

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: P226836

Luminaire Tested: **IST-AF-1200-LED-E1-SL2-8030-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226836
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35945)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: IST-AF-1200-LED-E1-SL2-8030-ULG
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II 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: 7169.4 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type II - 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

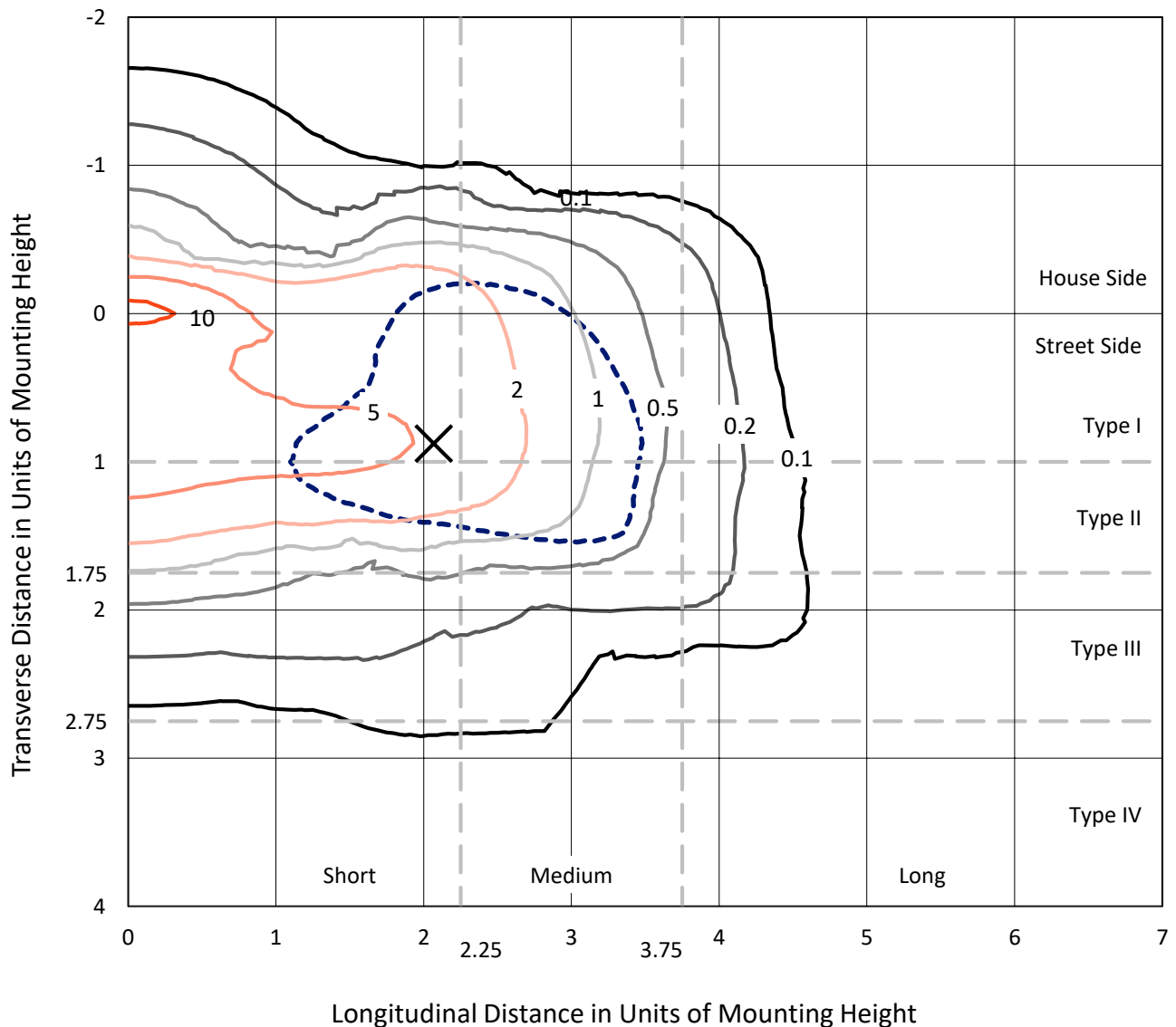


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

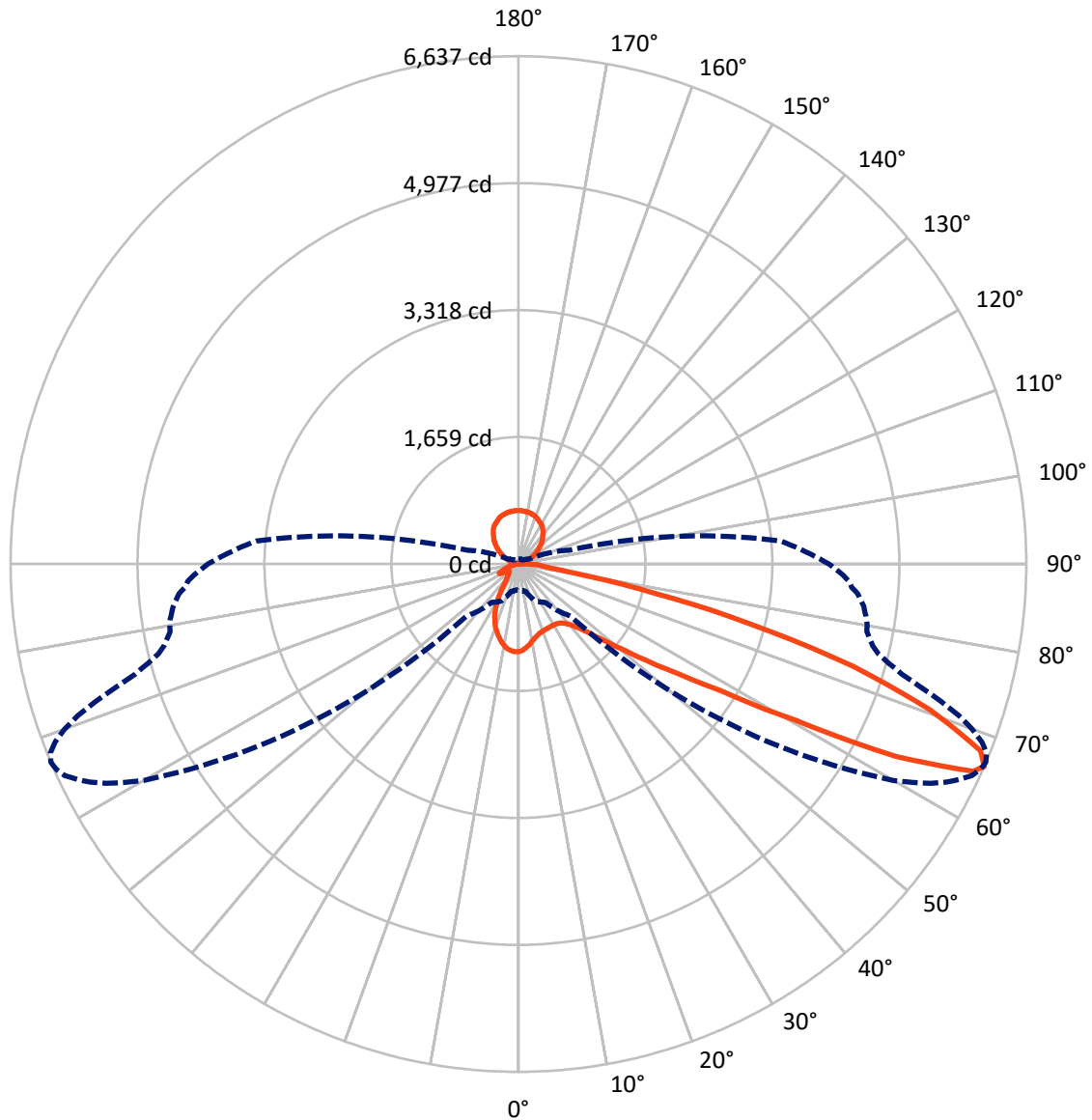


