

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: P271837

Luminaire Tested: **ISW-AF-450-LED-E1-T2-7027-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35937)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISW-AF-450-LED-E1-T2-7027-ULG
Description: IMPACT ELITE LED WEDGE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II, WITH UPLIGHT GLOW
Light Source: (16) 2700K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4430.2 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type II - Medium - Non-Cutoff
BUG Rating: B1 - U5 - G1

Input Watts (W): 42.01
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

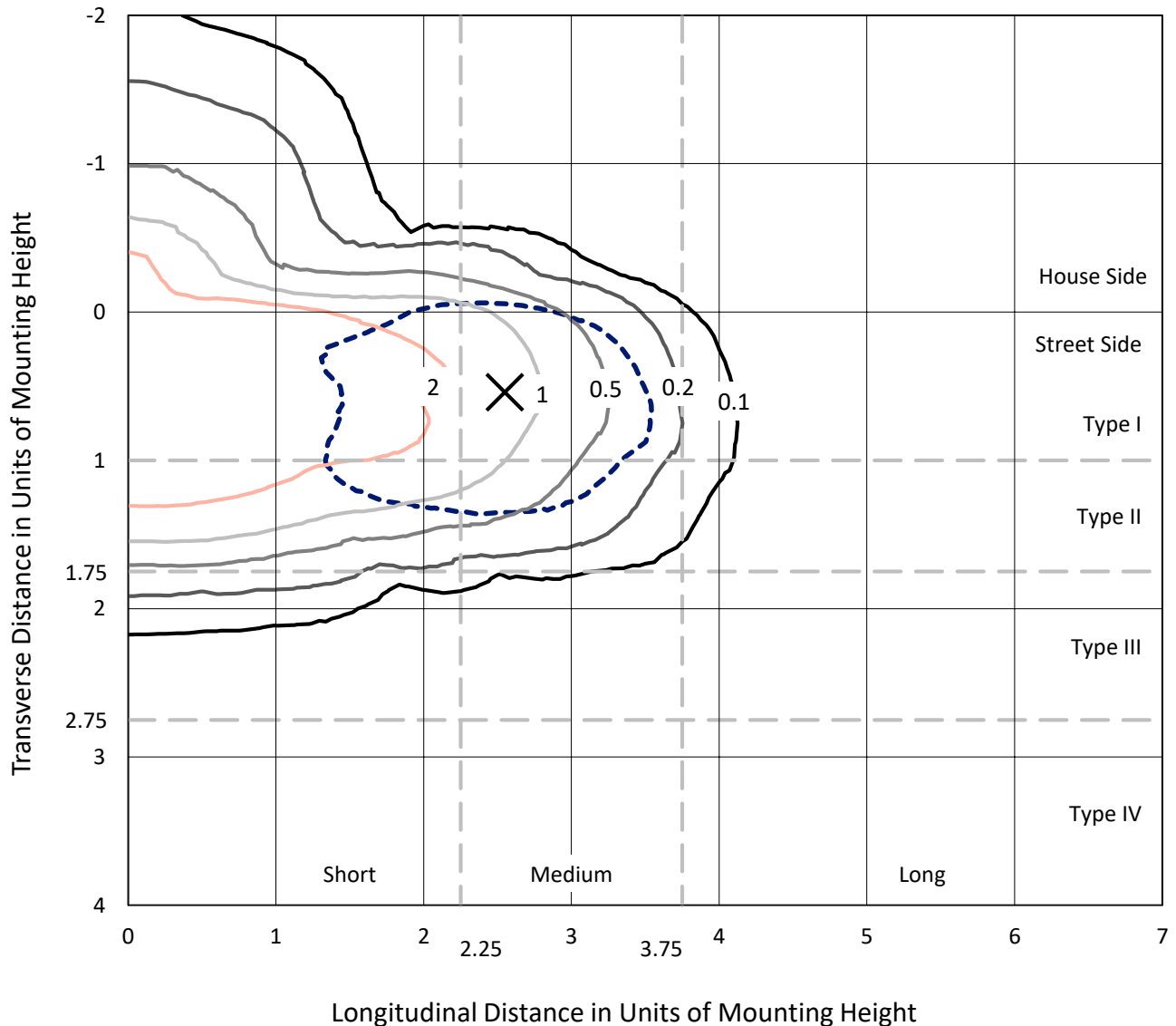


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

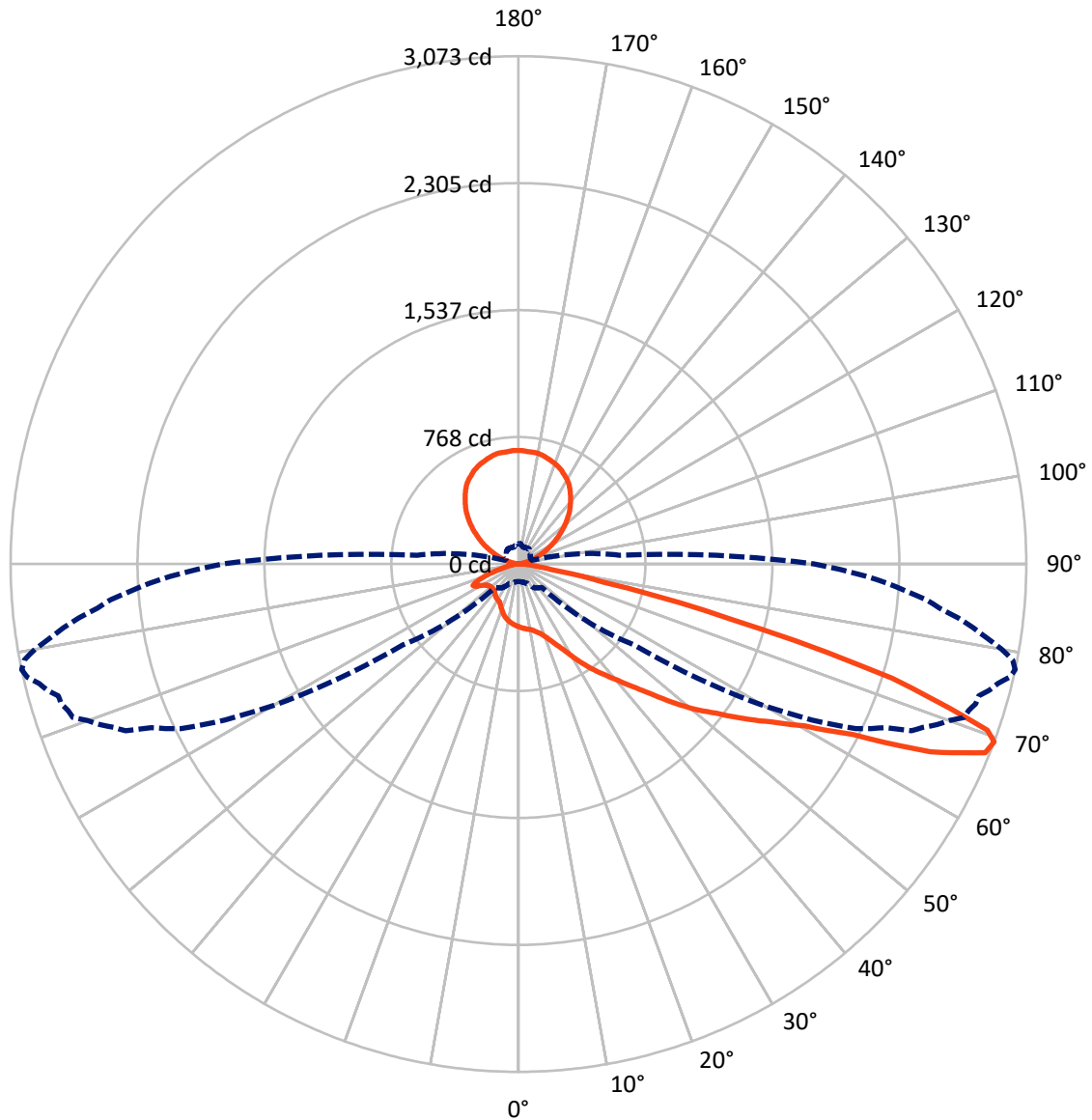


Based on 10 foot mounting height. Maximum calculated value = 4.9 fc
