

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: P228338

Luminaire Tested: **ISS-AF-1000-LED-E1-SL4-7050-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228338
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29763)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISS-AF-1000-LED-E1-SL4-7050-ULG
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCUED OPTICS-TYPE IV W/SPILL CONTROL, WITH UPLIGHT
GLOW
Light Source: (16) 5000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6539.2 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U5 - G2

Input Watts (W): 71.3
Input Voltage (V): 120
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

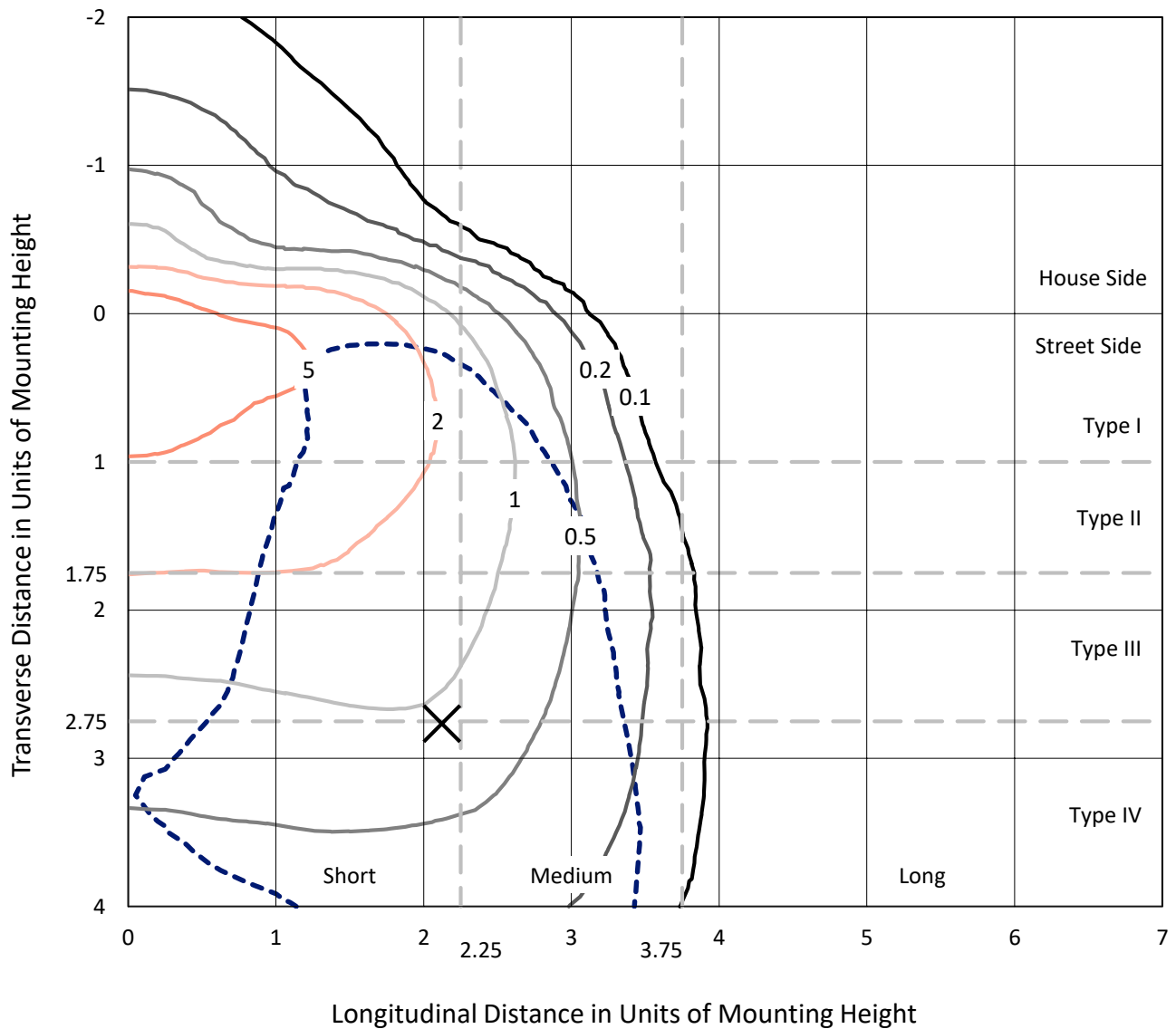


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Iso-Footcandle Lines of Horizontal Illumination

