

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: P228331

Luminaire Tested: **ISS-AF-1200-LED-E1-SL4-8030-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228331
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-1200-LED-E1-SL4-8030-ULG
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV W/SPILL CONTROL, WITH UPLIGHT
GLOW
Light Source: (16) 3000K CCT, 80 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6174.2 lumens
Efficiency: N/A
Efficacy: 74.7 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

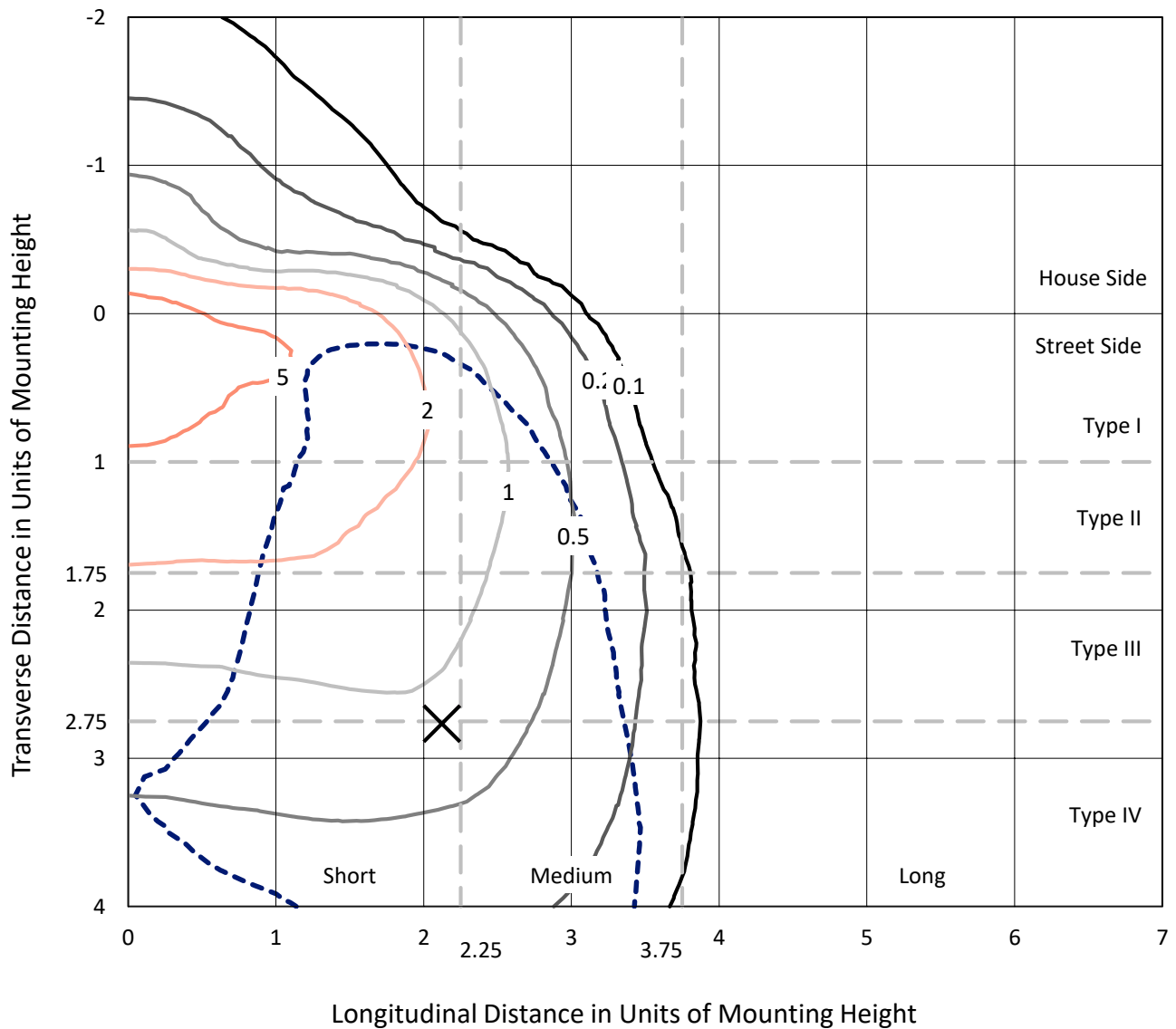
Input Watts (W): 82.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

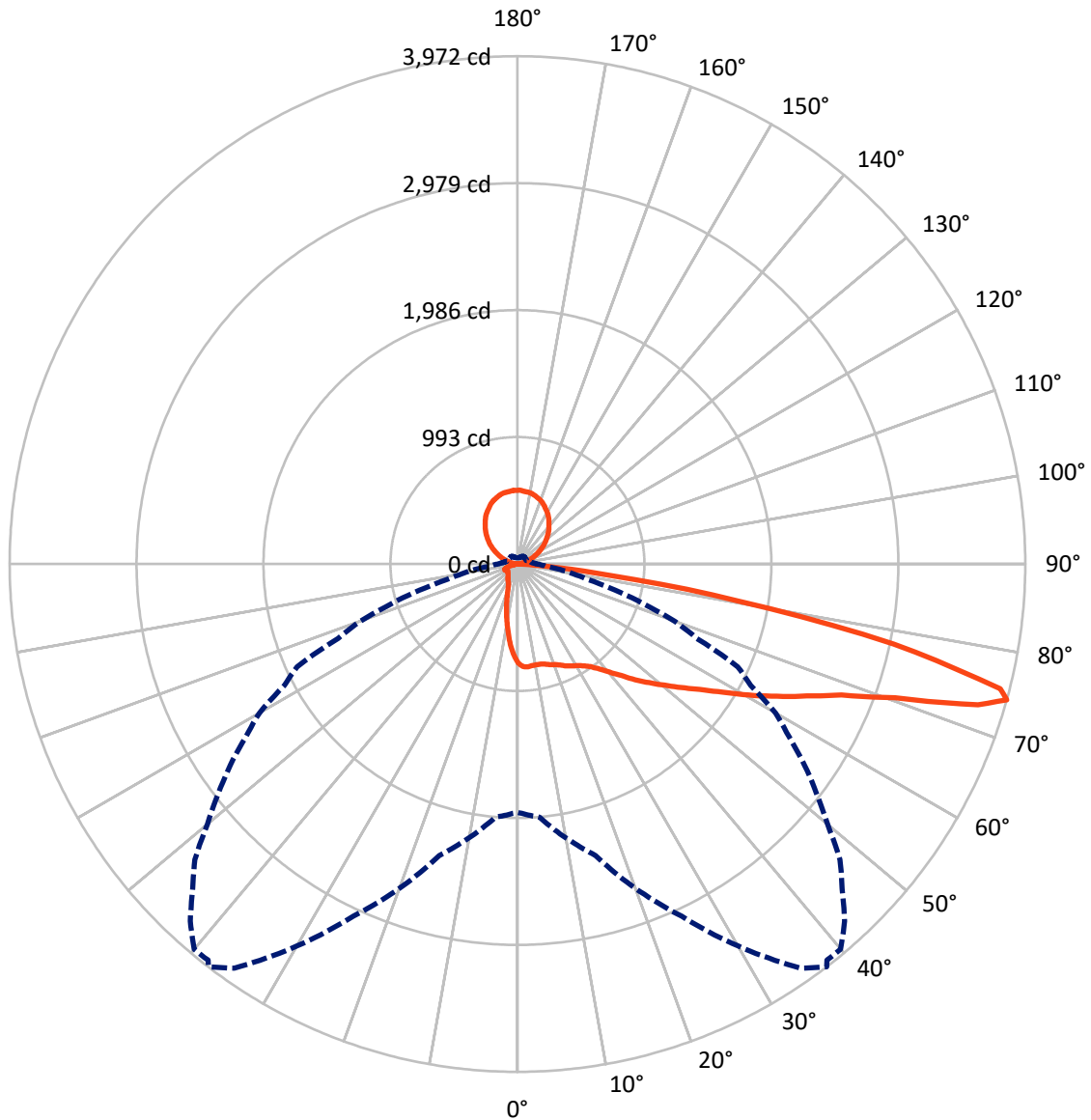
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 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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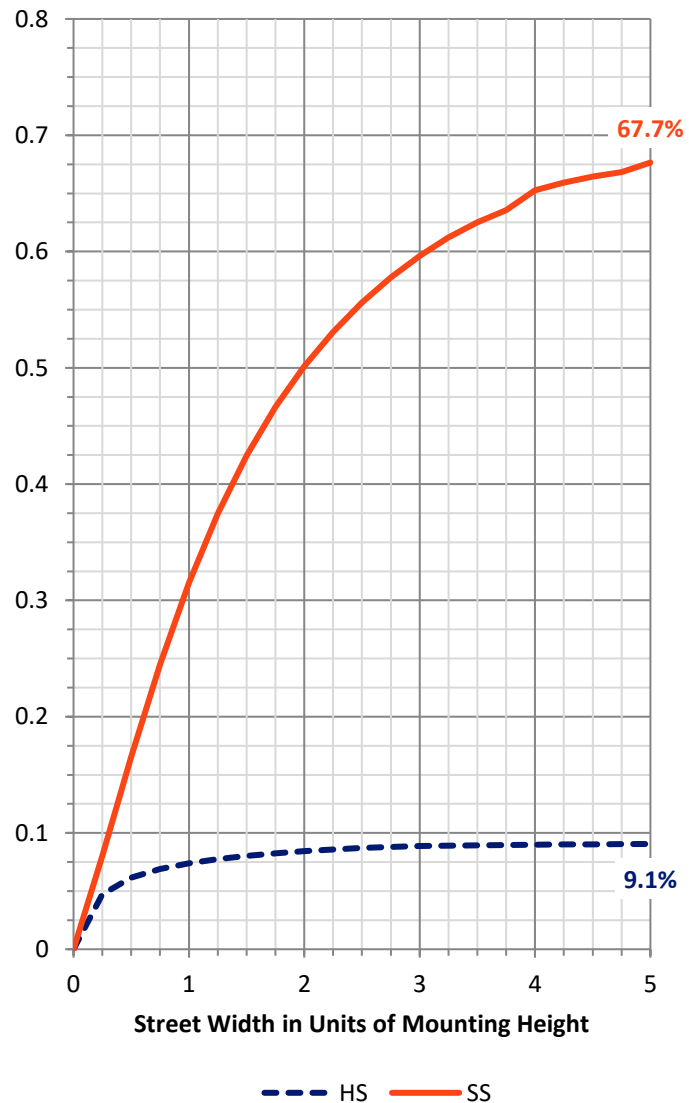
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	563.0	713.1	1276.1
	% Fixture	9.1	11.5	20.7
Street Side	Lumens	4185.0	713.1	4898.1
	% Fixture	67.8	11.5	79.3
Total	Lumens	4748.0	1426.2	6174.2
	% Fixture	76.9	23.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.5	1.1
10°-20°	171.8	2.8
20°-30°	266.3	4.3
30°-40°	395.0	6.4
40°-50°	607.6	9.8
50°-60°	898.1	14.5
60°-70°	1197.2	19.4
70°-80°	1033.4	16.7
80°-90°	111.1	1.8
90°-100°	4.7	0.1
100°-110°	69.0	1.1
110°-120°	153.0	2.5
120°-130°	223.9	3.6
130°-140°	265.6	4.3
140°-150°	269.3	4.4
150°-160°	231.1	3.7
160°-170°	155.1	2.5
170°-180°	54.3	0.9
0°-90°	4748.0	76.9
0°-180°	6174.2	100.0



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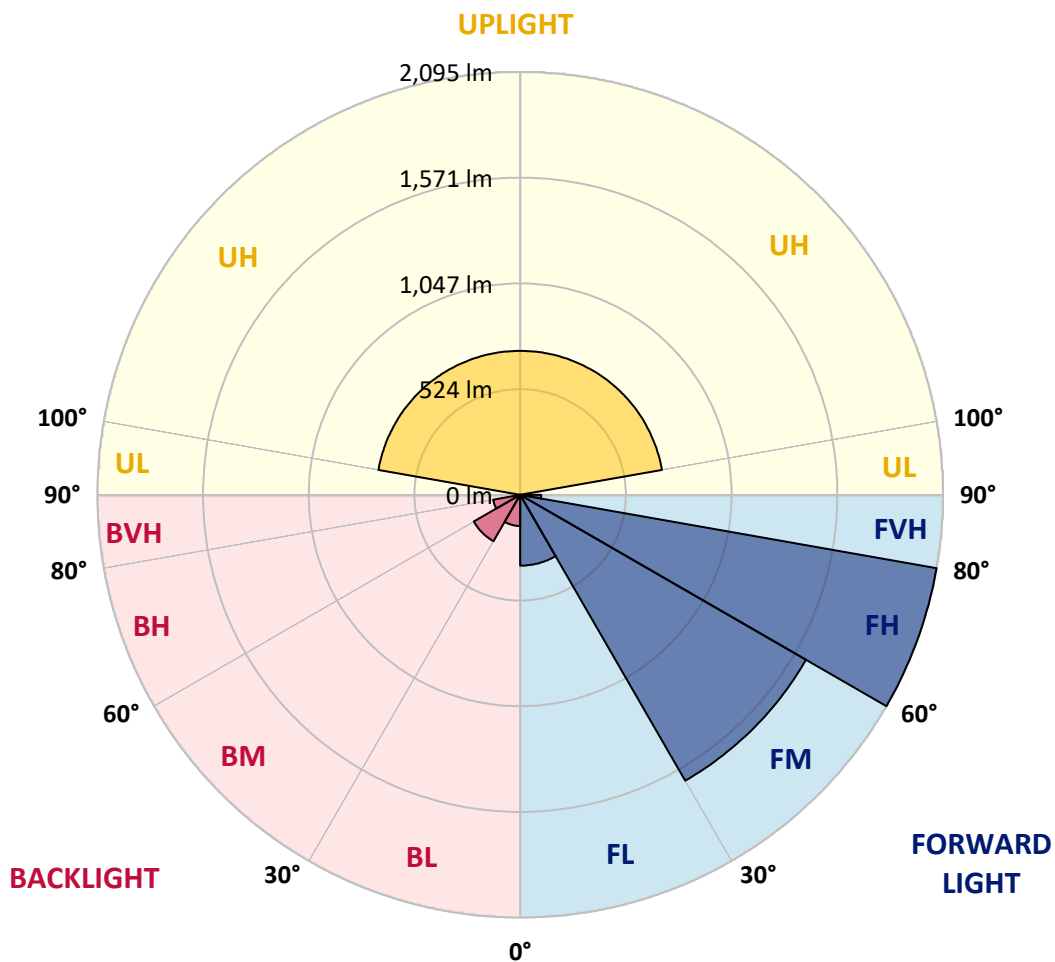
CATALOG NUMBER: ISS-AF-1200-LED-E1-SL4-8030-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	351.0	5.7			
FM (30°-60°)	1635.3	26.5			
FH (60°-80°)	2094.8	33.9			G2/5000
FVH (80°-90°)	103.8	1.7			G2/225
BL (0°-30°)	154.6	2.5	B1/500		
BM (30°-60°)	265.4	4.3	B1/1000		
BH (60°-80°)	135.7	2.2	B1/500		G1/500
BVH (80°-90°)	7.3	0.1			G0/10
