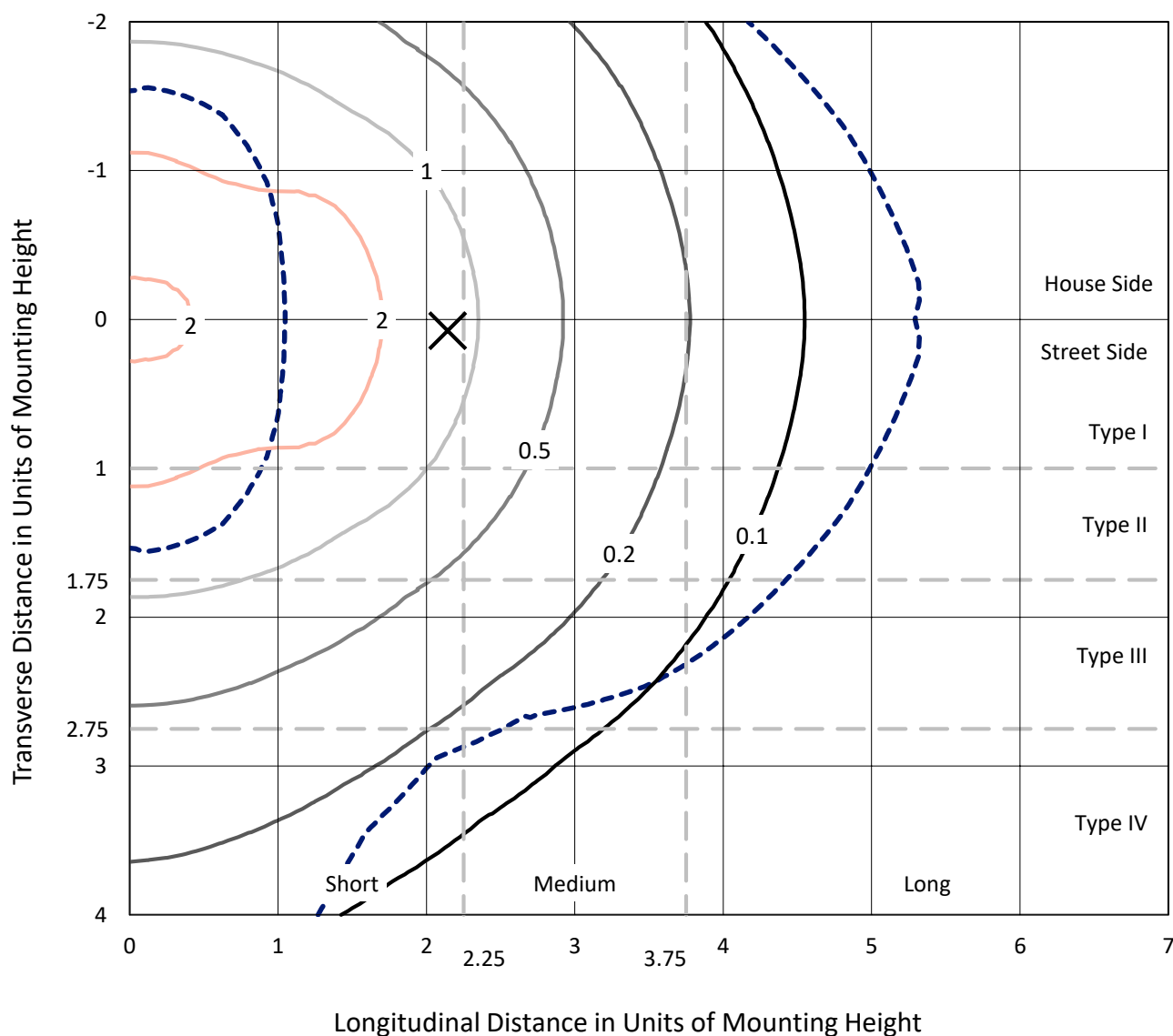


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

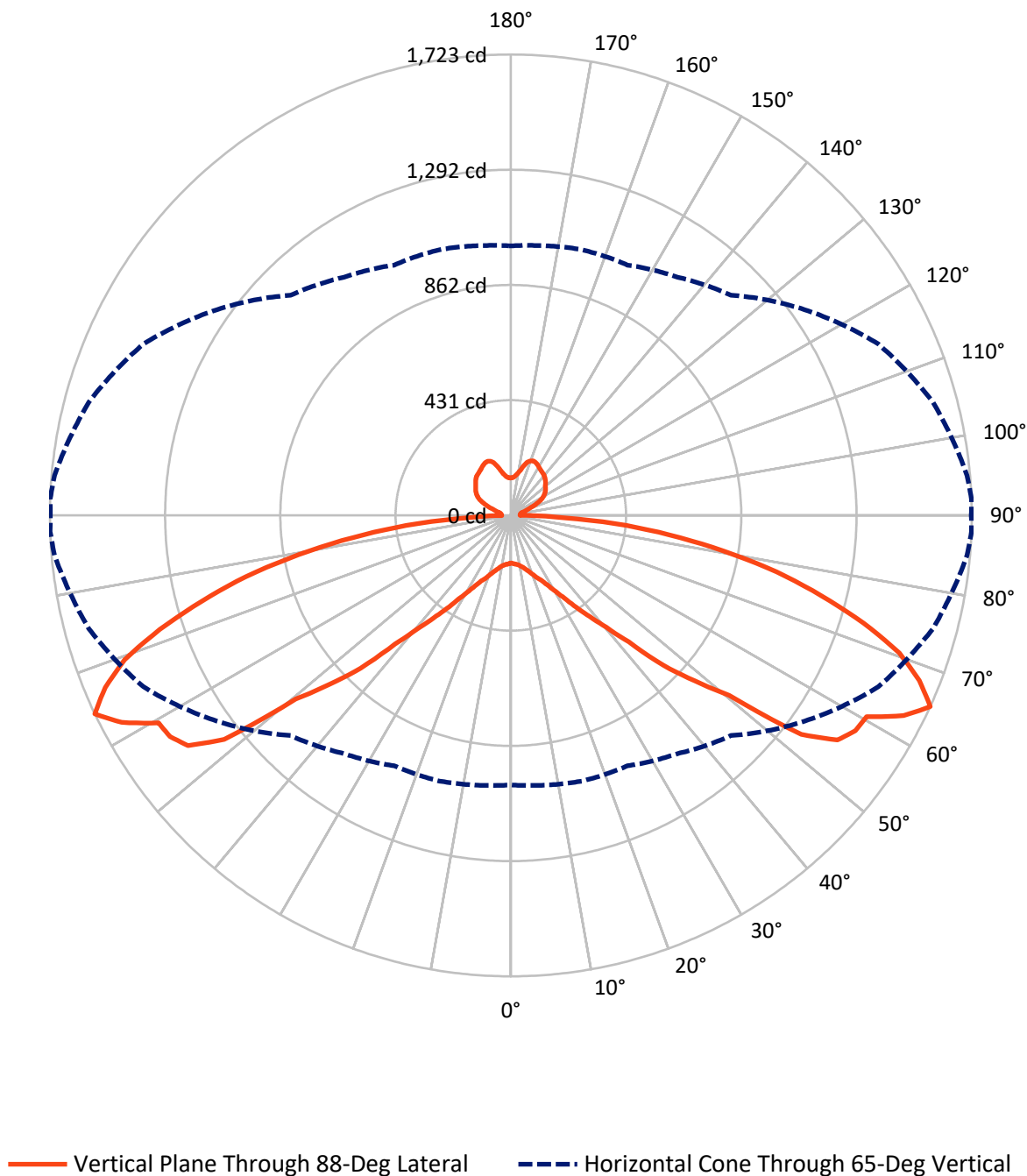


Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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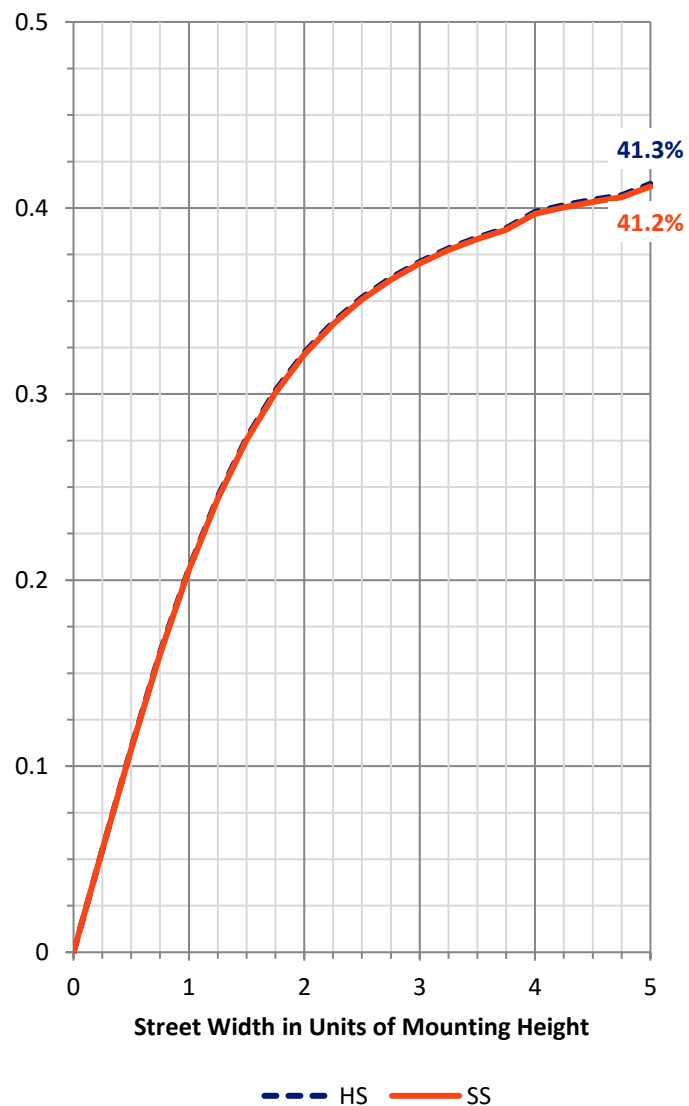
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2272.0	412.7	2684.7
	% Fixture	42.3	7.7	50.0
Street Side	Lumens	2272.0	412.7	2684.7
	% Fixture	42.3	7.7	50.0
Total	Lumens	4544.1	825.3	5369.4
	% Fixture	84.6	15.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.8	0.3
10°-20°	61.8	1.2
20°-30°	136.5	2.5
30°-40°	272.1	5.1
40°-50°	520.8	9.7
50°-60°	932.1	17.4
60°-70°	1235.2	23.0
70°-80°	1030.8	19.2
80°-90°	337.0	6.3
90°-100°	38.4	0.7
100°-110°	59.5	1.1
110°-120°	119.6	2.2
120°-130°	148.9	2.8
130°-140°	153.3	2.9
140°-150°	136.3	2.5
150°-160°	103.9	1.9
160°-170°	51.8	1.0
170°-180°	13.6	0.3
0°-90°	4544.1	84.6
0°-180°	5369.4	100.0

Coefficient of Utilization



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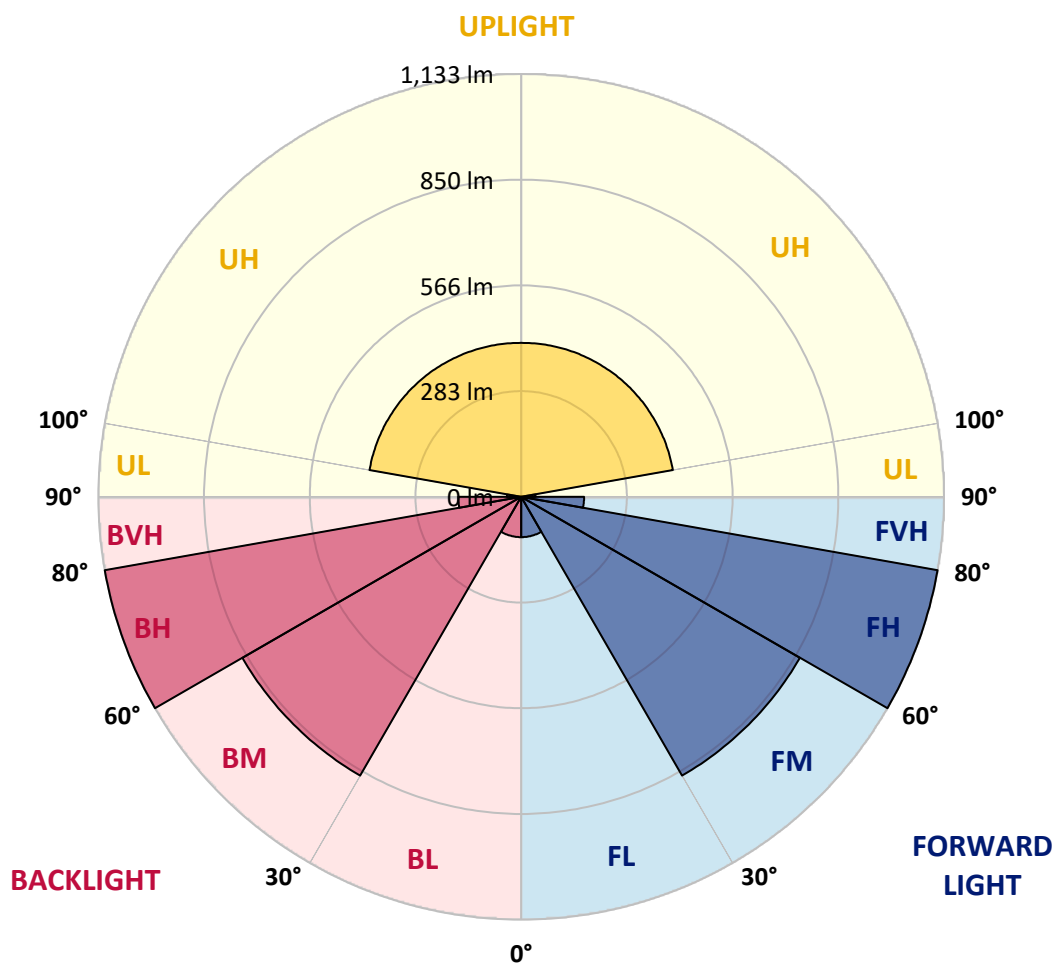
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	108.1	2.0			
FM	(30°-60°)	862.5	16.1			
FH	(60°-80°)	1133.0	21.1			G1/1800
FVH	(80°-90°)	168.5	3.1			G2/225
BL	(0°-30°)	108.1	2.0	B0/110		