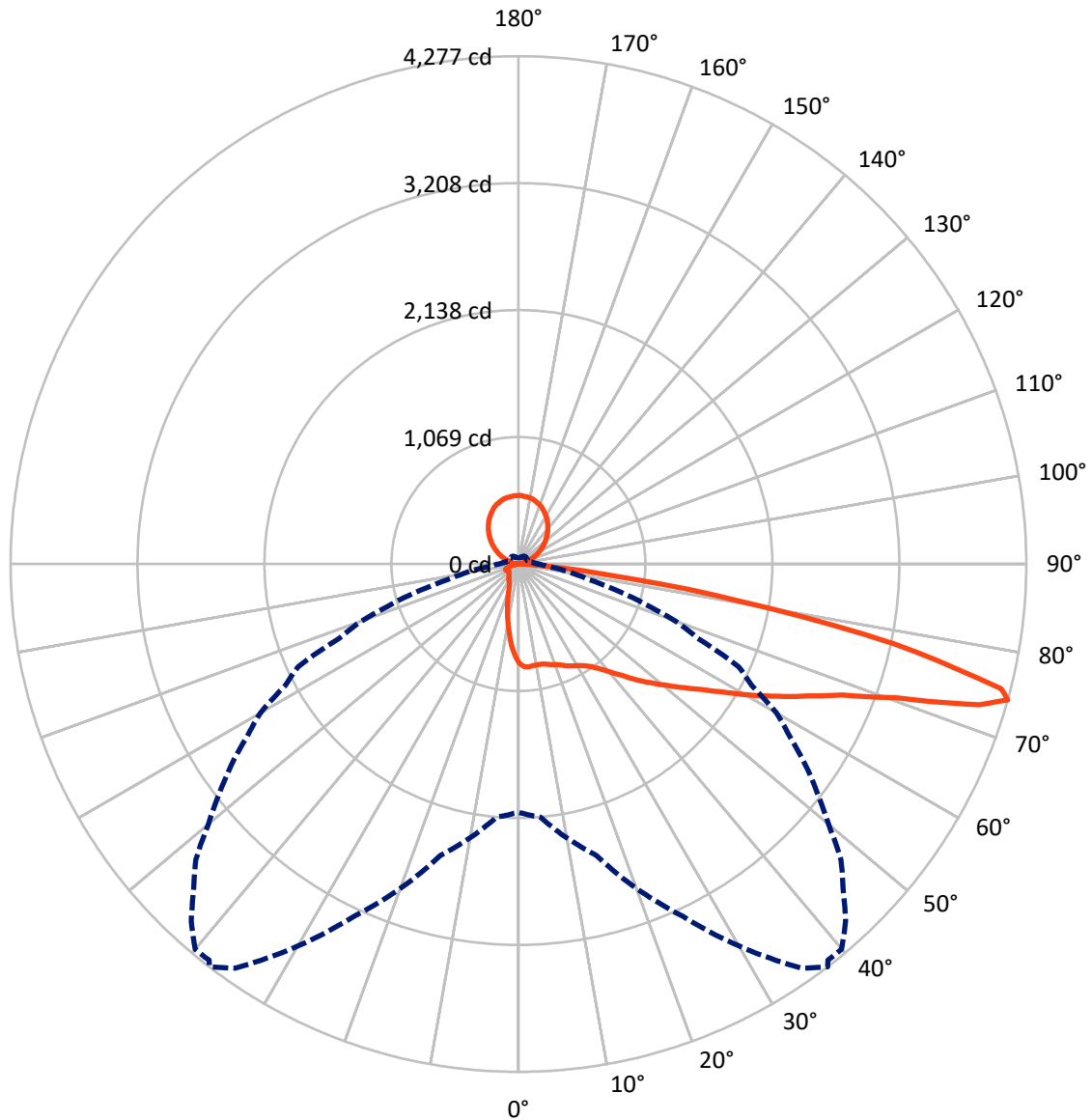
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 37.5-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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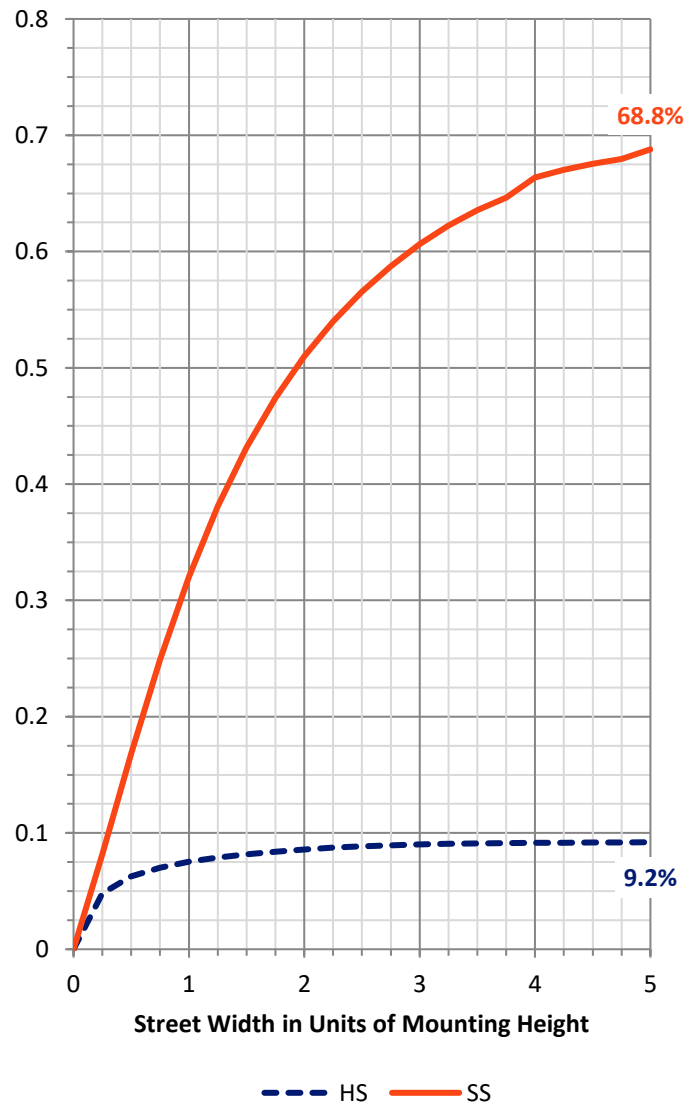
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	606.3	713.1	1319.4
	% Fixture	9.3	10.9	20.2
Street Side	Lumens	4506.7	713.1	5219.8
	% Fixture	68.9	10.9	79.8
Total	Lumens	5113.0	1426.2	6539.2
	% Fixture	78.2	21.8	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	1.1
10°-20°	185.1	2.8
20°-30°	286.8	4.4
30°-40°	425.3	6.5
40°-50°	654.3	10.0
50°-60°	967.2	14.8
60°-70°	1289.2	19.7
70°-80°	1112.8	17.0
80°-90°	119.7	1.8
90°-100°	4.7	0.1
100°-110°	69.0	1.1
110°-120°	153.0	2.3
120°-130°	223.9	3.4
130°-140°	265.6	4.1
140°-150°	269.3	4.1
150°-160°	231.1	3.5
160°-170°	155.1	2.4
170°-180°	54.3	0.8
0°-90°	5113.0	78.2
0°-180°	6539.2	100.0