 Type II - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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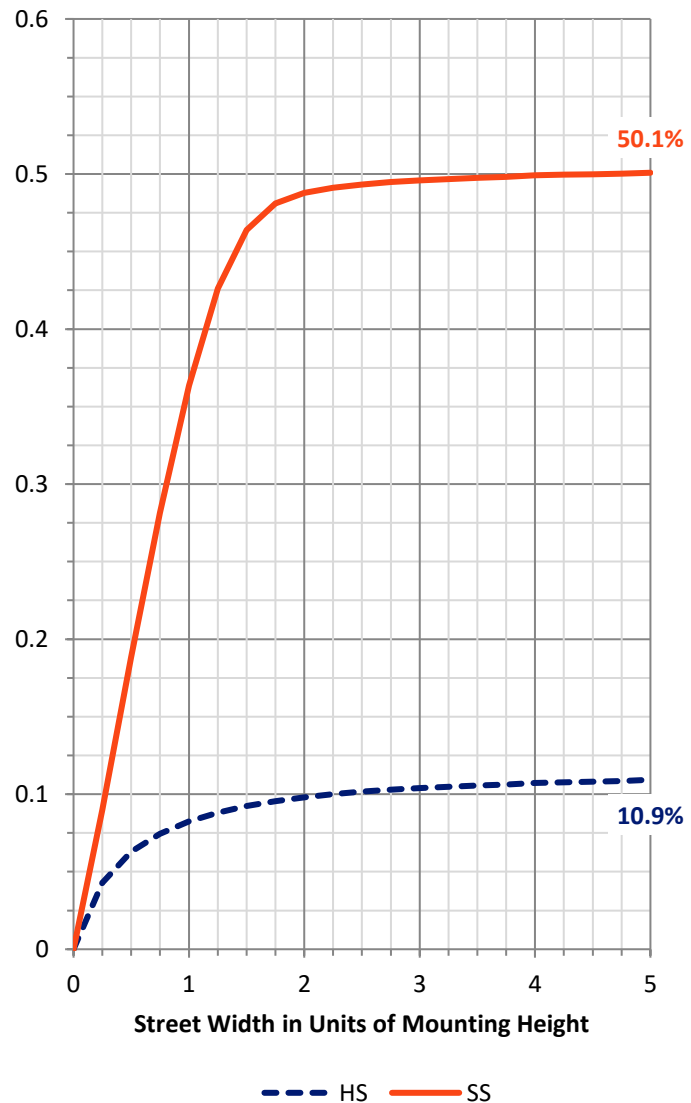
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	498.9	852.4	1351.4
	% Fixture	11.3	19.2	30.5
Street Side	Lumens	2226.9	851.9	3078.8
	% Fixture	50.3	19.2	69.5
Total	Lumens	2725.8	1704.4	4430.2
	% Fixture	61.5	38.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.2	0.8
10°-20°	106.3	2.4
20°-30°	190.6	4.3
30°-40°	311.1	7.0
40°-50°	460.1	10.4
50°-60°	600.8	13.6
60°-70°	671.9	15.2
70°-80°	301.7	6.8
80°-90°	48.0	1.1
90°-100°	10.5	0.2
100°-110°	56.3	1.3
110°-120°	163.0	3.7
120°-130°	268.1	6.1
130°-140°	330.6	7.5
140°-150°	338.2	7.6
150°-160°	284.9	6.4
160°-170°	187.6	4.2
170°-180°	65.0	1.5
0°-90°	2725.8	61.5
0°-180°	4430.2	100.0