UL (90°-100°)	4.7	0.1		U1/10	
UH (100°-180°)	713.1	11.5		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°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	819.1	817.4	813.8	812.0	808.5	803.2	808.5	801.4	797.8	801.4	794.3
5°	833.3	831.5	828.0	820.9	817.4	808.5	813.8	804.9	803.2	806.7	797.8
7.5°	835.1	831.5	826.2	817.4	813.8	803.2	806.7	796.1	792.5	796.1	790.8
10°	829.8	828.0	822.7	808.5	804.9	801.4	799.6	792.5	790.8	789.0	787.2
12.5°	820.9	820.9	817.4	812.0	810.3	803.2	804.9	797.8	799.6	796.1	792.5
15°	817.4	815.6	819.1	822.7	822.7	812.0	819.1	813.8	810.3	812.0	806.7
17.5°	813.8	815.6	828.0	835.1	838.6	828.0	838.6	828.0	820.9	829.8	820.9
20°	812.0	817.4	838.6	854.6	856.4	838.6	856.4	838.6	838.6	849.3	833.3
22.5°	820.9	829.8	859.9	877.6	881.2	858.1	879.4	856.4	856.4	865.2	849.3
25°	849.3	858.1	891.8	911.3	907.8	883.0	902.5	879.4	877.6	888.3	867.0
27.5°	886.5	898.9	930.8	948.6	936.1	902.5	930.8	897.1	897.1	913.1	884.7
30°	939.7	948.6	976.9	978.7	962.7	922.0	953.9	916.6	911.3	939.7	904.2
32.5°	998.2	1005.3	1026.6	1014.2	991.1	948.6	985.8	941.5	939.7	969.8	929.0
35°	1060.3	1067.3	1074.4	1053.2	1031.9	985.8	1026.6	982.2	980.5	1014.2	975.1
37.5°	1124.1	1124.1	1124.1	1099.3	1085.1	1040.7	1078.0	1042.5	1039.0	1074.4	1037.2
40°	1175.5	1179.0	1173.7	1150.7	1143.6	1111.7	1143.6	1111.7	1117.0	1148.9	1118.8
42.5°	1218.0	1221.6	1223.4	1203.9	1211.0	1193.2	1218.0	1195.0	1196.8	1232.2	1214.5
45°	1260.6	1258.8	1273.0	1267.7	1289.0	1290.7	1304.9	1296.1	1299.6	1326.2	1320.9
47.5°	1304.9	1296.1	1312.0	1335.1	1374.1	1386.5	1395.3	1398.9	1413.1	1425.5	1437.9
50°	1347.5	1338.6	1349.2	1400.7	1462.7	1489.3	1491.1	1508.8	1524.8	1542.5	1567.3
52.5°	1391.8	1384.7	1395.3	1468.0	1567.3	1604.6	1599.2	1629.4	1652.4	1671.9	1712.7
55°	1437.9	1430.8	1441.4	1549.6	1679.0	1730.4	1725.1	1767.7	1812.0	1819.1	1865.2
57.5°	1482.2	1473.4	1503.5	1645.3	1812.0	1890.0	1865.2	1930.8	1973.3	1969.8	2033.6
60°	1530.1	1523.0	1570.9	1762.4	1978.7	2079.7	2042.5	2129.4	2159.5	2147.1	2207.4