Coefficient of Utilization



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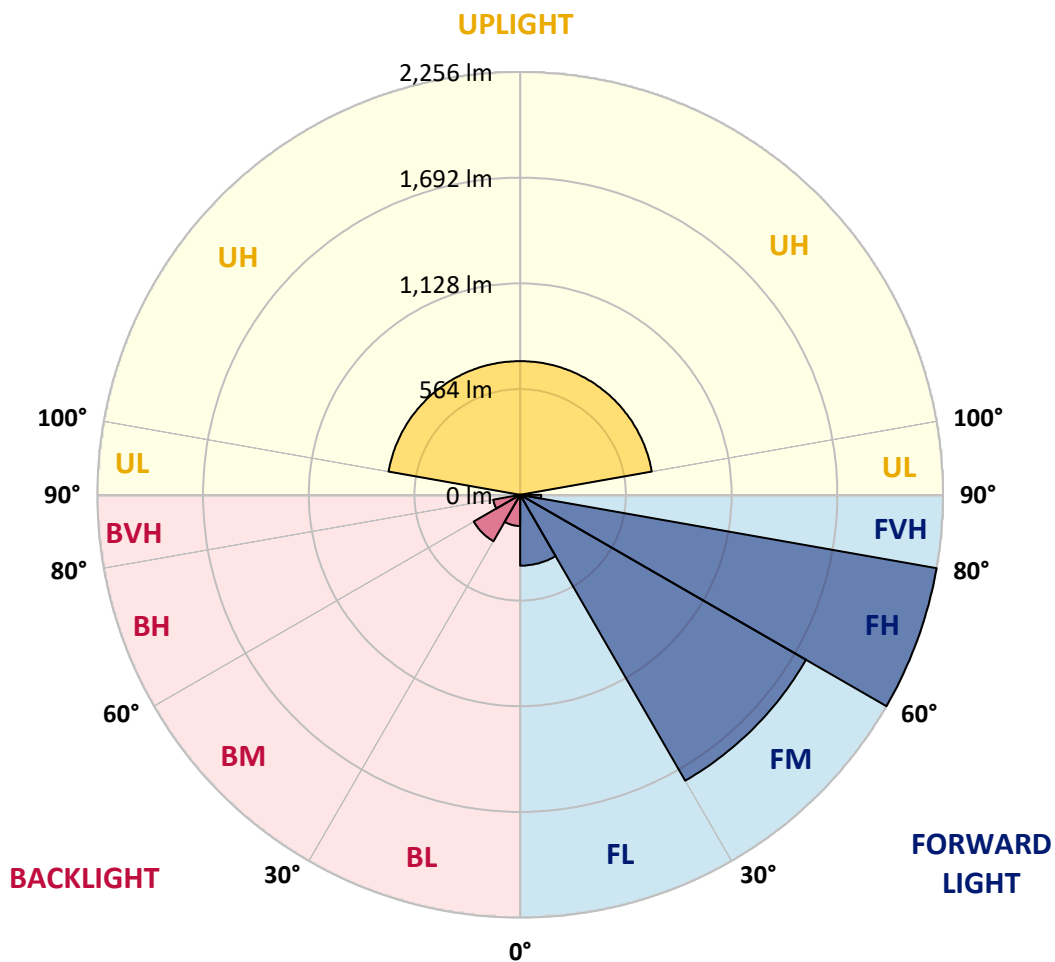
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	378.0	5.8			
FM	(30°-60°)	1761.0	26.9			
FH	(60°-80°)	2255.9	34.5			G2/5000
FVH	(80°-90°)	111.8	1.7			G2/225
BL	(0°-30°)	166.4	2.5	B1/500		
BM	(30°-60°)	285.8	4.4	B1/1000		
BH	(60°-80°)	146.2	2.2	B1/500		G1/500
BVH	(80°-90°)	7.9	0.1			G0/10
UL	(90°-100°)	4.7	0.1		U1/10	
UH	(100°-180°)	713.1	10.9		U4/1000	