BM	(30°-60°)	862.5	16.1	B1/1000		
BH	(60°-80°)	1133.0	21.1	B3/2500		G3/2500
BVH	(80°-90°)	168.5	3.1			G2/225
UL	(90°-100°)	38.4	0.7		U2/50	
UH	(100°-180°)	412.7	7.7		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°	88°
0°	177.8	177.8	177.8	177.8	177.8	177.8	177.8	177.8	177.8	177.8	177.8
2.5°	179.5	179.5	179.5	179.5	180.4	180.4	180.4	180.4	180.4	180.4	180.4
5°	182.2	182.2	183.1	183.1	184.0	184.0	184.0	184.0	183.1	183.1	183.1
7.5°	186.7	187.6	188.5	188.5	188.5	187.6	186.7	186.7	185.8	185.8	185.8
10°	194.7	194.7	195.6	195.6	194.7	193.8	192.9	192.1	192.1	192.1	191.2
12.5°	204.6	204.6	205.4	204.6	202.8	201.9	200.1	199.2	199.2	198.3	198.3
15°	218.0	219.7	219.7	217.1	214.4	211.7	210.8	209.0	209.0	209.0	209.0
17.5°	238.5	237.6	234.0	231.4	229.6	225.1	223.3	222.4	220.6	220.6	220.6
20°	261.7	259.9	255.5	251.9	248.3	243.0	239.4	237.6	236.7	235.8	235.8
22.5°	287.6	284.9	278.7	276.0	268.9	263.5	259.0	255.5	252.8	251.9	253.7
25°	314.4	314.4	309.1	301.9	294.8	286.7	280.5	276.0	272.4	271.6	270.7
27.5°	343.0	344.8	337.7	330.5	322.5	311.7	305.5	299.2	298.3	297.5	296.6
30°	373.4	377.0	369.8	362.7	351.9	341.2	333.2	330.5	327.8	329.6	329.6
32.5°	410.9	412.7	404.6	399.3	385.0	374.3	367.1	365.3	366.2	365.3	368.0
35°	454.7	452.0	445.7	435.0	422.5	412.7	407.3	410.9	420.7	424.3	422.5