Based on 10 foot mounting height. Maximum calculated value = 11.4 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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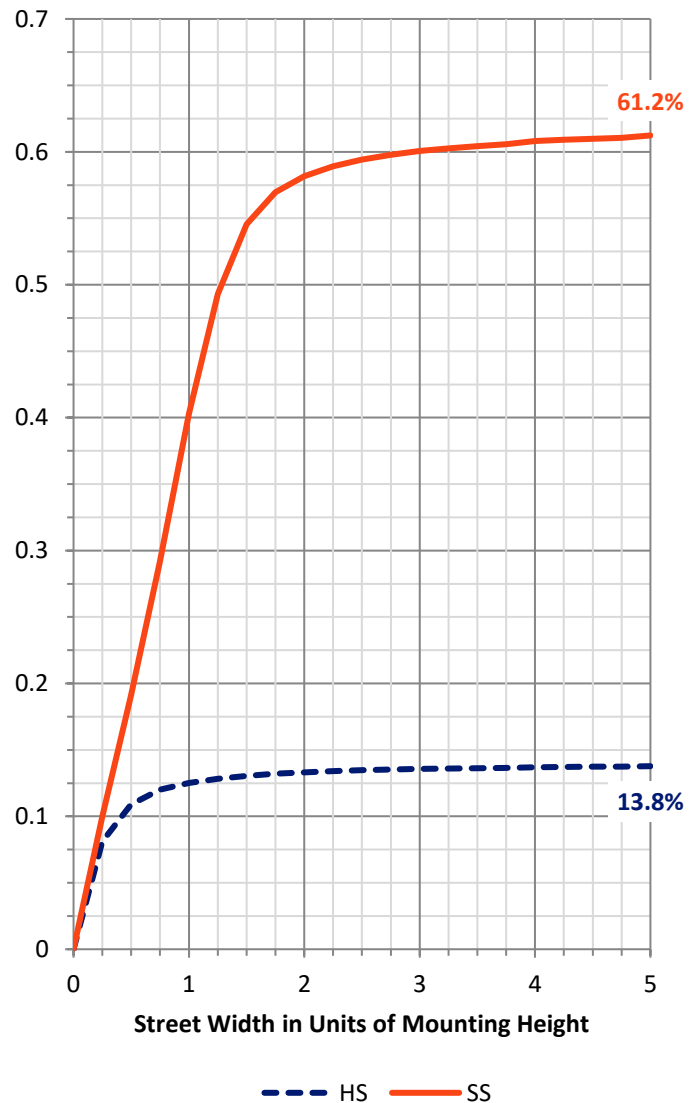
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1003.7	868.0	1871.7
	% Fixture	14.0	12.1	26.1
Street Side	Lumens	4428.6	869.1	5297.7
	% Fixture	61.8	12.1	73.9
Total	Lumens	5432.3	1737.1	7169.4
	% Fixture	75.8	24.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	1.4
10°-20°	236.1	3.3
20°-30°	323.7	4.5
30°-40°	462.4	6.4
40°-50°	749.8	10.5
50°-60°	1188.0	16.6
60°-70°	1505.4	21.0
70°-80°	748.3	10.4
80°-90°	119.5	1.7
90°-100°	11.2	0.2
100°-110°	57.4	0.8
110°-120°	166.1	2.3
120°-130°	273.2	3.8
130°-140°	336.8	4.7
140°-150°	344.6	4.8
150°-160°	290.3	4.0
160°-170°	191.2	2.7
170°-180°	66.3	0.9
0°-90°	5432.3	75.8
0°-180°	7169.4	100.0