BUG Rating: B1-U5-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	38°	40°	42.5°	45°	47.5°
0°	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4
2.5°	882.1	880.2	876.4	874.5	870.6	864.9	870.6	863.0	859.2	863.0	855.4
5°	897.4	895.5	891.6	884.0	880.2	870.6	876.4	866.8	864.9	868.7	859.2
7.5°	899.3	895.5	889.7	880.2	876.4	864.9	868.7	857.3	853.5	857.3	851.5
10°	893.5	891.6	885.9	870.6	866.8	863.0	861.1	853.5	851.5	849.6	847.7
12.5°	884.0	884.0	880.2	874.5	872.5	864.9	866.8	859.2	861.1	857.3	853.5
15°	880.2	878.3	882.1	885.9	885.9	874.5	882.1	876.4	872.5	874.5	868.7
17.5°	876.4	878.3	891.6	899.3	903.1	891.6	903.1	891.6	884.0	893.5	884.0
20°	874.5	880.2	903.1	920.3	922.2	903.1	922.2	903.1	903.1	914.6	897.4
22.5°	884.0	893.5	926.0	945.1	948.9	924.1	947.0	922.2	922.2	931.7	914.6
25°	914.6	924.1	960.4	981.4	977.6	950.8	971.8	947.0	945.1	956.6	933.6
27.5°	954.6	968.0	1002.4	1021.5	1008.1	971.8	1002.4	966.1	966.1	983.3	952.7
30°	1011.9	1021.5	1052.0	1053.9	1036.7	992.8	1027.2	987.1	981.4	1011.9	973.7
32.5°	1074.9	1082.6	1105.5	1092.1	1067.3	1021.5	1061.6	1013.8	1011.9	1044.4	1000.5
35°	1141.8	1149.4	1157.0	1134.1	1111.2	1061.6	1105.5	1057.7	1055.8	1092.1	1050.1
37.5°	1210.5	1210.5	1210.5	1183.8	1168.5	1120.8	1160.8	1122.7	1118.8	1157.0	1116.9
40°	1265.9	1269.7	1264.0	1239.1	1231.5	1197.1	1231.5	1197.1	1202.9	1237.2	1204.8
42.5°	1311.7	1315.5	1317.4	1296.4	1304.0	1285.0	1311.7	1286.9	1288.8	1327.0	1307.9
45°	1357.5	1355.6	1370.9	1365.1	1388.1	1390.0	1405.2	1395.7	1399.5	1428.2	1422.4
47.5°	1405.2	1395.7	1412.9	1437.7	1479.7	1493.1	1502.6	1506.4	1521.7	1535.1	1548.4
50°	1451.1	1441.5	1453.0	1508.3	1575.2	1603.8	1605.7	1624.8	1642.0	1661.1	1687.8
52.5°	1498.8	1491.2	1502.6	1580.9	1687.8	1727.9	1722.2	1754.6	1779.5	1800.5	1844.4
55°	1548.4	1540.8	1552.3	1668.7	1808.1	1863.5	1857.7	1903.6	1951.3	1958.9	2008.6
57.5°	1596.2	1586.6	1619.1	1771.8	1951.3	2035.3	2008.6	2079.2	2125.0	2121.2	2190.0
60°	1647.7	1640.1	1691.6	1897.8	2130.8	2239.6	2199.5	2293.1	2325.5	2312.2	2377.1
62.5°	1697.4	1695.5	1781.4	2044.9	2348.4	2453.4	2417.2	2499.3	2522.2	2505.0	2537.4
65°	1743.2	1754.6	1878.7	2191.9	2558.5	2678.7	2629.1	2711.2	2737.9	2724.6	2779.9
67.5°	1819.6	1832.9	1999.0	2379.0	2818.1	2942.2	2900.2	2986.1	3026.2	3022.4	3083.5
70°	1932.2	1957.0	2176.6	2644.4	3213.3	3371.8	3348.9	3453.9	3551.3	3543.6	3604.7
72.5°	2128.9	2169.0	2468.7	3056.8	3862.5	4055.3	4028.6	4087.8	4070.6	3931.2	3818.6
74°	2090.7	2140.3	2541.3	3272.5	4154.6	4276.8	4232.9	4234.8	4078.2	3866.3	3684.9
75°	1951.3	2002.8	2436.3	3245.8	4133.6	4200.4	4137.4	4059.2	3870.1	3654.4	3431.0
77.5°	1338.4	1405.2	1790.9	2621.5	3327.9	3236.3	3221.0	3072.1	2821.9	2579.5	2293.1
80°	685.4	733.2	926.0	1370.9	1974.2	1882.6	1913.1	1792.8	1584.7	1409.1	1116.9
82.5°	164.2	175.7	273.0	530.8	855.4	782.8	794.3	702.6	582.3	475.4	368.5
85°	85.9	97.4	133.7	147.0	225.3	232.9	227.2	219.6	179.5	150.8	131.7
87.5°	0.0	0.0	0.0	3.8	1.9	0.0	1.9	0.0	0.0	1.9	3.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	2.0	2.0	2.0	3.0	4.0	5.2	5.5	6.5	7.8	9.0	10.0
100°	8.0	8.0	10.0	14.0	22.0	24.0	24.4	26.0	28.0	30.0	30.5
102.5°	28.0	28.0	32.0	38.0	45.0	46.2	46.5	47.5	48.8	50.0	50.2
105°	54.0	54.0	56.0	61.0	66.0	67.0	67.2	68.0	69.0	70.0	70.2
107.5°	78.0	77.0	80.0	84.0	88.0	88.8	88.9	89.5	90.2	91.0	91.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	37.5°	38°	40°	42.5°	45°	47.5°
110°	101.0	102.0	103.0	106.0	110.0	110.5	110.6	111.0	111.5	112.0	112.5
112.5°	124.0	124.0	126.0	129.0	132.0	132.5	132.6	133.0	133.5	134.0	134.5
115°	146.0	147.0	149.0	151.0	154.0	154.5	154.6	155.0	155.5	156.0	156.5
117.5°	169.0	170.0	172.0	174.0	177.0	177.5	177.6	178.0	178.5	179.0	179.2
120°	193.0	195.0	196.0	198.0	201.0	201.2	201.3	201.5	201.8	202.0	202.5
122.5°	219.0	220.0	221.0	223.0	226.0	226.2	226.3	226.5	226.8	227.0	227.2
125°	244.0	246.0	247.0	248.0	251.0	251.2	251.3	251.5	251.8	252.0	252.2
127.5°	267.0	269.0	270.0	272.0	274.0	274.5	274.6	275.0	275.5	276.0	276.5
130°	290.0	292.0	293.0	294.0	298.0	298.2	298.3	298.5	298.8	299.0	299.5
132.5°	313.0	314.0	317.0	318.0	321.0	321.2	321.3	321.5	321.8	322.0	322.8
135°	336.0	337.0	339.0	341.0	345.0	345.0	345.0	345.0	345.0	345.0	345.8
137.5°	359.0	360.0	363.0	364.0	367.0	367.0	367.0	367.0	367.0	367.0	367.5
140°	382.0	383.0	385.0	386.0	388.0	388.2	388.3	388.5	388.8	389.0	389.2
142.5°	404.0	406.0	408.0	407.0	410.0	410.0	410.0	410.0	410.0	410.0	410.5
145°	425.0	426.0	428.0	428.0	431.0	431.2	431.3	431.5	431.8	432.0	432.5
147.5°	444.0	444.0	447.0	448.0	452.0	452.2	452.3	452.5	452.8	453.0	453.2
150°	461.0	462.0	464.0	465.0	469.0	469.2	469.3	469.5	469.8	470.0	470.2
152.5°	479.0	480.0	483.0	482.0	485.0	485.2	485.3	485.5	485.8	486.0	486.2
155°	499.0	500.0	502.0	501.0	503.0	503.0	503.0	503.0	503.0	503.0	503.2
157.5°	513.0	515.0	517.0	516.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0
160°	525.0	527.0	529.0	529.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0
162.5°	535.0	536.0	539.0	538.0	541.0	541.0	541.0	541.0	541.0	541.0	541.2
165°	546.0	547.0	549.0	548.0	552.0	552.0	552.0	552.0	552.0	552.0	552.2
167.5°	555.0	556.0	559.0	558.0	561.0	560.8	560.7	560.5	560.2	560.0	560.0
170°	562.0	563.0	566.0	565.0	567.0	566.8	566.7	566.5	566.2	566.0	565.8
172.5°	565.0	566.0	569.0	567.0	569.0	568.8	568.7	568.5	568.2	568.0	568.2
175°	567.0	569.0	570.0	569.0	572.0	572.0	572.0	572.0	572.0	572.0	572.2
177.5°	572.0	573.0	575.0	574.0	578.0	577.8	577.7	577.5	577.2	577.0	577.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0



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CANDELA DISTRIBUTION (continued):