62.5°	1576.2	1574.4	1654.2	1898.9	2180.8	2278.3	2244.6	2320.8	2342.1	2326.2	2356.3
65°	1618.7	1629.4	1744.6	2035.4	2375.8	2487.5	2441.4	2517.7	2542.5	2530.1	2581.5
67.5°	1689.7	1702.1	1856.3	2209.2	2616.9	2732.2	2693.2	2773.0	2810.2	2806.7	2863.4
70°	1794.3	1817.3	2021.2	2455.6	2983.9	3131.1	3109.8	3207.3	3297.8	3290.7	3347.4
72.5°	1976.9	2014.1	2292.5	2838.6	3586.8	3765.8	3741.0	3796.0	3780.0	3650.6	3546.0
74°	1941.4	1987.5	2359.9	3038.9	3858.0	3971.5	3930.7	3932.5	3787.1	3590.3	3421.9
75°	1812.0	1859.9	2262.3	3014.1	3838.5	3900.6	3842.1	3769.4	3593.9	3393.5	3186.1
77.5°	1242.9	1304.9	1663.1	2434.3	3090.3	3005.2	2991.0	2852.7	2620.5	2395.3	2129.4
80°	636.5	680.8	859.9	1273.0	1833.3	1748.2	1776.5	1664.8	1471.6	1308.5	1037.2
82.5°	152.5	163.1	253.5	492.9	794.3	726.9	737.6	652.5	540.8	441.5	342.2
85°	79.8	90.4	124.1	136.5	209.2	216.3	211.0	203.9	166.7	140.1	122.3
87.5°	0.0	0.0	0.0	3.5	1.8	0.0	1.8	0.0	0.0	1.8	3.5
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°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	799.6	796.1	799.6	789.0	794.3	785.4	789.0	780.1	783.7	776.6	778.3
5°	803.2	794.3	799.6	790.8	792.5	785.4	783.7	780.1	778.3	773.0	769.5
7.5°	794.3	787.2	785.4	781.9	776.6	778.3	771.3	769.5	764.2	764.2	753.5
10°	785.4	787.2	776.6	780.1	771.3	773.0	760.6	764.2	755.3	762.4	746.4
12.5°	792.5	794.3	785.4	790.8	774.8	778.3	767.7	773.0	760.6	769.5	750.0
15°	808.5	806.7	803.2	803.2	787.2	794.3	781.9	785.4	773.0	783.7	762.4
17.5°	822.7	820.9	815.6	813.8	803.2	804.9	792.5	799.6	785.4	794.3	773.0
20°	838.6	829.8	828.0	826.2	813.8	813.8	804.9	808.5	794.3	804.9	780.1
22.5°	851.0	843.9	842.2	835.1	826.2	829.8	817.4	819.1	804.9	815.6	794.3
25°	870.5	861.7	861.7	851.0	845.7	843.9	836.9	842.2	828.0	835.1	815.6
27.5°	897.1	877.6	884.7	874.1	870.5	868.8	865.2	868.8	858.1	863.4	843.9
30°	922.0	897.1	907.8	893.6	900.7	893.6	898.9	893.6	893.6	893.6	884.7
32.5°	955.6	925.5	946.8	925.5	939.7	929.0	946.8	936.1	943.2	941.5	937.9
35°	1003.5	968.1	998.2	969.8	994.6	980.5	1005.3	1000.0	1014.2	1007.1	1014.2