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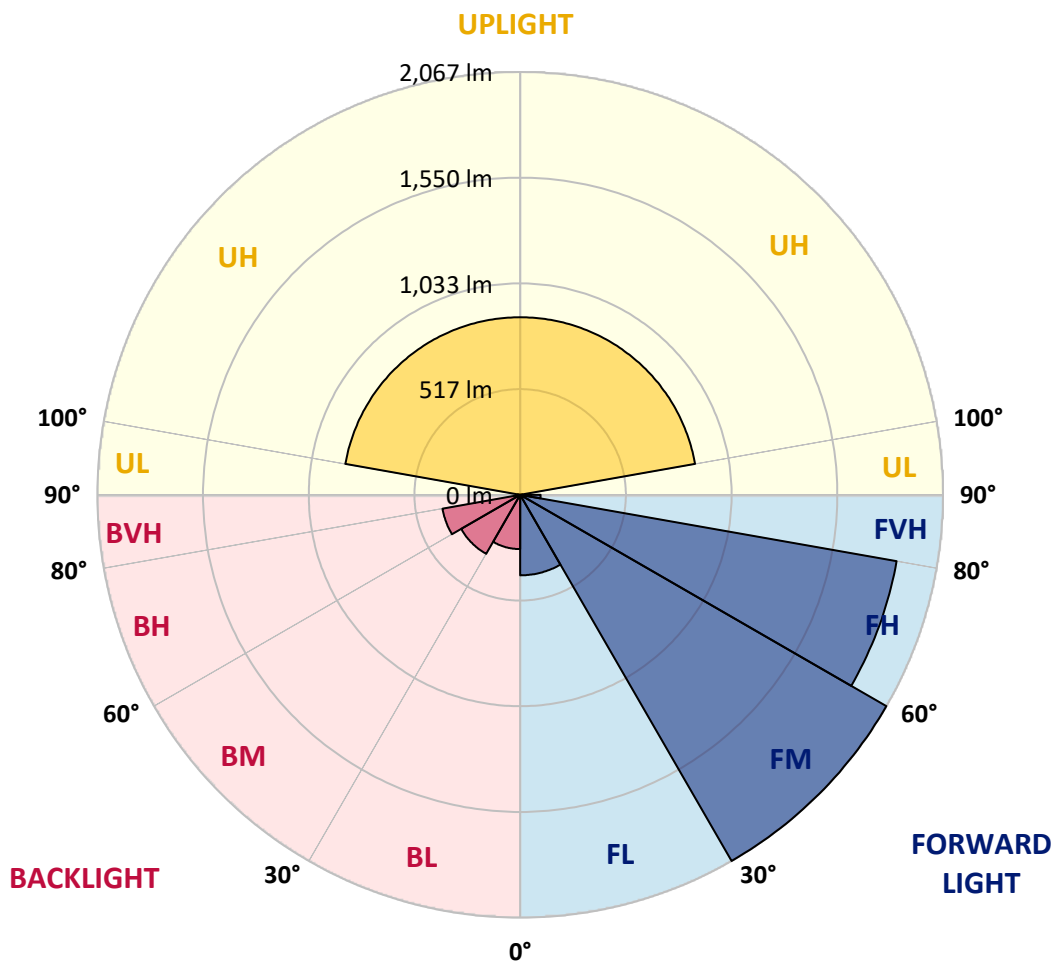
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	393.6	5.5			
FM	(30°-60°)	2066.9	28.8			
FH	(60°-80°)	1868.2	26.1			G2/5000
FVH	(80°-90°)	99.9	1.4			G1/100
BL	(0°-30°)	265.3	3.7	B1/500		
BM	(30°-60°)	333.3	4.6	B1/1000		
BH	(60°-80°)	385.5	5.4	B1/500		G1/500
BVH	(80°-90°)	19.6	0.3			G1/100
UL	(90°-100°)	11.2	0.2		U2/50	
UH	(100°-180°)	868.0	12.1		U4/1000	