Coefficient of Utilization



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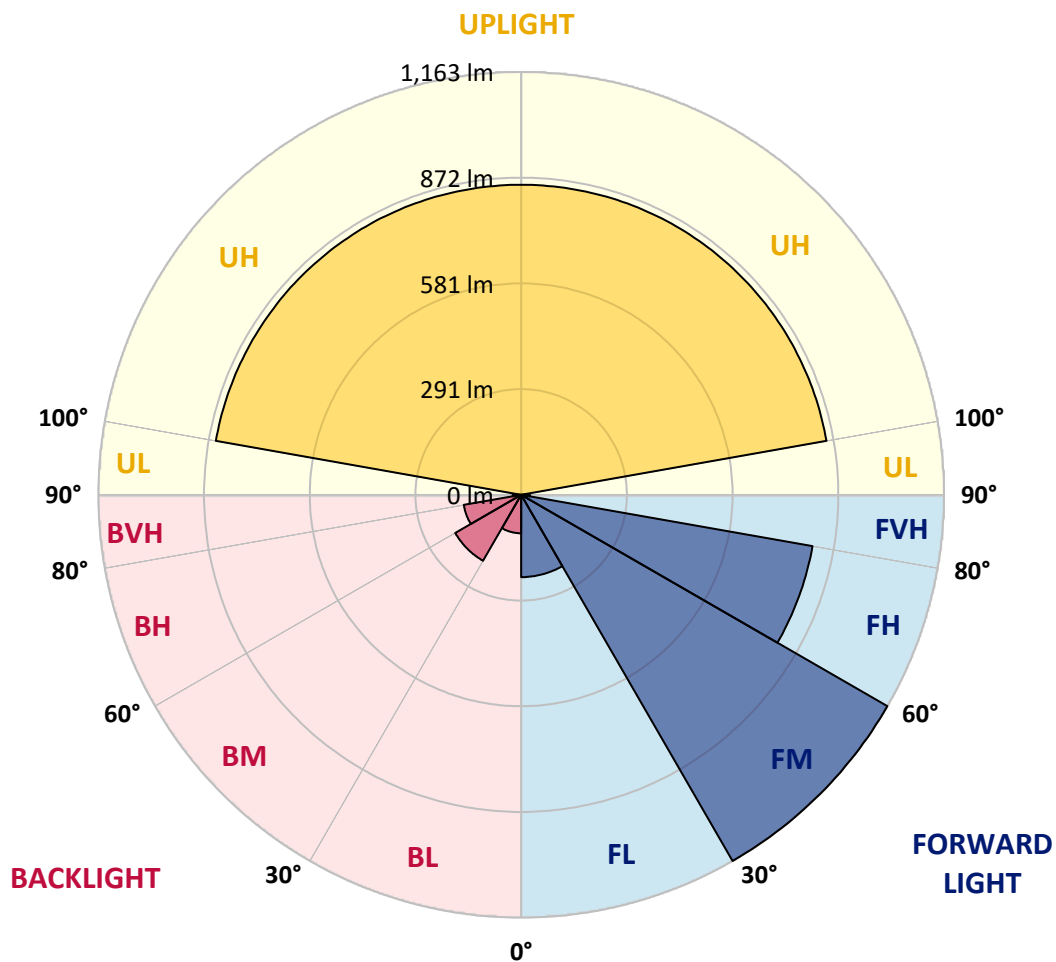
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	226.3	5.1			
FM (30°-60°)	1162.6	26.2			
FH (60°-80°)	813.4	18.4			G1/1800
FVH (80°-90°)	24.5	0.6			G1/100
BL (0°-30°)	105.8	2.4	B0/110		
BM (30°-60°)	209.4	4.7	B0/220		
BH (60°-80°)	160.2	3.6	B1/500		G1/500
BVH (80°-90°)	23.5	0.5			G1/100
UL (90°-100°)	10.5	0.2		U2/50	
UH (100°-180°)	852.4	19.2		U4/1000	