	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4
2.5°	861.1	857.3	861.1	849.6	855.4	845.8	849.6	840.1	843.9	836.3	838.2
5°	864.9	855.4	861.1	851.5	853.5	845.8	843.9	840.1	838.2	832.5	828.6
7.5°	855.4	847.7	845.8	842.0	836.3	838.2	830.5	828.6	822.9	822.9	811.4
10°	845.8	847.7	836.3	840.1	830.5	832.5	819.1	822.9	813.4	821.0	803.8
12.5°	853.5	855.4	845.8	851.5	834.4	838.2	826.7	832.5	819.1	828.6	807.6
15°	870.6	868.7	864.9	864.9	847.7	855.4	842.0	845.8	832.5	843.9	821.0
17.5°	885.9	884.0	878.3	876.4	864.9	866.8	853.5	861.1	845.8	855.4	832.5
20°	903.1	893.5	891.6	889.7	876.4	876.4	866.8	870.6	855.4	866.8	840.1
22.5°	916.5	908.8	906.9	899.3	889.7	893.5	880.2	882.1	866.8	878.3	855.4
25°	937.5	927.9	927.9	916.5	910.7	908.8	901.2	906.9	891.6	899.3	878.3
27.5°	966.1	945.1	952.7	941.3	937.5	935.6	931.7	935.6	924.1	929.8	908.8
30°	992.8	966.1	977.6	962.3	969.9	962.3	968.0	962.3	962.3	962.3	952.7
32.5°	1029.1	996.7	1019.6	996.7	1011.9	1000.5	1019.6	1008.1	1015.7	1013.8	1010.0
35°	1080.7	1042.5	1074.9	1044.4	1071.1	1055.8	1082.6	1076.8	1092.1	1084.5	1092.1
37.5°	1149.4	1109.3	1147.5	1118.8	1151.3	1128.4	1166.6	1162.8	1195.2	1183.8	1195.2
40°	1235.3	1206.7	1235.3	1214.3	1248.7	1239.1	1279.2	1281.1	1317.4	1311.7	1325.0
42.5°	1330.8	1309.8	1338.4	1327.0	1361.3	1369.0	1414.8	1426.2	1460.6	1470.2	1472.1
45°	1433.9	1430.1	1453.0	1464.4	1498.8	1521.7	1561.8	1590.4	1628.6	1649.6	1645.8
47.5°	1554.2	1569.4	1584.7	1613.4	1643.9	1691.6	1731.7	1768.0	1811.9	1825.3	1831.0
50°	1689.7	1716.5	1729.8	1769.9	1800.5	1859.7	1915.0	1960.8	2008.6	2002.8	2006.7
52.5°	1832.9	1867.3	1886.4	1934.1	1974.2	2042.9	2090.7	2134.6	2193.8	2178.5	2172.8
55°	1991.4	2042.9	2058.2	2111.7	2146.0	2216.7	2258.7	2335.1	2359.9	2344.6	2312.2
57.5°	2159.4	2220.5	2237.7	2310.2	2327.4	2403.8	2440.1	2491.6	2512.6	2487.8	2445.8
60°	2350.3	2405.7	2419.1	2484.0	2506.9	2577.5	2604.3	2650.1	2665.4	2604.3	2545.1
62.5°	2541.3	2598.5	2606.2	2663.5	2686.4	2747.5	2778.0	2804.8	2797.1	2707.4	2632.9
65°	2758.9	2814.3	2833.4	2890.7	2904.0	2949.9	2974.7	2944.1	2926.9	2791.4	2707.4
67.5°	3104.5	3163.7	3171.3	3184.7	3182.8	3159.9	3148.4	3043.4	2967.0	2716.9	2596.6
70°	3558.9	3515.0	3429.1	3329.8	3257.3	3127.4	3051.0	2835.3	2674.9	2394.3	2191.9
72.5°	3641.0	3497.8	3285.9	3116.0	2940.3	2736.0	2571.8	2245.3	2020.0	1726.0	1512.2
74°	3408.1	3175.2	2951.8	2713.1	2510.7	2212.9	2046.8	1634.4	1411.0	1113.1	853.5
75°	3127.4	2854.4	2602.4	2298.8	2109.8	1752.7	1596.2	1151.3	927.9	660.6	444.9
77.5°	1995.2	1668.7	1428.2	1076.8	929.8	641.5	469.7	292.1	215.8	189.0	164.2
80°	895.5	637.7	506.0	349.4	292.1	223.4	189.0	152.7	139.4	122.2	116.5
82.5°	286.4	229.1	217.7	194.7	194.7	156.6	133.7	105.0	95.5	82.1	74.5
85°	124.1	116.5	120.3	110.7	112.6	85.9	68.7	51.6	51.6	36.3	32.5
87.5°	3.8	0.0	1.9	0.0	3.8	0.0	1.9	0.0	1.9	0.0	1.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	11.0	12.0	13.0	11.5	10.0	8.5	7.0	6.5	6.0	5.5	5.0
100°	31.0	31.5	32.0	31.5	31.0	30.5	30.0	29.2	28.5	27.8	27.0
102.5°	50.5	50.8	51.0	50.8	50.5	50.2	50.0	49.5	49.0	48.5	48.0
105°	70.5	70.8	71.0	71.0	71.0	71.0	71.0	70.5	70.0	69.5	69.0
107.5°	92.0	92.5	93.0	92.8	92.5	92.2	92.0	91.8	91.5	91.2	91.0



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CANDELA DISTRIBUTION (continued):

	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
110°	113.0	113.5	114.0	114.0	114.0	114.0	114.0	113.8	113.5	113.2	113.0
112.5°	135.0	135.5	136.0	136.0	136.0	136.0	136.0	135.8	135.5	135.2	135.0
115°	157.0	157.5	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0
117.5°	179.5	179.8	180.0	180.2	180.5	180.8	181.0	180.8	180.5	180.2	180.0
120°	203.0	203.5	204.0	204.0	204.0	204.0	204.0	204.0	204.0	204.0	204.0
122.5°	227.5	227.8	228.0	228.0	228.0	228.0	228.0	228.2	228.5	228.8	229.0
125°	252.5	252.8	253.0	253.2	253.5	253.8	254.0	254.0	254.0	254.0	254.0
127.5°	277.0	277.5	278.0	277.8	277.5	277.2	277.0	277.2	277.5	277.8	278.0
130°	300.0	300.5	301.0	301.0	301.0	301.0	301.0	301.2	301.5	301.8	302.0
132.5°	323.5	324.2	325.0	325.0	325.0	325.0	325.0	325.2	325.5	325.8	326.0
135°	346.5	347.2	348.0	348.0	348.0	348.0	348.0	348.2	348.5	348.8	349.0
137.5°	368.0	368.5	369.0	369.0	369.0	369.0	369.0	369.2	369.5	369.8	370.0
140°	389.5	389.8	390.0	390.0	390.0	390.0	390.0	390.5	391.0	391.5	392.0
142.5°	411.0	411.5	412.0	412.0	412.0	412.0	412.0	412.2	412.5	412.8	413.0
145°	433.0	433.5	434.0	433.8	433.5	433.2	433.0	433.2	433.5	433.8	434.0
147.5°	453.5	453.8	454.0	453.5	453.0	452.5	452.0	452.2	452.5	452.8	453.0
150°	470.5	470.8	471.0	470.5	470.0	469.5	469.0	469.0	469.0	469.0	469.0
152.5°	486.5	486.8	487.0	486.8	486.5	486.2	486.0	486.0	486.0	486.0	486.0
155°	503.5	503.8	504.0	503.8	503.5	503.2	503.0	503.2	503.5	503.8	504.0
157.5°	519.0	519.0	519.0	518.5	518.0	517.5	517.0	517.2	517.5	517.8	518.0
160°	532.0	532.0	532.0	531.5	531.0	530.5	530.0	530.0	530.0	530.0	530.0
162.5°	541.5	541.8	542.0	541.5	541.0	540.5	540.0	539.5	539.0	538.5	538.0
165°	552.5	552.8	553.0	552.2	551.5	550.8	550.0	549.5	549.0	548.5	548.0
167.5°	560.0	560.0	560.0	559.5	559.0	558.5	558.0	558.2	558.5	558.8	559.0
170°	565.5	565.2	565.0	564.8	564.5	564.2	564.0	564.5	565.0	565.5	566.0
172.5°	568.5	568.8	569.0	568.5	568.0	567.5	567.0	567.2	567.5	567.8	568.0
175°	572.5	572.8	573.0	572.2	571.5	570.8	570.0	569.5	569.0	568.5	568.0
177.5°	577.0	577.0	577.0	576.2	575.5	574.8	574.0	574.0	574.0	574.0	574.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0