BUG Rating: B1-U5-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	63°
0°	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6
2.5°	1062.8	1065.3	1079.1	1086.5	1097.1	1100.4	1112.6	1117.5	1121.6	1120.8	1120.8
5°	967.3	974.7	981.2	995.9	1011.4	1030.2	1053.8	1071.8	1075.1	1079.1	1081.6
7.5°	894.7	899.6	911.0	921.6	941.2	967.3	1000.8	1023.6	1028.5	1030.2	1035.9
10°	843.2	846.5	856.3	870.2	893.0	918.3	953.4	977.1	984.5	987.7	992.6
12.5°	803.2	808.1	817.1	831.8	856.3	882.4	919.2	942.8	947.7	951.8	959.2
15°	777.9	781.2	789.4	805.7	827.7	853.9	889.8	918.3	921.6	925.7	932.2
17.5°	773.0	775.5	780.4	792.6	809.8	835.1	871.8	895.5	901.2	906.9	913.4
20°	792.6	794.3	795.9	797.5	807.3	823.6	859.6	884.9	889.8	894.7	902.8
22.5°	835.1	837.5	833.4	827.7	820.4	823.6	853.9	880.0	883.2	888.1	894.7
25°	908.5	906.1	893.8	884.9	858.7	837.5	855.5	877.5	881.6	886.5	893.8
27.5°	995.1	991.8	984.5	960.0	916.7	873.4	865.3	881.6	884.1	888.1	894.7
30°	1088.1	1088.9	1082.4	1055.5	1000.0	927.3	887.3	891.4	893.0	896.3	900.4
32.5°	1172.2	1184.5	1183.6	1182.0	1102.8	1000.0	929.8	913.4	911.0	913.4	915.1
35°	1269.3	1271.8	1294.7	1306.1	1241.6	1106.1	991.8	955.9	946.1	946.9	945.3
37.5°	1373.8	1377.1	1416.3	1435.9	1386.1	1226.9	1074.3	1018.7	1009.8	1000.8	994.3
40°	1525.7	1538.7	1559.1	1581.2	1556.7	1389.3	1182.8	1107.7	1084.9	1083.2	1070.2
42.5°	1752.6	1748.5	1738.7	1756.7	1727.3	1571.4	1314.2	1233.4	1216.3	1193.4	1175.5
45°	1975.4	1984.4	1942.0	1950.1	1951.8	1782.0	1504.4	1391.0	1382.0	1355.1	1335.5
47.5°	2125.6	2115.9	2058.7	2100.3	2202.4	2027.7	1724.8	1605.7	1586.9	1573.0	1560.8
50°	2133.8	2125.6	2088.9	2162.4	2380.3	2464.4	2031.8	1893.0	1866.1	1841.6	1834.2
52.5°	1934.6	1923.2	1935.4	2084.8	2444.8	2830.1	2465.2	2249.7	2227.7	2207.3	2178.7
55°	1579.5	1592.6	1650.6	1865.2	2346.0	3089.7	3318.3	2800.7	2706.0	2705.2	2635.0
57.5°	1179.6	1166.5	1209.8	1411.4	2096.3	3181.9	4101.9	3973.8	3762.3	3619.5	3447.2
60°	795.9	799.2	839.2	942.8	1458.7	3081.5	4626.8	5073.3	4999.0	4968.8	4922.3
62.5°	551.8	556.7	593.5	690.6	853.0	2479.1	4780.3	5689.6	5822.7	5932.9	5905.9
65°	386.1	386.9	423.7	573.9	639.2	1273.4	4441.5	5771.2	5969.6	6159.0	6328.8
66°	340.4	341.2	371.4	533.9	613.0	960.8	4147.6	5657.8	5883.9	6104.3	6279.8
67.5°	291.4	296.3	320.0	453.9	587.7	741.2	3426.0	5319.0	5555.7	5798.2	6030.0
70°	200.0	201.6	222.9	368.2	550.2	650.6	1952.6	4152.5	4479.9	4906.0	5152.5
72.5°	142.9	141.2	143.7	227.7	564.9	646.5	1026.1	2733.0	3190.9	3564.8	3831.7
75°	127.3	123.3	112.6	141.2	412.2	706.1	687.3	1608.9	1957.5	2297.9	2571.3
77.5°	113.5	106.9	101.2	108.6	204.1	665.3	617.1	921.6	1099.6	1353.4	1564.0
80°	86.5	82.4	85.7	93.9	122.4	612.2	613.0	613.0	661.2	744.5	827.7
82.5°	57.1	52.2	59.6	77.5	92.2	461.2	633.4	541.2	532.2	529.0	534.7
85°	35.9	31.0	41.6	58.0	71.0	240.8	649.8	571.4	529.8	489.8	449.8
87.5°	13.1	14.7	21.2	33.5	46.5	104.5	569.8	503.7	475.1	425.3	378.8
90°	8.3	7.4	11.1	17.8	18.6	26.6	94.3	147.6	91.5	50.0	42.1
92.5°	4.0	4.0	5.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
95°	5.0	5.0	6.0	7.0	7.0	7.0	7.0	7.5	7.6	7.7	7.8
97.5°	7.0	7.0	8.0	8.0	9.0	9.0	12.0	11.0	10.8	10.6	10.4
100°	8.0	8.0	9.0	10.0	12.0	21.0	29.0	27.5	27.2	26.9	26.6
102.5°	11.0	11.0	13.0	18.0	27.0	40.0	50.0	48.5	48.2	47.9	47.6
105°	21.0	22.0	27.0	36.0	48.0	63.0	72.0	71.0	70.8	70.6	70.4
107.5°	41.0	42.0	49.0	58.0	73.0	88.0	95.0	94.5	94.4	94.3	94.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	63°
110°	66.0	68.0	74.0	87.0	102.0	114.0	120.0	120.5	120.6	120.7	120.8
112.5°	99.0	99.0	106.0	121.0	134.0	143.0	148.0	149.0	149.2	149.4	149.6
115°	140.0	139.0	147.0	159.0	168.0	174.0	179.0	180.5	180.8	181.1	181.4
117.5°	184.0	184.0	189.0	197.0	202.0	205.0	211.0	213.0	213.4	213.8	214.2
120°	225.0	223.0	226.0	233.0	237.0	243.0	246.0	248.0	248.4	248.8	249.2
122.5°	263.0	260.0	261.0	267.0	271.0	277.0	279.0	281.0	281.4	281.8	282.2
125°	298.0	294.0	296.0	299.0	305.0	310.0	313.0	314.0	314.2	314.4	314.6
127.5°	330.0	329.0	329.0	333.0	339.0	340.0	345.0	345.5	345.6	345.7	345.8
130°	363.0	361.0	362.0	366.0	370.0	372.0	377.0	379.0	379.4	379.8	380.2
132.5°	396.0	394.0	393.0	401.0	404.0	405.0	411.0	413.5	414.0	414.5	415.0
135°	429.0	426.0	426.0	432.0	435.0	437.0	443.0	445.5	446.0	446.5	447.0
137.5°	460.0	457.0	459.0	460.0	464.0	468.0	473.0	474.0	474.2	474.4	474.6
140°	488.0	485.0	487.0	489.0	491.0	497.0	500.0	501.0	501.2	501.4	501.6
142.5°	518.0	515.0	517.0	518.0	521.0	525.0	527.0	530.0	530.6	531.2	531.8
145°	550.0	546.0	544.0	547.0	550.0	551.0	556.0	559.0	559.6	560.2	560.8
147.5°	575.0	572.0	571.0	574.0	574.0	575.0	580.0	582.5	583.0	583.5	584.0
150°	595.0	592.0	593.0	593.0	593.0	593.0	597.0	598.5	598.8	599.1	599.4
152.5°	611.0	608.0	608.0	609.0	610.0	610.0	611.0	612.5	612.8	613.1	613.4
155°	629.0	625.0	625.0	627.0	630.0	628.0	626.0	628.5	629.0	629.5	630.0
157.5°	646.0	643.0	643.0	644.0	646.0	645.0	644.0	646.0	646.4	646.8	647.2
160°	663.0	660.0	659.0	656.0	655.0	655.0	658.0	661.0	661.6	662.2	662.8
162.5°	673.0	669.0	669.0	665.0	661.0	663.0	667.0	669.0	669.4	669.8	670.2
165°	681.0	678.0	676.0	676.0	673.0	673.0	672.0	674.5	675.0	675.5	676.0
167.5°	690.0	687.0	684.0	686.0	688.0	685.0	678.0	681.0	681.6	682.2	682.8
170°	698.0	695.0	692.0	692.0	693.0	691.0	686.0	687.5	687.8	688.1	688.4
172.5°	699.0	697.0	695.0	693.0	690.0	690.0	689.0	690.5	690.8	691.1	691.4
175°	700.0	698.0	697.0	695.0	691.0	690.0	690.0	692.5	693.0	693.5	694.0
177.5°	707.0	705.0	700.0	699.0	697.0	695.0	694.0	696.5	697.0	697.5	698.0
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0



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CANDELA DISTRIBUTION (continued):