BUG Rating: B1-U5-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2
2.5°	406.0	406.0	404.9	404.1	402.9	399.7	395.0	394.2	393.7	393.0	392.2
5°	435.8	432.5	433.3	431.4	427.1	421.5	412.8	408.4	406.0	405.7	404.1
7.5°	459.8	460.3	459.0	455.1	449.2	442.4	430.6	423.9	421.8	420.7	417.9
10°	477.3	476.1	475.3	474.6	469.7	464.2	449.2	440.9	439.3	436.1	432.9
12.5°	489.9	489.9	489.9	489.1	486.4	482.0	470.2	461.9	459.8	455.5	452.7
15°	503.8	502.2	500.6	499.5	499.9	499.9	491.1	484.8	481.6	479.2	473.8
17.5°	533.4	529.9	526.4	521.6	514.1	512.1	511.8	511.3	506.9	506.6	501.1
20°	558.8	555.6	552.5	547.8	537.1	525.6	531.4	537.1	536.3	536.6	534.0
22.5°	590.1	587.7	581.3	575.8	562.0	548.1	549.0	560.8	562.4	564.0	564.8
25°	632.9	631.7	621.4	610.7	594.9	581.7	569.4	584.2	587.3	590.8	598.0
27.5°	676.0	673.2	662.1	652.6	632.9	618.9	602.0	609.9	614.6	621.4	632.5
30°	731.8	724.2	720.4	698.9	680.7	660.5	645.9	648.3	647.5	655.3	672.4
32.5°	812.4	800.6	780.9	759.4	738.0	711.2	698.9	698.5	696.5	705.7	715.1
35°	856.1	853.3	841.0	819.6	796.3	770.9	763.0	755.6	756.7	761.4	765.0
37.5°	903.2	900.7	891.3	879.4	861.6	875.4	831.5	820.4	815.2	812.9	814.0
40°	923.6	925.6	930.8	932.8	922.5	989.0	902.3	866.0	864.3	860.8	857.3
42.5°	928.1	933.2	943.5	966.0	976.0	1120.7	960.8	917.0	910.6	907.8	908.3
45°	943.8	951.8	953.8	974.3	1021.0	1127.6	1027.0	962.1	957.3	957.0	954.6
47.5°	982.3	993.0	993.0	1002.1	1046.3	1140.6	1049.6	1007.2	1004.0	1002.5	1008.8
50°	987.9	1002.1	1030.5	1059.8	1091.9	1151.3	1075.3	1056.2	1057.5	1061.1	1079.7
52.5°	894.0	908.3	983.5	1069.7	1174.3	1180.6	1114.1	1121.5	1129.5	1147.0	1180.9
55°	766.6	776.9	866.0	1004.0	1177.4	1291.8	1211.5	1232.4	1249.0	1254.1	1307.7
57.5°	603.5	617.8	708.4	887.6	1099.4	1323.5	1435.4	1444.9	1426.3	1443.4	1462.7
60°	326.9	325.4	451.6	641.9	935.6	1264.8	1651.5	1814.6	1818.5	1844.6	1813.4
62.5°	182.9	182.9	219.3	329.7	602.0	1070.2	1755.2	2134.4	2183.8	2225.3	2316.8
65°	138.1	139.2	152.4	198.6	338.0	675.5	1679.2	2243.6	2338.6	2433.9	2594.2
67.5°	114.7	114.7	124.2	148.0	211.3	306.7	1236.3	2024.3	2143.1	2257.0	2478.6
69°	106.4	106.9	113.9	130.3	176.9	199.4	854.1	1716.4	1852.1	2010.0	2271.3
70°	102.5	101.3	108.1	121.5	160.3	157.6	625.7	1492.4	1597.6	1739.4	2039.7
72.5°	91.0	89.8	93.4	103.7	126.2	112.4	255.3	802.9	961.6	1120.4	1359.9
75°	81.2	79.9	82.7	87.5	98.2	85.9	128.2	336.3	407.2	526.4	726.2
77.5°	71.7	69.3	71.7	74.8	77.2	64.0	87.0	155.6	190.8	234.3	330.8
80°	64.9	62.5	65.3	63.7	60.5	49.5	57.9	90.5	100.5	120.4	157.6
82.5°	46.4	45.9	62.2	64.0	48.3	36.0	41.1	58.2	64.9	68.5	83.1
85°	28.5	27.3	36.0	45.9	49.0	22.5	26.5	34.5	36.0	39.2	46.4
87.5°	14.6	15.0	19.4	23.7	32.1	13.5	15.8	20.2	20.2	20.2	23.0
90°	8.4	9.3	12.8	16.2	14.6	10.4	12.8	12.6	13.6	12.9	14.1
92.5°	4.0	4.0	4.9	5.9	5.9	5.9	6.8	6.8	6.8	6.8	6.8
95°	4.9	4.9	5.9	6.8	6.8	6.8	6.8	7.4	7.5	7.5	7.7
97.5°	6.8	6.8	7.8	7.8	8.8	8.8	11.8	10.8	10.6	10.4	10.0
100°	7.8	7.8	8.8	9.8	11.8	20.6	28.5	26.9	26.7	26.4	25.8
102.5°	10.8	10.8	12.8	17.7	26.5	39.3	49.0	47.6	47.3	47.0	46.4
105°	20.6	21.6	26.5	35.3	47.1	61.8	70.7	69.7	69.5	69.3	68.9
107.5°	40.2	41.2	48.1	57.0	71.7	86.3	93.2	92.7	92.6	92.5	92.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
110°	64.8	66.7	72.7	85.4	100.1	111.9	117.8	118.3	118.4	118.5	118.7
112.5°	97.2	97.2	104.0	118.8	131.5	140.3	145.3	146.2	146.4	146.6	147.1
115°	137.4	136.5	144.3	156.0	164.9	170.8	175.7	177.1	177.4	177.8	178.3
117.5°	180.6	180.6	185.5	193.3	198.3	201.2	207.1	209.0	209.5	209.8	210.7
120°	220.8	218.8	221.8	228.7	232.6	238.5	241.5	243.4	243.8	244.2	245.0
122.5°	258.2	255.2	256.2	262.0	266.0	271.8	273.8	275.8	276.2	276.6	277.4
125°	292.5	288.5	290.5	293.5	299.3	304.3	307.2	308.2	308.4	308.6	308.9
127.5°	323.9	322.9	322.9	326.8	332.7	333.7	338.6	339.1	339.2	339.3	339.5
130°	356.3	354.3	355.3	359.2	363.2	365.1	370.0	372.0	372.3	372.8	373.5
132.5°	388.7	386.7	385.7	393.5	396.5	397.5	403.4	405.9	406.3	406.8	407.8
135°	421.0	418.1	418.1	424.0	427.0	428.9	434.8	437.3	437.7	438.2	439.2
137.5°	451.5	448.5	450.5	451.5	455.4	459.3	464.2	465.2	465.4	465.6	466.0
140°	479.0	476.0	478.0	480.0	481.9	487.8	490.7	491.7	491.9	492.1	492.5
142.5°	508.4	505.5	507.5	508.4	511.3	515.3	517.2	520.2	520.7	521.4	522.5
145°	539.8	535.9	534.0	536.8	539.8	540.8	545.7	548.7	549.2	549.9	551.0
147.5°	564.3	561.4	560.5	563.3	563.3	564.3	569.3	571.7	572.2	572.7	573.7
150°	584.0	581.0	582.0	582.0	582.0	582.0	586.0	587.4	587.7	588.0	588.6
152.5°	599.7	596.7	596.7	597.7	598.7	598.7	599.7	601.1	601.4	601.8	602.3
155°	617.3	613.5	613.5	615.4	618.3	616.3	614.4	616.9	617.3	617.9	618.8
157.5°	634.0	631.1	631.1	632.0	634.0	633.0	632.0	634.0	634.5	634.8	635.6
160°	650.7	647.8	646.8	643.8	642.8	642.8	645.8	648.8	649.4	649.9	651.1
162.5°	660.5	656.6	656.6	652.7	648.8	650.7	654.7	656.6	657.0	657.4	658.2
165°	668.4	665.5	663.5	663.5	660.5	660.5	659.5	662.1	662.5	662.9	663.9
167.5°	677.2	674.3	671.3	673.3	675.3	672.3	665.5	668.4	669.0	669.6	670.8
170°	685.0	682.2	679.2	679.2	680.2	678.2	673.3	674.8	675.1	675.3	676.0
172.5°	686.0	684.1	682.2	680.2	677.2	677.2	676.2	677.7	678.0	678.3	678.8
175°	687.0	685.0	684.1	682.2	678.2	677.2	677.2	679.7	680.2	680.6	681.6
177.5°	693.9	692.0	687.0	686.0	684.1	682.2	681.2	683.6	684.1	684.6	685.6
180°	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0