37.5°	1067.3	1030.1	1065.6	1039.0	1069.1	1047.8	1083.3	1079.8	1109.9	1099.3	1109.9
40°	1147.1	1120.5	1147.1	1127.6	1159.5	1150.7	1187.9	1189.7	1223.4	1218.0	1230.5
42.5°	1235.8	1216.3	1242.9	1232.2	1264.1	1271.2	1313.8	1324.4	1356.3	1365.2	1367.0
45°	1331.5	1328.0	1349.2	1359.9	1391.8	1413.1	1450.3	1476.9	1512.4	1531.9	1528.3
47.5°	1443.2	1457.4	1471.6	1498.2	1526.5	1570.9	1608.1	1641.8	1682.6	1695.0	1700.3
50°	1569.1	1593.9	1606.3	1643.6	1671.9	1726.9	1778.3	1820.9	1865.2	1859.9	1863.4
52.5°	1702.1	1734.0	1751.7	1796.0	1833.3	1897.1	1941.4	1982.2	2037.2	2023.0	2017.7
55°	1849.2	1897.1	1911.3	1960.9	1992.8	2058.4	2097.5	2168.4	2191.4	2177.2	2147.1
57.5°	2005.3	2062.0	2077.9	2145.3	2161.3	2232.2	2265.9	2313.8	2333.3	2310.2	2271.2
60°	2182.6	2234.0	2246.4	2306.7	2327.9	2393.5	2418.4	2460.9	2475.1	2418.4	2363.4
62.5°	2359.9	2413.0	2420.1	2473.3	2494.6	2551.3	2579.7	2604.5	2597.4	2514.1	2445.0
65°	2562.0	2613.4	2631.1	2684.3	2696.7	2739.3	2762.3	2734.0	2718.0	2592.1	2514.1
67.5°	2882.9	2937.9	2944.9	2957.4	2955.6	2934.3	2923.7	2826.2	2755.2	2523.0	2411.3
70°	3304.9	3264.1	3184.3	3092.1	3024.7	2904.2	2833.2	2632.9	2484.0	2223.3	2035.4
72.5°	3381.1	3248.1	3051.3	2893.5	2730.4	2540.7	2388.2	2085.0	1875.8	1602.8	1404.2
74°	3164.8	2948.5	2741.0	2519.4	2331.5	2054.9	1900.6	1517.7	1310.2	1033.7	792.5
75°	2904.2	2650.6	2416.6	2134.7	1959.2	1627.6	1482.2	1069.1	861.7	613.5	413.1
77.5°	1852.8	1549.6	1326.2	1000.0	863.4	595.7	436.2	271.3	200.3	175.5	152.5
80°	831.5	592.2	469.8	324.5	271.3	207.4	175.5	141.8	129.4	113.5	108.2
82.5°	265.9	212.8	202.1	180.8	180.8	145.4	124.1	97.5	88.6	76.2	69.1
85°	115.2	108.2	111.7	102.8	104.6	79.8	63.8	47.9	47.9	33.7	30.1
87.5°	3.5	0.0	1.8	0.0	3.5	0.0	1.8	0.0	1.8	0.0	1.8
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°	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°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	771.3	774.8	773.0	765.9	764.2	758.8	746.4	748.2	741.1	746.4	737.6