	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°
0°	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6
2.5°	1121.6	1125.7	1127.3	1125.7	1126.5	1131.4	1129.8	1132.2	1132.2	1133.8	1133.8
5°	1084.9	1088.1	1094.7	1093.8	1100.4	1102.8	1105.3	1108.5	1112.6	1115.1	1120.0
7.5°	1041.6	1048.1	1053.8	1057.1	1061.2	1069.4	1071.8	1079.1	1085.7	1092.2	1097.1
10°	1000.0	1008.9	1015.5	1017.9	1026.9	1031.0	1040.0	1045.7	1053.8	1062.0	1069.4
12.5°	964.9	973.0	976.3	984.5	992.6	1000.8	1004.9	1015.5	1023.6	1034.3	1044.0
15°	938.7	946.9	953.4	959.2	967.3	975.5	982.0	992.6	1002.4	1013.0	1022.0
17.5°	922.4	927.3	935.5	940.4	950.2	960.0	967.3	979.6	990.2	999.2	1011.4
20°	910.2	915.9	923.2	930.6	939.6	951.8	958.3	971.4	982.8	993.4	1004.9
22.5°	903.6	909.4	916.7	924.1	933.8	943.6	954.3	965.7	977.9	989.4	1000.8
25°	901.2	906.1	912.6	920.0	930.6	941.2	950.2	963.2	973.8	986.1	1000.0
27.5°	902.0	905.3	912.6	919.2	929.8	939.6	948.5	961.6	973.8	985.3	999.2
30°	905.3	907.7	915.1	920.8	929.8	939.6	947.7	961.6	972.2	984.5	999.2
32.5°	916.7	920.0	923.2	927.3	935.5	942.8	952.6	964.9	974.7	986.9	999.2
35°	943.6	941.2	943.6	945.3	951.0	958.3	965.7	976.3	985.3	995.9	1008.9
37.5°	986.1	981.2	982.8	982.0	982.0	986.9	994.3	1001.6	1008.9	1019.6	1032.6
40°	1064.5	1052.2	1048.9	1040.0	1037.5	1041.6	1046.5	1047.3	1056.3	1070.2	1075.9
42.5°	1165.7	1149.4	1151.8	1137.1	1133.0	1128.1	1134.7	1130.6	1136.3	1145.3	1157.5
45°	1325.7	1310.2	1293.8	1270.2	1275.1	1257.1	1252.2	1253.8	1253.0	1256.3	1271.0
47.5°	1516.7	1496.3	1485.7	1476.7	1459.5	1448.9	1435.1	1414.6	1419.5	1426.1	1439.1
50°	1795.9	1789.3	1768.9	1739.5	1735.5	1719.9	1715.9	1697.9	1691.4	1690.6	1689.7
52.5°	2168.9	2126.5	2118.3	2090.5	2069.3	2054.6	2049.7	2024.4	1999.1	2013.8	2012.2
55°	2623.6	2588.5	2543.6	2519.1	2502.0	2466.9	2457.9	2426.0	2411.4	2403.2	2382.8
57.5°	3387.6	3264.4	3172.1	3126.4	3061.9	2996.6	2973.8	2908.5	2857.9	2822.0	2824.4
60°	4719.9	4500.3	4241.5	4125.6	3857.0	3817.8	3633.4	3588.5	3477.4	3404.0	3361.5
62.5°	5887.2	5827.6	5703.5	5534.5	5265.1	4954.9	4815.4	4537.8	4320.7	4226.0	4094.6
65°	6444.7	6528.8	6563.1	6531.2	6423.5	6234.1	6067.6	5796.6	5432.5	5226.8	4971.3
66°	6416.1	6541.0	6603.9	6636.5	6597.3	6485.5	6310.8	6088.0	5806.3	5492.9	5206.4
67.5°	6207.2	6328.8	6416.1	6515.7	6515.7	6480.6	6409.6	6261.0	6061.9	5788.4	5531.3
70°	5353.3	5518.2	5672.5	5702.7	5787.6	5761.5	5817.8	5723.1	5675.7	5561.5	5423.5
72.5°	4170.5	4308.4	4440.7	4572.9	4550.9	4522.3	4516.6	4536.2	4439.9	4474.1	4438.2
75°	2773.8	3011.3	3146.8	3133.8	3142.8	3150.1	3089.7	2955.0	3059.5	2927.3	2971.3
77.5°	1685.7	1795.9	1832.6	1791.8	1738.7	1670.2	1560.0	1495.5	1403.2	1410.6	1349.3
80°	884.1	897.9	868.5	786.1	741.2	700.4	574.7	518.4	466.1	446.5	402.4
82.5°	506.9	473.5	437.5	409.8	356.7	320.8	271.8	240.8	207.3	178.0	167.3
85°	410.6	365.7	332.2	301.2	265.3	233.5	192.6	160.8	136.3	118.4	114.3
87.5°	338.8	307.7	273.5	244.1	209.0	176.3	136.3	106.1	84.1	67.8	62.9
90°	39.0	49.8	38.4	25.3	33.5	22.1	16.3	17.2	15.5	15.5	16.3
92.5°	7.0	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1
95°	7.9	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1
97.5°	10.2	10.0	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1
100°	26.3	26.0	25.7	25.4	25.1	24.8	24.5	24.2	23.9	23.6	23.3
102.5°	47.3	47.0	46.5	46.0	45.5	45.0	44.5	44.0	43.5	43.0	42.5
105°	70.2	70.0	69.5	69.0	68.5	68.0	67.5	67.0	66.5	66.0	65.5
107.5°	94.1	94.0	93.6	93.2	92.8	92.4	92.0	91.6	91.2	90.8	90.4



REPORT NUMBER: P226836

CATALOG NUMBER: IST-AF-1200-LED-E1-SL2-8030-ULG

CANDELA DISTRIBUTION (continued):