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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2
2.5°	392.6	391.4	389.9	390.2	389.4	388.2	388.7	388.2	388.7	387.9	387.1
5°	404.1	403.2	400.9	400.6	399.7	398.9	397.7	396.5	396.2	395.3	393.7
7.5°	417.2	414.7	413.6	412.1	410.0	406.8	406.4	404.9	403.7	402.9	400.9
10°	430.6	427.9	426.2	424.3	422.2	420.2	418.3	415.6	412.8	412.1	409.5
12.5°	450.8	447.2	444.0	440.9	438.9	435.3	432.5	429.0	426.2	425.1	421.0
15°	473.0	468.2	465.1	462.6	459.4	456.2	452.7	449.6	445.2	441.7	438.1
17.5°	499.1	494.7	492.3	488.0	484.0	480.4	477.7	473.8	470.2	463.9	460.7
20°	533.4	529.9	527.1	522.5	518.1	514.5	512.1	503.8	499.1	493.5	488.4
22.5°	565.6	565.9	563.1	560.0	557.2	552.5	548.5	542.6	536.6	529.9	522.8
25°	600.3	603.5	603.9	603.1	601.5	596.0	594.0	588.1	583.4	572.3	569.1
27.5°	639.1	642.6	647.0	652.6	653.8	647.9	650.6	644.7	636.4	631.7	621.4
30°	676.7	686.7	695.7	702.0	706.1	708.9	706.9	704.8	699.3	691.3	682.4
32.5°	725.0	735.4	744.4	758.3	765.4	774.1	772.5	773.4	771.4	763.4	752.7
35°	773.7	782.9	794.7	803.8	821.2	830.8	838.6	838.2	838.2	833.4	823.2
37.5°	816.9	821.9	831.9	846.9	858.4	873.4	886.1	891.3	899.6	899.9	888.9
40°	861.9	867.1	874.6	885.7	898.3	916.2	933.2	949.8	957.8	966.0	961.6
42.5°	910.6	916.2	921.8	928.8	947.0	960.8	983.8	1006.4	1022.6	1039.7	1037.7
45°	958.9	965.3	973.1	983.8	1000.2	1022.6	1044.8	1070.2	1107.3	1127.6	1141.4
47.5°	1013.6	1023.8	1038.5	1055.5	1068.5	1091.9	1120.0	1159.3	1196.8	1231.6	1253.3
50°	1095.8	1099.9	1123.6	1140.2	1165.1	1188.9	1216.9	1251.4	1300.0	1335.7	1370.5
52.5°	1192.8	1207.8	1231.6	1250.6	1270.5	1294.2	1323.0	1353.8	1402.2	1442.2	1487.2
55°	1317.8	1339.2	1359.9	1370.2	1397.9	1419.2	1442.6	1473.0	1524.9	1568.4	1621.4
57.5°	1467.1	1488.4	1498.4	1513.4	1525.2	1548.9	1580.7	1601.3	1647.1	1692.2	1748.6
60°	1773.4	1760.0	1771.7	1748.6	1744.9	1746.8	1753.6	1769.4	1795.2	1837.1	1896.5
62.5°	2326.3	2306.8	2255.5	2236.8	2200.8	2152.1	2106.3	2099.9	2086.4	2118.1	2155.3
65°	2649.2	2719.7	2727.2	2746.9	2732.7	2694.7	2640.8	2623.5	2579.9	2549.5	2547.5
67.5°	2571.7	2677.3	2743.4	2827.0	2873.2	2918.3	2930.2	2945.6	2917.5	2903.7	2907.6
69°	2356.0	2434.2	2582.4	2639.3	2712.5	2772.7	2851.8	2865.8	2893.0	2896.9	2949.7
70°	2142.3	2257.4	2342.2	2427.6	2528.9	2595.0	2630.6	2689.2	2756.9	2790.1	2847.1
72.5°	1540.3	1578.0	1638.1	1748.9	1776.9	1845.4	1915.5	1965.3	2044.9	2101.0	2235.3
75°	831.1	853.7	948.3	1011.1	1027.8	1050.4	1101.8	1114.1	1143.7	1162.0	1291.0
77.5°	379.5	414.0	426.2	460.7	441.2	450.8	463.1	460.3	468.6	508.1	553.3
80°	174.9	181.6	186.4	200.6	201.4	198.3	199.4	197.4	195.9	202.2	207.0
82.5°	85.1	95.4	95.4	104.0	108.4	107.3	109.6	108.9	110.4	108.9	113.9
85°	49.9	49.9	53.8	58.6	57.9	59.4	59.4	62.5	62.9	63.7	63.7
87.5°	23.4	25.7	26.9	28.8	29.6	30.9	31.7	31.7	32.1	31.4	32.1
90°	14.7	14.7	18.8	18.8	19.5	20.8	19.1	19.9	22.6	19.1	21.9
92.5°	6.8	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9
95°	7.8	7.7	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.0	6.8
97.5°	9.8	9.7	9.6	9.5	9.4	9.3	9.3	9.2	9.1	8.9	8.8
100°	25.5	25.2	25.0	24.6	24.3	24.1	23.7	23.4	23.2	22.9	22.5
102.5°	46.2	45.6	45.2	44.6	44.2	43.7	43.2	42.7	42.2	41.7	41.2
105°	68.7	68.2	67.7	67.2	66.7	66.3	65.8	65.3	64.8	64.3	63.8
107.5°	92.3	91.9	91.4	91.1	90.7	90.3	89.9	89.5	89.1	88.8	88.3



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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
110°	118.8	118.6	118.4	118.1	117.9	117.8	117.6	117.4	117.2	117.0	116.8
112.5°	147.2	147.1	147.1	147.0	146.9	146.7	146.6	146.5	146.4	146.3	146.2
115°	178.7	178.3	178.0	177.8	177.4	177.1	176.9	176.6	176.2	176.0	175.7
117.5°	211.0	210.6	210.0	209.6	209.0	208.6	208.0	207.6	207.1	206.6	206.1
120°	245.3	244.9	244.4	243.9	243.4	242.9	242.5	241.9	241.5	240.9	240.5
122.5°	277.8	277.3	276.8	276.3	275.8	275.3	274.8	274.3	273.8	273.4	272.8
125°	309.2	308.7	308.2	307.7	307.2	306.7	306.2	305.7	305.2	304.7	304.3
127.5°	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6
130°	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0
132.5°	408.3	408.1	407.9	407.7	407.5	407.3	407.1	406.9	406.8	406.6	406.3
135°	439.7	439.6	439.5	439.5	439.3	439.2	439.1	439.0	438.9	438.8	438.7
137.5°	466.2	466.3	466.4	466.5	466.6	466.7	466.8	466.8	467.0	467.1	467.2
140°	492.7	492.9	493.1	493.3	493.5	493.7	493.9	494.1	494.2	494.4	494.7
142.5°	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2	523.2
145°	551.6	551.5	551.4	551.3	551.2	551.1	551.0	550.9	550.8	550.8	550.6
147.5°	574.2	574.3	574.4	574.5	574.6	574.6	574.7	574.8	574.9	575.1	575.2
150°	588.9	589.2	589.5	589.7	590.1	590.4	590.6	590.9	591.3	591.5	591.8
152.5°	602.7	603.0	603.4	603.8	604.2	604.6	605.0	605.4	605.7	606.2	606.5
155°	619.3	619.8	620.3	620.8	621.3	621.8	622.3	622.7	623.2	623.7	624.2
157.5°	636.0	636.2	636.4	636.6	636.8	637.0	637.2	637.3	637.5	637.8	638.0
160°	651.7	651.5	651.1	650.8	650.6	650.2	649.9	649.7	649.4	649.0	648.8
162.5°	658.5	658.5	658.4	658.3	658.2	658.1	658.0	657.9	657.8	657.6	657.6
165°	664.5	664.7	665.0	665.4	665.6	665.9	666.3	666.5	666.8	667.1	667.4
167.5°	671.3	671.8	672.1	672.5	672.9	673.3	673.7	674.1	674.4	674.9	675.3
170°	676.2	676.7	677.2	677.7	678.2	678.7	679.2	679.7	680.2	680.6	681.2
172.5°	679.2	679.4	679.6	679.7	679.9	680.2	680.4	680.6	680.7	680.9	681.2
175°	682.2	682.3	682.4	682.4	682.5	682.6	682.7	682.8	682.9	683.0	683.1
177.5°	686.0	686.2	686.5	686.7	686.8	687.0	687.2	687.5	687.7	687.8	688.0
180°	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0