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CANDELA DISTRIBUTION (continued):

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4
2.5°	830.5	834.4	832.5	824.8	822.9	817.2	803.8	805.7	798.1	803.8	794.3
5°	822.9	821.0	813.4	803.8	794.3	782.8	773.3	769.4	761.8	758.0	752.3
7.5°	811.4	803.8	790.4	775.2	761.8	746.5	738.9	725.5	721.7	708.3	706.4
10°	807.6	794.3	779.0	759.9	737.0	714.1	712.2	689.3	687.3	666.3	660.6
12.5°	815.3	798.1	779.0	756.1	729.3	696.9	696.9	662.5	660.6	632.0	622.4
15°	830.5	809.5	784.7	758.0	723.6	683.5	681.6	641.5	637.7	603.3	591.9
17.5°	843.9	815.3	792.4	756.1	716.0	670.2	660.6	620.5	612.9	572.8	557.5
20°	853.5	821.0	794.3	752.3	702.6	649.2	635.8	593.8	576.6	536.5	515.5
22.5°	864.9	834.4	798.1	750.4	695.0	632.0	603.3	565.2	540.3	498.3	469.7
25°	882.1	855.4	811.4	756.1	689.3	614.8	576.6	536.5	502.1	460.1	418.1
27.5°	908.8	882.1	830.5	763.7	687.3	597.6	555.6	506.0	464.0	418.1	370.4
30°	947.0	918.4	863.0	784.7	689.3	584.2	532.7	479.2	429.6	376.1	326.5
32.5°	996.7	973.7	905.0	807.6	696.9	572.8	511.7	450.6	389.5	337.9	294.0
35°	1065.4	1050.1	964.2	851.5	716.0	567.1	490.7	423.9	355.1	303.6	255.8
37.5°	1166.6	1145.6	1050.1	914.6	746.5	563.2	475.4	391.4	326.5	271.1	231.0
40°	1294.5	1265.9	1151.3	990.9	794.3	565.2	462.0	366.6	301.7	242.5	210.0
42.5°	1447.2	1405.2	1275.4	1084.5	842.0	569.0	454.4	343.7	282.6	219.6	194.7
45°	1619.1	1571.3	1422.4	1200.9	910.7	578.5	448.7	324.6	265.4	202.4	185.2
47.5°	1787.1	1739.4	1573.3	1317.4	981.4	595.7	452.5	313.1	253.9	192.8	173.7
50°	1951.3	1901.7	1706.9	1422.4	1042.5	618.6	467.8	315.0	252.0	189.0	168.0
52.5°	2096.4	2035.3	1821.5	1504.5	1086.4	633.9	481.1	320.8	253.9	187.1	166.1
55°	2241.5	2163.2	1913.1	1569.4	1113.1	635.8	481.1	322.7	255.8	187.1	164.2
57.5°	2350.3	2260.6	1983.8	1607.6	1122.7	626.2	469.7	313.1	244.4	185.2	160.4
60°	2419.1	2323.6	2033.4	1632.4	1109.3	586.2	408.6	276.8	215.8	171.8	148.9
62.5°	2476.4	2379.0	2048.7	1590.4	996.7	465.9	318.9	225.3	179.5	152.7	137.5
65°	2489.7	2373.3	1941.8	1405.2	779.0	322.7	231.0	177.6	147.0	135.6	124.1
67.5°	2287.3	2148.0	1632.4	1099.8	530.8	221.5	171.8	145.1	126.0	120.3	116.5
70°	1859.7	1706.9	1195.2	719.8	295.9	154.7	131.7	120.3	108.8	108.8	103.1
72.5°	1199.0	1040.6	612.9	307.4	150.8	118.4	106.9	103.1	93.6	95.5	89.7
74°	612.9	477.3	250.1	162.3	124.1	105.0	95.5	93.6	84.0	85.9	80.2
75°	311.2	246.3	175.7	135.6	114.6	99.3	87.8	87.8	76.4	78.3	72.6
77.5°	145.1	139.4	120.3	106.9	97.4	84.0	72.6	70.6	59.2	63.0	55.4
80°	101.2	101.2	93.6	89.7	80.2	68.7	55.4	55.4	43.9	45.8	40.1
82.5°	57.3	53.5	53.5	61.1	63.0	51.6	40.1	38.2	32.5	32.5	26.7
85°	24.8	28.6	34.4	42.0	45.8	40.1	28.6	26.7	17.2	17.2	9.5
87.5°	0.0	1.9	1.9	3.8	7.6	7.6	0.0	3.8	0.0	1.9	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	4.8	4.5	4.0	4.0	4.0	4.5	4.8	5.0	5.5	6.0	6.5
100°	26.8	26.5	26.0	25.0	26.0	26.5	26.8	27.0	27.8	28.5	29.2
102.5°	48.2	48.5	49.0	48.0	49.0	48.5	48.2	48.0	48.5	49.0	49.5
105°	69.5	70.0	71.0	69.0	71.0	70.0	69.5	69.0	69.5	70.0	70.5
107.5°	91.2	91.5	92.0	91.0	92.0	91.5	91.2	91.0	91.2	91.5	91.8