	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°
110°	120.9	121.0	120.8	120.6	120.4	120.2	120.0	119.8	119.6	119.4	119.2
112.5°	149.8	150.0	149.9	149.8	149.7	149.6	149.5	149.4	149.3	149.2	149.1
115°	181.7	182.0	181.7	181.4	181.1	180.8	180.5	180.2	179.9	179.6	179.3
117.5°	214.6	215.0	214.5	214.0	213.5	213.0	212.5	212.0	211.5	211.0	210.5
120°	249.6	250.0	249.5	249.0	248.5	248.0	247.5	247.0	246.5	246.0	245.5
122.5°	282.6	283.0	282.5	282.0	281.5	281.0	280.5	280.0	279.5	279.0	278.5
125°	314.8	315.0	314.5	314.0	313.5	313.0	312.5	312.0	311.5	311.0	310.5
127.5°	345.9	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0
130°	380.6	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0
132.5°	415.5	416.0	415.8	415.6	415.4	415.2	415.0	414.8	414.6	414.4	414.2
135°	447.5	448.0	447.9	447.8	447.7	447.6	447.5	447.4	447.3	447.2	447.1
137.5°	474.8	475.0	475.1	475.2	475.3	475.4	475.5	475.6	475.7	475.8	475.9
140°	501.8	502.0	502.2	502.4	502.6	502.8	503.0	503.2	503.4	503.6	503.8
142.5°	532.4	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0	533.0
145°	561.4	562.0	561.9	561.8	561.7	561.6	561.5	561.4	561.3	561.2	561.1
147.5°	584.5	585.0	585.1	585.2	585.3	585.4	585.5	585.6	585.7	585.8	585.9
150°	599.7	600.0	600.3	600.6	600.9	601.2	601.5	601.8	602.1	602.4	602.7
152.5°	613.7	614.0	614.4	614.8	615.2	615.6	616.0	616.4	616.8	617.2	617.6
155°	630.5	631.0	631.5	632.0	632.5	633.0	633.5	634.0	634.5	635.0	635.5
157.5°	647.6	648.0	648.2	648.4	648.6	648.8	649.0	649.2	649.4	649.6	649.8
160°	663.4	664.0	663.7	663.4	663.1	662.8	662.5	662.2	661.9	661.6	661.3
162.5°	670.6	671.0	670.9	670.8	670.7	670.6	670.5	670.4	670.3	670.2	670.1
165°	676.5	677.0	677.3	677.6	677.9	678.2	678.5	678.8	679.1	679.4	679.7
167.5°	683.4	684.0	684.4	684.8	685.2	685.6	686.0	686.4	686.8	687.2	687.6
170°	688.7	689.0	689.5	690.0	690.5	691.0	691.5	692.0	692.5	693.0	693.5
172.5°	691.7	692.0	692.2	692.4	692.6	692.8	693.0	693.2	693.4	693.6	693.8
175°	694.5	695.0	695.1	695.2	695.3	695.4	695.5	695.6	695.7	695.8	695.9
177.5°	698.5	699.0	699.2	699.4	699.6	699.8	700.0	700.2	700.4	700.6	700.8
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0



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CATALOG NUMBER: IST-AF-1200-LED-E1-SL2-8030-ULG

CANDELA DISTRIBUTION (continued):

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°
0°	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6
2.5°	1136.3	1136.3	1137.9	1139.6	1140.4	1140.4	1140.4	1142.0	1142.8	1140.4	1142.8
5°	1122.4	1126.5	1129.8	1132.2	1133.0	1135.5	1137.9	1139.6	1142.0	1142.0	1143.6
7.5°	1103.6	1111.0	1115.1	1119.1	1123.2	1127.3	1132.2	1135.5	1137.1	1140.4	1142.8
10°	1080.0	1088.9	1097.1	1103.6	1109.4	1117.5	1124.0	1128.9	1136.3	1137.1	1142.8
12.5°	1054.7	1067.7	1074.3	1086.5	1094.7	1106.9	1113.4	1120.8	1128.9	1133.0	1139.6
15°	1036.7	1048.1	1060.4	1071.8	1084.9	1099.6	1107.7	1117.5	1128.9	1137.9	1146.1
17.5°	1022.8	1038.3	1052.2	1066.9	1083.2	1098.7	1111.0	1121.6	1136.3	1141.2	1149.4
20°	1018.7	1035.9	1049.8	1065.3	1082.4	1102.8	1117.5	1128.9	1143.6	1151.8	1159.1
22.5°	1017.1	1033.4	1049.8	1068.5	1087.3	1108.5	1124.0	1138.7	1153.4	1160.8	1166.5
25°	1015.5	1032.6	1050.6	1071.8	1092.2	1114.3	1132.2	1146.1	1160.0	1167.3	1172.2
27.5°	1015.5	1033.4	1053.0	1074.3	1096.3	1120.8	1137.9	1151.0	1163.2	1169.8	1171.4
30°	1014.7	1033.4	1052.2	1075.9	1099.6	1124.9	1143.6	1155.9	1166.5	1170.6	1168.9
32.5°	1016.3	1035.9	1056.3	1080.0	1104.5	1128.9	1148.5	1162.4	1168.1	1167.3	1166.5
35°	1024.5	1042.4	1066.1	1089.8	1115.1	1137.9	1156.7	1166.5	1171.4	1169.8	1165.7
37.5°	1046.5	1064.5	1088.1	1114.3	1133.8	1160.0	1177.1	1184.5	1185.3	1180.4	1170.6
40°	1092.2	1110.2	1131.4	1160.0	1183.6	1201.6	1217.9	1226.1	1221.2	1212.2	1201.6
42.5°	1164.9	1187.7	1213.0	1235.9	1263.6	1288.1	1292.2	1297.1	1288.9	1271.8	1258.7
45°	1281.6	1295.5	1328.1	1345.3	1381.2	1393.4	1402.4	1404.9	1386.9	1373.0	1350.2
47.5°	1449.8	1476.7	1499.5	1515.9	1542.0	1558.3	1576.3	1568.1	1554.2	1530.6	1500.4
50°	1714.2	1731.4	1760.8	1790.1	1817.9	1829.3	1829.3	1821.2	1812.2	1766.5	1729.7
52.5°	2039.1	2040.8	2083.2	2118.3	2142.0	2124.8	2145.2	2124.8	2119.1	2087.3	2057.1
55°	2415.4	2399.9	2451.4	2482.4	2503.6	2524.0	2519.9	2517.5	2496.2	2460.3	2423.6
57.5°	2773.0	2817.9	2842.4	2888.1	2898.7	2912.6	2906.8	2898.7	2886.4	2866.0	2849.7
60°	3288.9	3319.1	3341.1	3350.1	3380.3	3384.4	3404.8	3371.3	3379.5	3355.8	3304.4
62.5°	3990.9	3958.2	3975.4	3975.4	3966.4	3934.6	3951.7	3964.8	3942.7	3923.1	3915.0
65°	4777.0	4671.7	4570.5	4553.3	4506.8	4496.2	4483.1	4450.5	4436.6	4402.3	4374.6
66°	5012.1	4848.8	4753.3	4694.5	4638.2	4626.0	4608.0	4573.7	4546.0	4497.8	4451.3
67.5°	5275.8	5065.1	4921.5	4838.2	4768.8	4723.1	4687.2	4638.2	4594.1	4522.3	4448.0
70°	5258.6	5084.7	4911.7	4785.2	4680.7	4586.8	4531.3	4426.0	4336.2	4233.3	4148.4
72.5°	4418.6	4387.6	4287.2	4216.2	4088.0	4038.2	3891.3	3824.4	3700.3	3567.2	3526.4
75°	3071.7	2950.1	2898.7	2870.1	2813.8	2658.7	2557.5	2579.5	2434.2	2304.4	2230.1
77.5°	1342.8	1367.3	1225.3	1161.6	1112.6	1028.5	950.2	896.3	865.3	844.9	752.6
80°	371.4	324.1	320.0	297.1	292.2	260.4	264.5	241.6	226.1	222.9	215.5
82.5°	162.4	159.2	154.3	151.8	149.4	146.1	142.0	141.2	136.3	132.2	133.1
85°	107.8	106.9	104.5	102.0	98.0	92.2	88.2	84.9	85.7	81.6	80.8
87.5°	62.9	61.2	60.4	57.1	56.3	51.4	52.2	48.2	47.3	46.5	44.1
90°	18.0	18.6	20.8	19.8	16.4	23.5	20.9	19.0	19.6	17.0	16.8
92.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
95°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	9.0	8.9	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0
100°	23.0	22.6	22.2	21.8	21.4	21.0	20.6	20.2	19.8	19.4	19.0
102.5°	42.0	41.7	41.4	41.1	40.8	40.5	40.2	39.9	39.6	39.3	39.0
105°	65.0	64.6	64.2	63.8	63.4	63.0	62.6	62.2	61.8	61.4	61.0
107.5°	90.0	89.7	89.4	89.1	88.8	88.5	88.2	87.9	87.6	87.3	87.0