5°	764.2	762.4	755.3	746.4	737.6	726.9	718.1	714.5	707.4	703.9	698.6
7.5°	753.5	746.4	734.0	719.8	707.4	693.2	686.1	673.7	670.2	657.8	656.0
10°	750.0	737.6	723.4	705.7	684.4	663.1	661.3	640.1	638.3	618.8	613.5
12.5°	757.1	741.1	723.4	702.1	677.3	647.1	647.1	615.2	613.5	586.9	578.0
15°	771.3	751.7	728.7	703.9	672.0	634.7	633.0	595.7	592.2	560.3	549.6
17.5°	783.7	757.1	735.8	702.1	664.9	622.3	613.5	576.2	569.1	531.9	517.7
20°	792.5	762.4	737.6	698.6	652.5	602.8	590.4	551.4	535.4	498.2	478.7
22.5°	803.2	774.8	741.1	696.8	645.4	586.9	560.3	524.8	501.8	462.8	436.2
25°	819.1	794.3	753.5	702.1	640.1	570.9	535.4	498.2	466.3	427.3	388.3
27.5°	843.9	819.1	771.3	709.2	638.3	554.9	515.9	469.8	430.8	388.3	344.0
30°	879.4	852.8	801.4	728.7	640.1	542.5	494.7	445.0	398.9	349.3	303.2
32.5°	925.5	904.2	840.4	750.0	647.1	531.9	475.2	418.4	361.7	313.8	273.0
35°	989.3	975.1	895.4	790.8	664.9	526.6	455.7	393.6	329.8	281.9	237.6
37.5°	1083.3	1063.8	975.1	849.3	693.2	523.0	441.5	363.5	303.2	251.8	214.5
40°	1202.1	1175.5	1069.1	920.2	737.6	524.8	429.1	340.4	280.1	225.2	195.0
42.5°	1343.9	1304.9	1184.4	1007.1	781.9	528.4	422.0	319.1	262.4	203.9	180.8
45°	1503.5	1459.2	1320.9	1115.2	845.7	537.2	416.7	301.4	246.4	187.9	172.0
47.5°	1659.5	1615.2	1460.9	1223.4	911.3	553.2	420.2	290.8	235.8	179.1	161.3
50°	1812.0	1765.9	1585.1	1320.9	968.1	574.5	434.4	292.5	234.0	175.5	156.0
52.5°	1946.7	1890.0	1691.4	1397.1	1008.8	588.6	446.8	297.9	235.8	173.8	154.3
55°	2081.5	2008.8	1776.5	1457.4	1033.7	590.4	446.8	299.6	237.6	173.8	152.5
57.5°	2182.6	2099.2	1842.1	1492.9	1042.5	581.5	436.2	290.8	226.9	172.0	148.9
60°	2246.4	2157.7	1888.2	1515.9	1030.1	544.3	379.4	257.1	200.3	159.6	138.3
62.5°	2299.6	2209.2	1902.4	1476.9	925.5	432.6	296.1	209.2	166.7	141.8	127.7
65°	2312.0	2203.8	1803.1	1304.9	723.4	299.6	214.5	164.9	136.5	125.9	115.2
67.5°	2124.0	1994.6	1515.9	1021.2	492.9	205.7	159.6	134.7	117.0	111.7	108.2
70°	1726.9	1585.1	1109.9	668.4	274.8	143.6	122.3	111.7	101.1	101.1	95.7