37.5°	502.9	493.1	489.5	476.1	464.5	456.5	458.2	467.2	475.2	481.5	479.7
40°	538.6	540.4	530.6	518.1	507.4	505.6	515.4	527.0	542.2	547.6	549.4
42.5°	575.3	586.0	574.4	561.9	556.5	560.1	574.4	597.6	631.5	649.4	646.7
45°	617.2	628.9	616.3	606.5	605.6	619.0	650.3	711.0	761.1	796.8	800.4
47.5°	661.0	669.9	658.3	652.1	661.0	686.9	740.5	821.8	875.4	917.4	924.5
50°	716.4	712.8	703.9	703.0	722.6	770.0	842.3	924.5	1021.0	1048.7	1057.6
52.5°	770.9	757.5	755.7	760.2	795.0	848.6	945.1	1106.7	1248.8	1348.8	1359.5
55°	821.8	806.6	810.2	821.8	870.9	952.2	1086.2	1283.6	1407.8	1478.3	1481.9
57.5°	868.2	859.3	867.4	883.4	956.7	1061.2	1203.2	1365.8	1459.6	1509.6	1518.5
60°	915.6	913.8	923.6	953.1	1031.7	1124.6	1243.4	1387.2	1481.0	1519.4	1528.4
62.5°	960.3	966.5	979.0	1007.6	1068.3	1140.7	1255.9	1431.9	1572.1	1632.9	1648.1
65°	1007.6	1013.0	1028.1	1032.6	1087.1	1163.9	1340.8	1515.9	1633.8	1712.4	1723.1
67.5°	1050.5	1057.6	1052.3	1048.7	1096.0	1163.9	1323.8	1477.4	1575.7	1635.6	1647.2
70°	1091.6	1083.5	1062.1	1034.4	1047.8	1094.2	1240.7	1373.8	1473.0	1529.3	1540.9
72.5°	1102.3	1091.6	1034.4	971.0	951.3	986.2	1121.0	1238.9	1320.2	1372.9	1380.1
75°	1074.6	1052.3	955.8	868.2	830.7	865.6	978.1	1079.1	1136.2	1193.4	1197.9