REPORT NUMBER: P226836
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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	75°	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	
110°	119.0	118.7	118.4	118.1	117.8	117.5	117.2	116.9	116.6	116.3	116.0	0°
112.5°	149.0	148.8	148.6	148.4	148.2	148.0	147.8	147.6	147.4	147.2	147.0	2.5°
115°	179.0	178.8	178.6	178.4	178.2	178.0	177.8	177.6	177.4	177.2	177.0	5°
117.5°	210.0	209.8	209.6	209.4	209.2	209.0	208.8	208.6	208.4	208.2	208.0	7.5°
120°	245.0	244.8	244.6	244.4	244.2	244.0	243.8	243.6	243.4	243.2	243.0	10°
122.5°	278.0	277.8	277.6	277.4	277.2	277.0	276.8	276.6	276.4	276.2	276.0	12.5°
125°	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	310.0	15°
127.5°	346.0	345.9	345.8	345.7	345.6	345.5	345.4	345.3	345.2	345.1	345.0	17.5°
130°	381.0	380.8	380.6	380.4	380.2	380.0	379.8	379.6	379.4	379.2	379.0	20°
132.5°	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	22.5°
135°	447.0	447.3	447.6	447.9	448.2	448.5	448.8	449.1	449.4	449.7	450.0	25°
137.5°	476.0	476.5	477.0	477.5	478.0	478.5	479.0	479.5	480.0	480.5	481.0	27.5°
140°	504.0	504.5	505.0	505.5	506.0	506.5	507.0	507.5	508.0	508.5	509.0	30°
142.5°	533.0	533.1	533.2	533.3	533.4	533.5	533.6	533.7	533.8	533.9	534.0	32.5°
145°	561.0	560.7	560.4	560.1	559.8	559.5	559.2	558.9	558.6	558.3	558.0	35°
147.5°	586.0	585.7	585.4	585.1	584.8	584.5	584.2	583.9	583.6	583.3	583.0	37.5°
150°	603.0	603.3	603.6	603.9	604.2	604.5	604.8	605.1	605.4	605.7	606.0	40°
152.5°	618.0	618.5	619.0	619.5	620.0	620.5	621.0	621.5	622.0	622.5	623.0	42.5°
155°	636.0	636.2	636.4	636.6	636.8	637.0	637.2	637.4	637.6	637.8	638.0	45°
157.5°	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	47.5°
160°	661.0	660.9	660.8	660.7	660.6	660.5	660.4	660.3	660.2	660.1	660.0	50°
162.5°	670.0	669.8	669.6	669.4	669.2	669.0	668.8	668.6	668.4	668.2	668.0	52.5°
165°	680.0	679.8	679.6	679.4	679.2	679.0	678.8	678.6	678.4	678.2	678.0	55°
167.5°	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	688.0	57.5°
170°	694.0	694.2	694.4	694.6	694.8	695.0	695.2	695.4	695.6	695.8	696.0	60°
172.5°	694.0	694.2	694.4	694.6	694.8	695.0	695.2	695.4	695.6	695.8	696.0	62.5°
175°	696.0	695.8	695.6	695.4	695.2	695.0	694.8	694.6	694.4	694.2	694.0	65°
177.5°	701.0	700.7	700.4	700.1	699.8	699.5	699.2	698.9	698.6	698.3	698.0	66°
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	67.5°
												70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°

NUMBER: P226836
 NUMBER: IST-AF-1200-LED-E1-SL2-8030-ULG

REPORT NUMBER: P
 CATALOG NUMBER:

DISTRIBUTION (continued):