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CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2
2.5°	386.2	387.1	386.7	385.0	384.7	384.7	383.8	383.5	382.7	382.3	383.0
5°	393.4	393.4	392.2	390.7	389.1	388.7	388.2	386.2	385.5	384.7	383.8
7.5°	400.1	399.4	397.7	395.0	393.4	393.0	391.4	389.4	387.5	385.8	385.0
10°	407.2	406.4	403.2	401.4	398.1	397.7	395.0	392.6	390.7	388.7	387.1
12.5°	417.5	416.7	413.2	408.4	406.0	404.5	400.9	398.1	395.3	393.0	390.2
15°	433.3	430.2	427.9	423.0	419.5	416.4	412.1	408.0	404.1	400.1	397.7
17.5°	455.5	451.2	444.8	442.1	437.4	432.2	426.2	423.6	418.3	413.6	408.8
20°	484.4	480.1	470.2	466.6	459.8	452.4	447.5	441.7	437.4	429.7	424.7
22.5°	516.4	512.6	503.1	493.5	487.2	481.2	473.8	466.2	457.9	450.8	445.2
25°	558.0	552.1	543.7	534.3	524.8	516.4	506.1	495.4	488.4	478.4	470.5
27.5°	614.6	604.3	590.5	580.1	572.7	560.0	547.3	537.8	526.8	513.7	504.9
30°	676.0	664.5	654.1	642.3	629.6	617.3	600.0	586.1	574.3	560.5	546.2
32.5°	744.1	734.2	719.5	704.0	690.2	674.8	662.1	647.5	626.8	612.3	597.2
35°	812.4	801.0	785.9	772.9	757.1	741.2	727.0	707.7	689.0	668.0	647.0
37.5°	878.6	868.8	852.0	832.3	818.4	801.4	786.7	766.2	744.1	720.7	704.8
40°	952.2	936.3	924.9	902.0	887.6	868.8	847.7	831.9	810.5	785.2	762.6
42.5°	1036.6	1025.4	1013.2	994.5	979.5	957.0	930.5	910.3	890.5	860.4	829.1
45°	1143.4	1136.3	1116.1	1101.1	1080.8	1057.0	1034.1	1009.5	978.3	943.5	915.0
47.5°	1271.6	1266.0	1247.8	1226.5	1200.0	1167.9	1146.5	1112.9	1086.4	1042.8	1008.8
50°	1387.9	1390.7	1380.9	1348.0	1324.2	1292.1	1258.5	1229.2	1188.5	1143.4	1099.9
52.5°	1526.8	1524.1	1499.1	1480.9	1452.8	1414.0	1377.2	1339.6	1295.0	1248.3	1193.9
55°	1659.8	1668.2	1650.7	1624.9	1591.0	1536.7	1499.5	1450.9	1403.7	1352.3	1289.8
57.5°	1788.9	1815.4	1801.9	1771.4	1736.6	1697.3	1648.3	1593.8	1545.1	1477.7	1407.4
60°	1949.5	1984.7	1990.3	1970.5	1932.5	1887.0	1822.5	1779.7	1712.9	1650.7	1596.5
62.5°	2196.9	2276.8	2272.0	2281.5	2254.7	2226.6	2150.9	2105.1	2018.0	1973.3	1897.7
65°	2610.0	2669.0	2739.8	2737.5	2718.9	2651.5	2573.3	2496.5	2439.1	2350.9	2272.0
67.5°	2956.7	3005.4	3047.3	3025.6	2982.8	2907.3	2815.5	2708.6	2621.2	2523.8	2420.4
69°	2989.2	3048.6	3073.1	3046.2	2969.3	2870.8	2781.1	2681.7	2561.3	2477.9	2352.0
70°	2902.2	2960.6	3010.1	2940.9	2870.4	2774.2	2676.1	2572.8	2465.2	2375.4	2248.3
72.5°	2305.3	2371.3	2364.7	2357.2	2301.0	2204.8	2114.5	2059.2	1983.5	1875.1	1783.2
75°	1340.5	1370.9	1317.5	1373.7	1306.5	1209.5	1222.1	1159.6	1104.2	1041.7	993.3
77.5°	526.4	553.3	525.1	516.1	486.1	479.2	429.0	434.9	410.0	360.8	338.4
80°	199.4	203.1	198.3	188.4	186.4	174.9	171.8	160.7	155.6	139.2	133.4
82.5°	107.3	109.2	106.1	102.9	100.5	93.9	89.4	81.2	76.4	71.2	70.9
85°	61.7	60.2	58.6	57.0	53.4	49.5	46.4	43.2	39.5	36.8	34.0
87.5°	32.5	32.9	33.2	31.7	29.3	26.1	24.2	23.0	20.2	19.0	17.8
90°	19.3	16.3	17.3	19.5	18.5	16.3	15.8	14.5	12.9	12.8	11.6
92.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
95°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
97.5°	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	7.9	7.8	7.8
100°	22.2	21.8	21.4	21.0	20.6	20.2	19.9	19.4	19.0	18.7	18.7
102.5°	41.0	40.6	40.3	40.1	39.7	39.4	39.2	38.9	38.5	38.3	38.1
105°	63.4	63.0	62.6	62.3	61.8	61.4	61.1	60.6	60.3	59.8	59.8
107.5°	88.0	87.8	87.5	87.1	86.9	86.6	86.2	86.0	85.7	85.4	85.2