77.5°	963.8	949.5	842.3	736.0	694.1	720.0	813.8	885.2	951.3	1006.7	1017.4
80°	791.4	778.9	684.2	597.6	541.3	559.2	628.0	685.1	748.5	792.3	805.7
82.5°	582.4	580.6	512.7	431.4	392.1	390.4	442.2	498.4	546.7	588.7	597.6
85°	366.2	366.2	319.8	270.7	229.6	230.5	261.7	302.8	363.6	390.4	393.0
87.5°	124.2	117.9	109.9	89.3	71.5	64.3	68.8	78.6	119.7	148.3	153.6
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	38.4
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	48.6
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	59.6
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	74.6

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	88°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.4
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	114.2
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	130.6
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	143.2
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	151.2
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	158.8
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	164.2
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	169.8
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	177.2
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.4
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.4
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	201.6
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	205.2
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	210.6
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	215.6
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.4
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	220.2
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	216.2
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	191.2
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	173.2
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	159.6
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	150.2
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	143.6
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°	177.8
2.5°	180.4
5°	183.1
7.5°	185.8
10°	191.2
12.5°	199.2
15°	208.1
17.5°	220.6
20°	235.8
22.5°	252.8
25°	270.7
27.5°	297.5
30°	328.7
32.5°	367.1
35°	423.4
37.5°	481.5
40°	553.8
42.5°	653.9
45°	791.4
47.5°	924.5
50°	1047.8
52.5°	1337.2
55°	1485.5
57.5°	1517.6
60°	1525.7
62.5°	1640.0
65°	1721.3
67.5°	1646.3
70°	1538.2
72.5°	1374.7
75°	1205.0
77.5°	1017.4
80°	795.0
82.5°	597.6
85°	386.8
87.5°	149.2
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)