72.5°	1113.4	966.3	569.1	285.5	140.1	109.9	99.3	95.7	86.9	88.6	83.3
74°	569.1	443.2	232.3	150.7	115.2	97.5	88.6	86.9	78.0	79.8	74.5
75°	289.0	228.7	163.1	125.9	106.4	92.2	81.6	81.6	70.9	72.7	67.4
77.5°	134.7	129.4	111.7	99.3	90.4	78.0	67.4	65.6	55.0	58.5	51.4
80°	94.0	94.0	86.9	83.3	74.5	63.8	51.4	51.4	40.8	42.6	37.2
82.5°	53.2	49.6	49.6	56.7	58.5	47.9	37.2	35.5	30.1	30.1	24.8
85°	23.0	26.6	31.9	39.0	42.6	37.2	26.6	24.8	16.0	16.0	8.9
87.5°	0.0	1.8	1.8	3.5	7.1	7.1	0.0	3.5	0.0	1.8	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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 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°
774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	110°	114.0
741.1	732.2	737.6	728.7	732.2	723.4	726.9	721.6	716.3	709.2	707.4	112.5°	136.0
693.2	686.1	684.4	675.5	677.3	670.2	663.1	654.2	643.6	629.4	624.1	115°	158.0
640.1	638.3	625.9	620.5	613.5	606.4	594.0	579.8	558.5	539.0	526.6	117.5°	181.0
594.0	588.6	570.9	562.0	551.4	542.5	524.8	505.3	475.2	445.0	429.1	120°	204.0
554.9	547.9	524.8	514.2	498.2	487.6	466.3	441.5	398.9	356.4	336.9	122.5°	228.0
523.0	512.4	485.8	469.8	448.6	437.9	414.9	379.4	328.0	283.7	257.1	125°	254.0
485.8	471.6	443.2	423.7	402.5	383.0	359.9	322.7	264.2	223.4	196.8	127.5°	277.0
445.0	427.3	397.2	370.6	347.5	329.8	306.7	269.5	211.0	179.1	164.9	130°	301.0
402.5	374.1	347.5	324.5	297.9	280.1	257.1	223.4	179.1	161.3	156.0	132.5°	325.0
358.1	326.2	299.6	276.6	251.8	235.8	216.3	189.7	163.1	157.8	157.8	135°	348.0
313.8	281.9	257.1	234.0	212.8	202.1	184.4	166.7	154.3	156.0	157.8	137.5°	369.0
273.0	241.1	218.1	200.3	180.8	173.8	159.6	148.9	147.2	152.5	154.3	140°	390.0
237.6	209.2	187.9	173.8	157.8	154.3	141.8	136.5	141.8	148.9	147.2	142.5°	412.0
207.4	184.4	163.1	154.3	140.1	138.3	129.4	125.9	133.0	141.8	141.8	145°	433.0
184.4	163.1	147.2	140.1	129.4	127.7	120.6	117.0	122.3	134.7	138.3	147.5°	452.0
164.9	152.5	136.5	129.4	122.3	118.8	115.2	111.7	113.5	129.4	131.2	150°	469.0