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°	
110°	116.5	116.2	115.9	115.6	115.3	115.1	114.7	114.4	114.2	113.8	114.1	0°
112.5°	146.1	145.9	145.6	145.4	145.3	145.1	144.9	144.6	144.4	144.3	144.3	2.5°
115°	175.5	175.3	175.1	174.9	174.7	174.5	174.3	174.1	173.9	173.7	173.9	5°
117.5°	205.9	205.7	205.5	205.4	205.2	204.9	204.7	204.5	204.4	204.2	204.4	7.5°
120°	240.3	240.0	239.8	239.7	239.5	239.3	239.1	238.9	238.7	238.5	238.5	10°
122.5°	272.6	272.5	272.3	272.1	271.8	271.6	271.5	271.3	271.1	270.9	271.1	12.5°
125°	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	304.3	15°
127.5°	339.5	339.4	339.3	339.2	339.1	339.0	338.9	338.8	338.8	338.6	339.0	17.5°
130°	373.8	373.5	373.3	373.2	373.0	372.8	372.5	372.3	372.2	372.0	372.2	20°
132.5°	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.3	406.6	22.5°
135°	439.0	439.3	439.6	439.9	440.2	440.5	440.8	441.1	441.3	441.7	441.9	25°
137.5°	467.7	468.2	468.6	469.2	469.6	470.2	470.6	471.1	471.6	472.1	472.3	27.5°
140°	495.1	495.7	496.1	496.7	497.1	497.6	498.1	498.6	499.1	499.5	500.0	30°
142.5°	523.3	523.4	523.4	523.5	523.6	523.7	523.8	523.9	524.0	524.1	524.5	32.5°
145°	550.3	550.0	549.8	549.4	549.1	548.9	548.5	548.2	548.0	547.7	548.1	35°
147.5°	574.8	574.6	574.3	573.9	573.7	573.4	573.1	572.8	572.5	572.2	572.6	37.5°
150°	592.2	592.4	592.7	593.0	593.3	593.6	593.9	594.2	594.5	594.8	595.6	40°
152.5°	607.1	607.5	608.1	608.5	609.1	609.5	609.9	610.5	610.9	611.5	612.5	42.5°
155°	624.4	624.6	624.8	625.0	625.2	625.4	625.6	625.8	626.0	626.2	626.7	45°
157.5°	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	639.0	47.5°
160°	648.7	648.6	648.5	648.4	648.3	648.1	648.0	647.9	647.9	647.8	648.9	50°
162.5°	657.4	657.2	657.0	656.8	656.6	656.4	656.2	656.0	655.9	655.7	656.8	52.5°
165°	667.2	667.0	666.8	666.6	666.5	666.3	666.0	665.8	665.6	665.5	666.3	55°
167.5°	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	675.3	676.4	57.5°
170°	681.4	681.5	681.7	681.9	682.2	682.4	682.5	682.7	682.9	683.1	684.1	60°
172.5°	681.4	681.5	681.7	681.9	682.2	682.4	682.5	682.7	682.9	683.1	684.1	62.5°
175°	682.9	682.7	682.5	682.4	682.2	681.9	681.7	681.5	681.4	681.2	682.2	65°
177.5°	687.7	687.5	687.1	686.8	686.6	686.2	685.9	685.7	685.4	685.0	685.9	67.5°
180°	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	69°
												70°
												72.5°
												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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REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°	110°	87°
379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	379.2	110°	114.3
381.9	381.9	380.7	379.9	377.2	372.3	367.7	363.4	357.3	355.0	351.9	112.5°	144.3
383.0	382.3	381.2	379.5	374.0	362.9	351.5	339.2	326.5	315.0	301.7	115°	174.1
383.8	382.3	380.7	378.7	370.8	353.8	330.8	306.7	284.1	267.2	260.0	117.5°	204.5
384.3	383.0	381.2	378.4	367.2	342.0	305.2	270.3	250.4	243.8	242.6	120°	238.5
388.7	386.7	383.5	380.3	365.7	328.9	276.3	243.0	235.1	238.2	243.8	122.5°	271.3
394.2	391.8	387.9	384.7	364.9	311.8	248.1	227.6	230.3	238.9	248.1	125°	304.3
404.1	400.1	395.7	392.6	366.5	290.9	225.6	219.6	228.0	238.9	251.3	127.5°	339.4
418.7	413.2	408.0	402.5	368.8	264.8	212.1	214.4	224.4	236.3	249.7	130°	372.3
436.9	430.6	423.6	415.2	371.6	242.3	204.6	208.9	218.1	228.3	239.5	132.5°	406.8
461.5	452.7	443.7	433.3	375.6	217.7	197.9	202.7	208.1	214.1	219.6	135°	442.1
492.3	480.4	470.5	456.7	379.5	201.0	192.3	193.9	195.1	195.9	195.5	137.5°	472.5
533.4	515.3	503.8	486.8	383.8	192.3	185.9	184.1	182.1	179.3	176.1	140°	500.4
577.0	562.0	543.7	522.1	386.7	186.4	180.1	173.7	168.3	165.4	165.4	142.5°	524.9
627.6	609.1	586.1	558.8	383.0	180.1	172.1	163.9	160.7	164.2	163.0	145°	548.4
678.3	652.6	627.3	596.0	374.4	172.9	163.4	159.1	161.4	156.8	154.0	147.5°	573.0
734.2	705.7	670.5	634.0	361.7	165.4	159.1	161.4	153.1	147.6	149.9	150°	596.4
796.7	763.0	725.0	675.5	353.4	160.7	152.4	154.4	147.2	143.3	142.1	152.5°	613.5
881.8	833.9	787.5	729.3	359.7	153.1	139.2	147.2	143.3	139.7	136.5	155°	627.4
965.3	914.3	859.6	791.1	370.8	147.6	129.1	139.7	142.5	136.5	130.6	157.5°	640.0
1049.2	995.0	931.3	854.8	384.3	144.1	121.1	130.6	140.5	133.4	128.5	160°	650.1
1137.4	1068.9	1003.7	921.3	401.7	140.5	114.7	122.7	136.9	133.4	126.2	162.5°	658.0
1230.0	1149.3	1084.0	995.0	432.2	135.4	106.9	116.3	133.4	132.9	123.9	165°	667.0
1337.7	1265.6	1181.7	1091.1	474.6	129.4	99.7	111.6	130.3	131.4	121.1	167.5°	677.6
1520.9	1446.5	1345.2	1259.0	558.5	121.5	95.4	106.9	125.0	128.2	118.8	170°	685.0
1818.1	1716.8	1623.8	1543.1	702.0	110.4	92.3	101.7	119.6	124.2	116.8	172.5°	685.0
2158.9	2059.9	1947.5	1811.8	782.1	100.1	87.9	95.4	113.9	120.4	114.7	175°	683.1
2303.7	2174.3	2037.7	1876.6	705.7	91.8	83.1	89.4	107.7	114.7	112.0	177.5°	686.7
2237.2	2106.3	1947.5	1789.6	613.8	87.5	80.4	86.2	102.9	111.2	109.2	180°	687.0
2121.7	1989.8	1848.3	1658.6	548.1	85.1	78.3	84.4	100.9	109.2	107.7		
1678.0	1560.4	1429.9	1285.5	373.5	77.2	72.0	78.3	93.1	102.0	101.7		
889.3	854.8	758.3	673.5	193.6	68.9	65.3	71.7	85.9	95.4	95.4		
320.2	290.5	277.8	230.8	102.9	60.2	58.6	63.3	78.0	87.0	86.7		
121.1	117.9	105.7	98.9	65.3	49.0	49.5	54.2	68.5	77.2	76.7		
68.5	62.2	60.2	58.2	41.5	38.8	40.7	45.5	58.6	66.0	67.2		
32.9	30.5	29.6	27.7	27.3	29.6	32.1	36.0	46.7	55.9	54.5		
15.8	15.0	14.6	14.2	19.4	19.0	23.4	25.0	31.4	44.4	40.0		
11.9	11.9	11.6	10.8	12.4	15.2	16.3	17.6	19.9	33.6	28.8		
5.9	5.9	5.9	5.9	5.9	5.9	6.8	6.8	5.9	5.9	5.9		
6.8	6.8	6.8	6.8	6.8	6.8	7.8	6.8	6.8	6.8	6.8		
7.8	7.8	7.8	7.8	7.8	8.8	9.8	11.8	8.8	8.8	7.8		
18.7	18.7	18.7	18.7	18.7	22.5	25.5	28.5	20.6	11.8	9.8		
37.9	37.7	37.5	37.3	38.3	41.2	46.2	49.0	39.3	26.5	17.7		
59.8	59.8	59.8	59.8	59.8	63.8	68.7	70.7	61.8	47.1	35.3		
85.0	84.8	84.6	84.4	85.4	88.3	92.3	93.2	86.3	71.7	57.0		

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 ISW-AF-450-LED-E1-T2-7027-ULG

REPORT NUMBER: P271837
 CATALOG NUMBER: ISW-AF-4!