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°	
110°	113.2	113.5	114.0	113.0	114.0	113.5	113.2	113.0	113.2	113.5	113.8	0°
112.5°	135.5	136.0	137.0	135.0	137.0	136.0	135.5	135.0	135.2	135.5	135.8	2.5°
115°	158.5	159.0	160.0	159.0	160.0	159.0	158.5	158.0	158.0	158.0	158.0	5°
117.5°	180.5	181.0	182.0	180.0	182.0	181.0	180.5	180.0	180.2	180.5	180.8	7.5°
120°	204.5	205.0	206.0	204.0	206.0	205.0	204.5	204.0	204.0	204.0	204.0	10°
122.5°	230.0	231.0	233.0	232.0	233.0	231.0	230.0	229.0	228.8	228.5	228.2	12.5°
125°	254.8	255.5	257.0	256.0	257.0	255.5	254.8	254.0	254.0	254.0	254.0	15°
127.5°	278.8	279.5	281.0	278.0	281.0	279.5	278.8	278.0	277.8	277.5	277.2	17.5°
130°	302.8	303.5	305.0	303.0	305.0	303.5	302.8	302.0	301.8	301.5	301.2	20°
132.5°	326.8	327.5	329.0	327.0	329.0	327.5	326.8	326.0	325.8	325.5	325.2	22.5°
135°	349.5	350.0	351.0	350.0	351.0	350.0	349.5	349.0	348.8	348.5	348.2	25°
137.5°	371.0	372.0	374.0	372.0	374.0	372.0	371.0	370.0	369.8	369.5	369.2	27.5°
140°	393.0	394.0	396.0	394.0	396.0	394.0	393.0	392.0	391.5	391.0	390.5	30°
142.5°	413.8	414.5	416.0	415.0	416.0	414.5	413.8	413.0	412.8	412.5	412.2	32.5°
145°	434.8	435.5	437.0	435.0	437.0	435.5	434.8	434.0	433.8	433.5	433.2	35°
147.5°	453.8	454.5	456.0	453.0	456.0	454.5	453.8	453.0	452.8	452.5	452.2	37.5°
150°	470.0	471.0	473.0	470.0	473.0	471.0	470.0	469.0	469.0	469.0	469.0	40°
152.5°	486.8	487.5	489.0	486.0	489.0	487.5	486.8	486.0	486.0	486.0	486.0	42.5°
155°	504.8	505.5	507.0	505.0	507.0	505.5	504.8	504.0	503.8	503.5	503.2	45°
157.5°	519.2	520.5	523.0	520.0	523.0	520.5	519.2	518.0	517.8	517.5	517.2	47.5°
160°	530.8	531.5	533.0	531.0	533.0	531.5	530.8	530.0	530.0	530.0	530.0	50°
162.5°	538.5	539.0	540.0	537.0	540.0	539.0	538.5	538.0	538.5	539.0	539.5	52.5°
165°	548.5	549.0	550.0	548.0	550.0	549.0	548.5	548.0	548.5	549.0	549.5	55°
167.5°	560.0	561.0	563.0	561.0	563.0	561.0	560.0	559.0	558.8	558.5	558.2	57.5°
170°	567.2	568.5	571.0	569.0	571.0	568.5	567.2	566.0	565.5	565.0	564.5	60°
172.5°	568.8	569.5	571.0	568.0	571.0	569.5	568.8	568.0	567.8	567.5	567.2	62.5°
175°	568.8	569.5	571.0	568.0	571.0	569.5	568.8	568.0	568.5	569.0	569.5	65°
177.5°	574.8	575.5	577.0	574.0	577.0	575.5	574.8	574.0	574.0	574.0	574.0	67.5°
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	70°
												72.5°
												74°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°



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DISTRIBUTION (continued):

CANDELA DISTRIBUTION

115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°	110°	115°
834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	110°	114.0
798.1	788.5	794.3	784.7	788.5	779.0	782.8	777.1	771.4	763.7	761.8	112.5°	136.0
746.5	738.9	737.0	727.4	729.3	721.7	714.1	704.5	693.1	677.8	672.1	115°	158.0
689.3	687.3	674.0	668.3	660.6	653.0	639.6	624.3	601.4	580.4	567.1	117.5°	181.0
639.6	633.9	614.8	605.2	593.8	584.2	565.2	544.1	511.7	479.2	462.0	120°	204.0
597.6	590.0	565.2	553.7	536.5	525.1	502.1	475.4	429.6	383.8	362.8	122.5°	228.0
563.2	551.8	523.1	506.0	483.1	471.6	446.8	408.6	353.2	305.5	276.8	125°	254.0
523.1	507.9	477.3	456.3	433.4	412.4	387.6	347.5	284.5	240.6	211.9	127.5°	277.0
479.2	460.1	427.7	399.0	374.2	355.1	330.3	290.2	227.2	192.8	177.6	130°	301.0
433.4	402.9	374.2	349.4	320.8	301.7	276.8	240.6	192.8	173.7	168.0	132.5°	325.0
385.7	351.3	322.7	297.8	271.1	253.9	232.9	204.3	175.7	169.9	169.9	135°	348.0
337.9	303.6	276.8	252.0	229.1	217.7	198.6	179.5	166.1	168.0	169.9	137.5°	369.0
294.0	259.7	234.8	215.8	194.7	187.1	171.8	160.4	158.5	164.2	166.1	140°	390.0
255.8	225.3	202.4	187.1	169.9	166.1	152.7	147.0	152.7	160.4	158.5	142.5°	412.0
223.4	198.6	175.7	166.1	150.8	148.9	139.4	135.6	143.2	152.7	152.7	145°	433.0
198.6	175.7	158.5	150.8	139.4	137.5	129.8	126.0	131.7	145.1	148.9	147.5°	452.0
177.6	164.2	147.0	139.4	131.7	127.9	124.1	120.3	122.2	139.4	141.3	150°	469.0
164.2	154.7	139.4	135.6	126.0	124.1	118.4	114.6	116.5	129.8	135.6	152.5°	486.0
154.7	147.0	133.7	131.7	122.2	120.3	114.6	110.7	112.6	124.1	129.8	155°	503.0
147.0	139.4	127.9	124.1	118.4	116.5	112.6	108.8	108.8	120.3	126.0	157.5°	517.0
143.2	135.6	124.1	120.3	114.6	112.6	108.8	105.0	106.9	116.5	120.3	160°	530.0
141.3	131.7	122.2	116.5	112.6	108.8	105.0	101.2	103.1	112.6	116.5	162.5°	540.0
141.3	129.8	122.2	116.5	110.7	105.0	103.1	97.4	101.2	108.8	114.6	165°	550.0
141.3	129.8	122.2	116.5	112.6	106.9	103.1	99.3	101.2	108.8	114.6	167.5°	558.0
137.5	127.9	124.1	118.4	116.5	110.7	108.8	105.0	105.0	114.6	124.1	170°	564.0
131.7	126.0	124.1	120.3	120.3	116.5	116.5	112.6	112.6	124.1	133.7	172.5°	567.0
124.1	120.3	122.2	120.3	120.3	120.3	118.4	118.4	118.4	127.9	139.4	175°	570.0
116.5	114.6	116.5	116.5	118.4	116.5	118.4	116.5	116.5	126.0	137.5	177.5°	574.0
105.0	105.0	106.9	105.0	106.9	106.9	108.8	108.8	108.8	114.6	126.0	180°	576.0
91.6	89.7	91.6	89.7	93.6	89.7	93.6	95.5	93.6	95.5	101.2		
82.1	80.2	82.1	80.2	84.0	80.2	82.1	82.1	80.2	64.9	55.4		
74.5	72.6	74.5	72.6	76.4	72.6	76.4	74.5	70.6	47.7	45.8		
59.2	53.5	59.2	53.5	57.3	51.6	55.4	47.7	36.3	34.4	34.4		
43.9	38.2	42.0	36.3	34.4	26.7	28.6	26.7	24.8	26.7	26.7		
26.7	19.1	22.9	17.2	21.0	15.3	19.1	17.2	15.3	15.3	15.3		
13.4	9.5	13.4	7.6	11.5	7.6	9.5	9.5	5.7	5.7	5.7		
1.9	0.0	3.8	0.0	3.8	0.0	1.9	1.9	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
7.0	8.5	10.0	11.5	13.0	12.0	11.0	9.0	4.0	3.0	2.0		
30.0	30.5	31.0	31.5	32.0	31.5	31.0	30.0	22.0	14.0	10.0		
50.0	50.2	50.5	50.8	51.0	50.8	50.5	50.0	45.0	38.0	32.0		
71.0	71.0	71.0	71.0	71.0	70.8	70.5	70.0	66.0	61.0	56.0		
92.0	92.2	92.5	92.8	93.0	92.5	92.0	91.0	88.0	84.0	80.0		