152.5	143.6	129.4	125.9	117.0	115.2	109.9	106.4	108.2	120.6	125.9	152.5°	486.0
143.6	136.5	124.1	122.3	113.5	111.7	106.4	102.8	104.6	115.2	120.6	155°	503.0
136.5	129.4	118.8	115.2	109.9	108.2	104.6	101.1	101.1	111.7	117.0	157.5°	517.0
133.0	125.9	115.2	111.7	106.4	104.6	101.1	97.5	99.3	108.2	111.7	160°	530.0
131.2	122.3	113.5	108.2	104.6	101.1	97.5	94.0	95.7	104.6	108.2	162.5°	540.0
131.2	120.6	113.5	108.2	102.8	97.5	95.7	90.4	94.0	101.1	106.4	165°	550.0
131.2	120.6	113.5	108.2	104.6	99.3	95.7	92.2	94.0	101.1	106.4	167.5°	558.0
127.7	118.8	115.2	109.9	108.2	102.8	101.1	97.5	97.5	106.4	115.2	170°	564.0
122.3	117.0	115.2	111.7	111.7	108.2	108.2	104.6	104.6	115.2	124.1	172.5°	567.0
115.2	111.7	113.5	111.7	111.7	111.7	109.9	109.9	109.9	118.8	129.4	175°	570.0
108.2	106.4	108.2	108.2	109.9	108.2	109.9	108.2	108.2	117.0	127.7	177.5°	574.0
97.5	97.5	99.3	97.5	99.3	99.3	101.1	101.1	101.1	106.4	117.0	180°	576.0
85.1	83.3	85.1	83.3	86.9	83.3	86.9	88.6	86.9	88.6	94.0		
76.2	74.5	76.2	74.5	78.0	74.5	76.2	76.2	74.5	60.3	51.4		
69.1	67.4	69.1	67.4	70.9	67.4	70.9	69.1	65.6	44.3	42.6		
55.0	49.6	55.0	49.6	53.2	47.9	51.4	44.3	33.7	31.9	31.9		
40.8	35.5	39.0	33.7	31.9	24.8	26.6	24.8	23.0	24.8	24.8		
24.8	17.7	21.3	16.0	19.5	14.2	17.7	16.0	14.2	14.2	14.2		
12.4	8.9	12.4	7.1	10.6	7.1	8.9	8.9	5.3	5.3	5.3		
1.8	0.0	3.5	0.0	3.5	0.0	1.8	1.8	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		

'228331
 ISS-AF-1200-LED-E1-SL4-8030-ULG

REPORT NUMBER: P228331
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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°	774.8	774.8
136.0	136.0	136.0	136.0	135.5	135.0	134.0	132.0	129.0	126.0	2.5°	702.1	703.9
158.0	158.0	158.0	158.0	157.5	157.0	156.0	154.0	151.0	149.0	5°	615.2	620.5
180.8	180.5	180.2	180.0	179.8	179.5	179.0	177.0	174.0	172.0	7.5°	519.5	523.0
204.0	204.0	204.0	204.0	203.5	203.0	202.0	201.0	198.0	196.0	10°	418.4	422.0
228.0	228.0	228.0	228.0	227.8	227.5	227.0	226.0	223.0	221.0	12.5°	322.7	326.2