TION (continued):

CANDELA DISTRIBUTION (con

88°	89°	90°	95°	105°	115°	125°	135°	145°	155°		165°	175°
114.4	114.6	114.8	113.8	116.8	118.8	117.8	111.9	100.1	85.4	0°	379.2	379.2
144.3	144.3	144.3	144.3	146.2	147.2	145.3	140.3	131.5	118.8	2.5°	349.0	343.5
174.3	174.5	174.7	173.7	175.7	178.7	175.7	170.8	164.9	156.0	5°	291.7	290.9
204.7	204.9	205.2	204.2	206.1	211.0	207.1	201.2	198.3	193.3	7.5°	255.7	250.4
238.5	238.5	238.5	238.5	240.5	245.3	241.5	238.5	232.6	228.7	10°	243.8	243.4
271.5	271.6	271.8	270.9	272.8	277.8	273.8	271.8	266.0	262.0	12.5°	248.9	250.1
304.3	304.3	304.3	304.3	304.3	309.2	307.2	304.3	299.3	293.5	15°	255.7	258.0
339.8	340.2	340.5	338.6	339.6	339.6	338.6	333.7	332.7	326.8	17.5°	260.0	264.4
372.5	372.8	373.0	372.0	374.0	374.0	370.0	365.1	363.2	359.2	20°	258.8	264.0
406.9	407.1	407.3	406.3	406.3	408.3	403.4	397.5	396.5	393.5	22.5°	245.8	248.1
442.2	442.4	442.7	441.7	438.7	439.7	434.8	428.9	427.0	424.0	25°	222.4	223.2
472.7	472.9	473.0	472.1	467.2	466.2	464.2	459.3	455.4	451.5	27.5°	194.3	193.6
500.7	501.2	501.5	499.5	494.7	492.7	490.7	487.8	481.9	480.0	30°	174.5	169.4
525.3	525.7	526.0	524.1	523.2	523.2	517.2	515.3	511.3	508.4	32.5°	165.4	162.2
548.9	549.2	549.7	547.7	550.6	551.6	545.7	540.8	539.8	536.8	35°	159.1	154.0
573.4	573.7	574.2	572.2	575.2	574.2	569.3	564.3	563.3	563.3	37.5°	165.0	164.6
597.1	597.9	598.7	594.8	591.8	588.9	586.0	582.0	582.0	582.0	40°	170.6	169.8
614.4	615.4	616.3	611.5	606.5	602.7	599.7	598.7	598.7	597.7	42.5°	161.1	154.0
627.9	628.5	629.2	626.2	624.2	619.3	614.4	616.3	618.3	615.4	45°	143.7	135.4
640.9	641.9	642.8	638.0	638.0	636.0	632.0	633.0	634.0	632.0	47.5°	131.8	127.0
651.3	652.5	653.7	647.8	648.8	651.7	645.8	642.8	642.8	643.8	50°	126.2	124.7
659.2	660.3	661.5	655.7	657.6	658.5	654.7	650.7	648.8	652.7	52.5°	124.7	128.5
667.8	668.6	669.3	665.5	667.4	664.5	659.5	660.5	660.5	663.5	55°	123.9	128.2
678.8	679.9	681.2	675.3	675.3	671.3	665.5	672.3	675.3	673.3	57.5°	118.4	125.9
686.0	687.0	688.0	683.1	681.2	676.2	673.3	678.2	680.2	679.2	60°	114.4	123.4
686.0	687.0	688.0	683.1	681.2	679.2	676.2	677.2	677.2	680.2	62.5°	112.0	122.3
684.1	685.0	686.0	681.2	683.1	682.2	677.2	677.2	678.2	682.2	65°	110.0	123.1
687.5	688.2	689.0	685.0	688.0	686.0	681.2	682.2	684.1	686.0	67.5°	106.9	125.4
687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	687.0	69°	105.3	125.0
										70°	103.7	123.9
										72.5°	98.2	114.4
										75°	91.4	100.9
										77.5°	82.7	86.7
										80°	73.2	75.5
										82.5°	63.7	72.9
										85°	49.9	61.7
										87.5°	36.8	34.0
										90°	27.8	20.3
										92.5°	4.9	4.0
										95°	5.9	4.9
										97.5°	7.8	6.8
										100°	8.8	7.8
										102.5°	12.8	10.8
										105°	26.5	21.6
										107.5°	48.1	41.2

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CATALOG NUMBER: ISW-AF-450-LED-E1-

50-LED-E1-T2-7027-ULG

tinued):

180°
379.2
344.7
288.5
250.9
244.6
249.3
258.8
266.0
265.2
250.1
223.9
196.7
173.4
165.8
156.3
166.6
171.4
155.6
135.4
126.2
123.9
129.9
127.8
126.2
123.9
121.9
121.5
122.3
120.7
118.8
106.9
96.2
86.7
76.4
64.5
48.3
36.8
18.0
4.0
4.9
6.8
7.8
10.8
20.6
40.2

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
110°	72.7	66.7	64.8
112.5°	104.0	97.2	97.2
115°	144.3	136.5	137.4
117.5°	185.5	180.6	180.6
120°	221.8	218.8	220.8
122.5°	256.2	255.2	258.2
125°	290.5	288.5	292.5
127.5°	322.9	322.9	323.9
130°	355.3	354.3	356.3
132.5°	385.7	386.7	388.7
135°	418.1	418.1	421.0
137.5°	450.5	448.5	451.5
140°	478.0	476.0	479.0
142.5°	507.5	505.5	508.4
145°	534.0	535.9	539.8
147.5°	560.5	561.4	564.3
150°	582.0	581.0	584.0
152.5°	596.7	596.7	599.7
155°	613.5	613.5	617.3
157.5°	631.1	631.1	634.0
160°	646.8	647.8	650.7
162.5°	656.6	656.6	660.5
165°	663.5	665.5	668.4
167.5°	671.3	674.3	677.2
170°	679.2	682.2	685.0
172.5°	682.2	684.1	686.0
175°	684.1	685.0	687.0
177.5°	687.0	692.0	693.9
180°	687.0	687.0	687.0

(END OF F

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