'228338
 ISS-AF-1000-LED-E1-SL4-7050-ULG

REPORT NUMBER: P228338
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TION (continued):

CANDELA DISTRIBUTION (con

117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°		175°	180°
114.0	114.0	114.0	114.0	113.5	113.0	112.0	110.0	106.0	103.0	0°	834.4	834.4
136.0	136.0	136.0	136.0	135.5	135.0	134.0	132.0	129.0	126.0	2.5°	756.1	758.0
158.0	158.0	158.0	158.0	157.5	157.0	156.0	154.0	151.0	149.0	5°	662.5	668.3
180.8	180.5	180.2	180.0	179.8	179.5	179.0	177.0	174.0	172.0	7.5°	559.4	563.2
204.0	204.0	204.0	204.0	203.5	203.0	202.0	201.0	198.0	196.0	10°	450.6	454.4
228.0	228.0	228.0	228.0	227.8	227.5	227.0	226.0	223.0	221.0	12.5°	347.5	351.3
253.8	253.5	253.2	253.0	252.8	252.5	252.0	251.0	248.0	247.0	15°	261.6	257.8
277.2	277.5	277.8	278.0	277.5	277.0	276.0	274.0	272.0	270.0	17.5°	200.5	196.7
301.0	301.0	301.0	301.0	300.5	300.0	299.0	298.0	294.0	293.0	20°	169.9	169.9
325.0	325.0	325.0	325.0	324.2	323.5	322.0	321.0	318.0	317.0	22.5°	166.1	164.2
348.0	348.0	348.0	348.0	347.2	346.5	345.0	345.0	341.0	339.0	25°	168.0	166.1
369.0	369.0	369.0	369.0	368.5	368.0	367.0	367.0	364.0	363.0	27.5°	168.0	166.1
390.0	390.0	390.0	390.0	389.8	389.5	389.0	388.0	386.0	385.0	30°	164.2	162.3
412.0	412.0	412.0	412.0	411.5	411.0	410.0	410.0	407.0	408.0	32.5°	158.5	156.6
433.2	433.5	433.8	434.0	433.5	433.0	432.0	431.0	428.0	428.0	35°	152.7	152.7
452.5	453.0	453.5	454.0	453.8	453.5	453.0	452.0	448.0	447.0	37.5°	148.9	150.8
469.5	470.0	470.5	471.0	470.8	470.5	470.0	469.0	465.0	464.0	40°	143.2	145.1
486.2	486.5	486.8	487.0	486.8	486.5	486.0	485.0	482.0	483.0	42.5°	137.5	139.4
503.2	503.5	503.8	504.0	503.8	503.5	503.0	503.0	501.0	502.0	45°	131.7	133.7
517.5	518.0	518.5	519.0	519.0	519.0	519.0	519.0	516.0	517.0	47.5°	126.0	126.0
530.5	531.0	531.5	532.0	532.0	532.0	532.0	532.0	529.0	529.0	50°	118.4	118.4
540.5	541.0	541.5	542.0	541.8	541.5	541.0	541.0	538.0	539.0	52.5°	116.5	116.5
550.8	551.5	552.2	553.0	552.8	552.5	552.0	552.0	548.0	549.0	55°	116.5	116.5
558.5	559.0	559.5	560.0	560.0	560.0	560.0	561.0	558.0	559.0	57.5°	120.3	120.3
564.2	564.5	564.8	565.0	565.2	565.5	566.0	567.0	565.0	566.0	60°	131.7	133.7
567.5	568.0	568.5	569.0	568.8	568.5	568.0	569.0	567.0	569.0	62.5°	154.7	156.6
570.8	571.5	572.2	573.0	572.8	572.5	572.0	572.0	569.0	570.0	65°	177.6	181.4
574.8	575.5	576.2	577.0	577.0	577.0	577.0	578.0	574.0	575.0	67.5°	179.5	185.2
576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	70°	173.7	179.5
										72.5°	120.3	120.3
										74°	53.5	51.6
										75°	45.8	43.9
										77.5°	34.4	34.4
										80°	24.8	22.9
										82.5°	13.4	13.4
										85°	3.8	3.8
										87.5°	0.0	0.0
										90°	0.0	0.0
										92.5°	0.0	0.0
										95°	1.0	1.0
										97.5°	2.0	2.0
										100°	8.0	8.0
										102.5°	28.0	28.0
										105°	54.0	54.0
										107.5°	77.0	78.0



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CANDELA DISTRIBUTION (continued):

	175°	180°
110°	102.0	101.0
112.5°	124.0	124.0
115°	147.0	146.0
117.5°	170.0	169.0
120°	195.0	193.0
122.5°	220.0	219.0
125°	246.0	244.0
127.5°	269.0	267.0
130°	292.0	290.0
132.5°	314.0	313.0
135°	337.0	336.0
137.5°	360.0	359.0
140°	383.0	382.0
142.5°	406.0	404.0
145°	426.0	425.0
147.5°	444.0	444.0
150°	462.0	461.0
152.5°	480.0	479.0
155°	500.0	499.0
157.5°	515.0	513.0
160°	527.0	525.0
162.5°	536.0	535.0
165°	547.0	546.0
167.5°	556.0	555.0
170°	563.0	562.0
172.5°	566.0	565.0
175°	569.0	567.0
177.5°	573.0	572.0
180°	576.0	576.0

(END OF REPORT)

Cooper Lighting Solutions Photometric Lab
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Scaled Data Report