253.8	253.5	253.2	253.0	252.8	252.5	252.0	251.0	248.0	247.0	15°	242.9	239.4
277.2	277.5	277.8	278.0	277.5	277.0	276.0	274.0	272.0	270.0	17.5°	186.2	182.6
301.0	301.0	301.0	301.0	300.5	300.0	299.0	298.0	294.0	293.0	20°	157.8	157.8
325.0	325.0	325.0	325.0	324.2	323.5	322.0	321.0	318.0	317.0	22.5°	154.3	152.5
348.0	348.0	348.0	348.0	347.2	346.5	345.0	345.0	341.0	339.0	25°	156.0	154.3
369.0	369.0	369.0	369.0	368.5	368.0	367.0	367.0	364.0	363.0	27.5°	156.0	154.3
390.0	390.0	390.0	390.0	389.8	389.5	389.0	388.0	386.0	385.0	30°	152.5	150.7
412.0	412.0	412.0	412.0	411.5	411.0	410.0	410.0	407.0	408.0	32.5°	147.2	145.4
433.2	433.5	433.8	434.0	433.5	433.0	432.0	431.0	428.0	428.0	35°	141.8	141.8
452.5	453.0	453.5	454.0	453.8	453.5	453.0	452.0	448.0	447.0	37.5°	138.3	140.1
469.5	470.0	470.5	471.0	470.8	470.5	470.0	469.0	465.0	464.0	40°	133.0	134.7
486.2	486.5	486.8	487.0	486.8	486.5	486.0	485.0	482.0	483.0	42.5°	127.7	129.4
503.2	503.5	503.8	504.0	503.8	503.5	503.0	503.0	501.0	502.0	45°	122.3	124.1
517.5	518.0	518.5	519.0	519.0	519.0	519.0	519.0	516.0	517.0	47.5°	117.0	117.0
530.5	531.0	531.5	532.0	532.0	532.0	532.0	532.0	529.0	529.0	50°	109.9	109.9
540.5	541.0	541.5	542.0	541.8	541.5	541.0	541.0	538.0	539.0	52.5°	108.2	108.2
550.8	551.5	552.2	553.0	552.8	552.5	552.0	552.0	548.0	549.0	55°	108.2	108.2
558.5	559.0	559.5	560.0	560.0	560.0	560.0	561.0	558.0	559.0	57.5°	111.7	111.7
564.2	564.5	564.8	565.0	565.2	565.5	566.0	567.0	565.0	566.0	60°	122.3	124.1
567.5	568.0	568.5	569.0	568.8	568.5	568.0	569.0	567.0	569.0	62.5°	143.6	145.4
570.8	571.5	572.2	573.0	572.8	572.5	572.0	572.0	569.0	570.0	65°	164.9	168.4
574.8	575.5	576.2	577.0	577.0	577.0	577.0	578.0	574.0	575.0	67.5°	166.7	172.0
576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	70°	161.3	166.7
										72.5°	111.7	111.7
										74°	49.6	47.9
										75°	42.6	40.8
										77.5°	31.9	31.9
										80°	23.0	21.3
										82.5°	12.4	12.4
										85°	3.5	3.5
										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