CANDELA DISTRIBUTION

86°	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	86°	
1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	1143.6	110°	116.2
1145.3	1146.9	1147.7	1146.9	1148.5	1147.7	1148.5	1147.7	1143.6	1142.8	1142.0	112.5°	147.0
1146.9	1150.2	1151.0	1151.8	1150.2	1151.8	1148.5	1135.5	1120.8	1104.5	1091.4	115°	177.2
1148.5	1152.6	1155.1	1155.1	1155.9	1154.2	1142.0	1113.4	1079.1	1044.9	1018.7	117.5°	208.2
1147.7	1153.4	1155.9	1156.7	1156.7	1153.4	1124.0	1078.3	1026.1	973.8	920.8	120°	243.0
1145.3	1150.2	1154.2	1154.2	1155.1	1143.6	1097.9	1032.6	958.3	880.0	809.0	122.5°	276.2
1150.2	1155.1	1155.1	1155.1	1154.2	1134.7	1070.2	975.5	875.9	769.8	664.5	125°	310.0
1157.5	1160.0	1158.3	1158.3	1155.1	1125.7	1039.2	919.2	788.5	648.1	501.2	127.5°	345.4
1164.0	1165.7	1164.9	1160.8	1156.7	1115.9	1007.3	859.6	684.1	501.2	355.1	130°	379.2
1170.6	1172.2	1168.1	1161.6	1155.9	1102.8	968.9	783.6	565.7	342.8	235.1	132.5°	414.2
1171.4	1173.0	1165.7	1156.7	1148.5	1083.2	922.4	702.8	435.9	222.0	183.7	135°	450.2
1170.6	1168.9	1156.7	1145.3	1136.3	1059.6	871.0	602.4	290.6	167.3	160.0	137.5°	481.2
1164.9	1157.5	1147.7	1134.7	1121.6	1033.4	819.6	490.6	183.7	145.3	145.3	140°	509.4
1156.7	1149.4	1137.1	1120.0	1105.3	1008.1	760.8	376.3	146.9	133.9	135.5	142.5°	534.4
1153.4	1145.3	1127.3	1109.4	1090.6	985.3	698.8	253.1	132.2	126.5	127.3	145°	558.4
1160.0	1146.1	1128.1	1107.7	1085.7	965.7	634.3	176.3	124.9	118.4	120.0	147.5°	583.4
1182.0	1168.9	1147.7	1121.6	1097.9	954.3	565.7	146.1	117.5	111.8	111.8	150°	606.8
1235.1	1217.9	1189.4	1158.3	1129.8	961.6	504.5	133.1	111.8	106.1	106.1	152.5°	624.0
1320.8	1300.4	1266.9	1231.8	1194.2	997.5	435.1	128.2	107.8	99.6	98.0	155°	638.6
1467.7	1440.8	1396.7	1355.1	1310.2	1059.6	364.9	124.9	102.9	95.5	92.2	157.5°	651.0
1698.7	1658.7	1606.5	1551.8	1497.1	1173.0	309.4	121.6	99.6	92.2	89.0	160°	661.2
1995.9	1968.9	1903.6	1831.8	1766.5	1399.1	277.5	119.2	97.1	88.2	85.7	162.5°	669.2
2374.6	2330.5	2279.1	2214.6	2137.1	1692.2	274.3	118.4	94.7	84.9	83.3	165°	678.8
2774.6	2757.5	2670.1	2630.1	2546.0	2082.4	333.9	120.0	93.1	82.4	80.0	167.5°	689.2
3230.9	3237.4	3155.8	3111.7	3042.4	2577.1	531.4	124.9	93.1	80.0	77.5	170°	697.0
3827.6	3838.2	3741.9	3689.7	3630.9	3131.3	835.1	133.1	95.5	77.5	75.1	172.5°	697.0
4316.6	4259.5	4197.4	4106.0	4031.7	3440.7	804.1	147.8	98.8	75.1	72.7	175°	695.0
4367.2	4326.4	4248.0	4149.3	4058.6	3442.3	702.0	152.6	99.6	74.3	71.8	177.5°	698.8
4360.7	4288.0	4199.1	4115.8	4026.8	3354.2	542.8	159.2	102.0	72.7	70.2	180°	700.0
4058.6	3956.6	3870.1	3755.0	3661.9	3001.5	333.9	158.4	98.8	67.8	66.1		
3346.8	3294.6	3191.7	3099.5	3002.4	2429.3	228.6	141.2	87.3	61.2	62.0		
2164.8	2105.2	2000.8	1948.5	1893.8	1554.2	178.0	115.1	74.3	54.7	57.1		
722.4	698.8	660.4	681.6	649.8	605.7	130.6	87.3	59.6	47.3	50.6		
216.3	211.4	218.8	205.7	218.0	184.5	85.7	61.2	45.7	40.8	44.9		
128.2	126.5	126.5	126.5	123.3	115.1	56.3	42.4	35.1	34.3	37.5		
78.4	76.7	77.5	76.7	78.4	70.2	38.4	29.4	26.1	25.3	30.2		
44.9	44.9	45.7	44.1	44.9	43.3	26.9	18.8	17.1	16.3	22.0		
17.6	17.6	15.2	14.3	15.2	18.4	16.3	14.7	11.9	11.1	15.3		
6.0	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	6.0	6.0		
7.0	7.0	7.0	7.0	7.0	7.0	7.0	8.0	7.0	7.0	7.0		
8.0	8.0	8.0	8.0	8.0	8.0	9.0	10.0	12.0	9.0	9.0		
19.0	19.0	19.0	19.0	19.0	19.0	23.0	26.0	29.0	21.0	12.0		
38.8	38.6	38.4	38.2	38.0	39.0	42.0	47.0	50.0	40.0	27.0		
61.0	61.0	61.0	61.0	61.0	61.0	65.0	70.0	72.0	63.0	48.0		
86.8	86.6	86.4	86.2	86.0	87.0	90.0	94.0	95.0	88.0	73.0		

'226836
 IST-AF-1200-LED-E1-SL2-8030-ULG

REPORT NUMBER: P226836
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TION (continued):

CANDELA DISTRIBUTION (con

87°	88°	89°	90°	95°	105°	115°	125°	135°	145°		155°	165°
116.4	116.6	116.8	117.0	116.0	119.0	121.0	120.0	114.0	102.0	0°	1143.6	1143.6
147.0	147.0	147.0	147.0	147.0	149.0	150.0	148.0	143.0	134.0	2.5°	1135.5	1129.8
177.4	177.6	177.8	178.0	177.0	179.0	182.0	179.0	174.0	168.0	5°	1071.0	1055.5
208.4	208.6	208.8	209.0	208.0	210.0	215.0	211.0	205.0	202.0	7.5°	977.9	960.0
243.0	243.0	243.0	243.0	243.0	245.0	250.0	246.0	243.0	237.0	10°	871.8	844.9
276.4	276.6	276.8	277.0	276.0	278.0	283.0	279.0	277.0	271.0	12.5°	736.3	683.2
310.0	310.0	310.0	310.0	310.0	310.0	315.0	313.0	310.0	305.0	15°	579.6	508.6
345.8	346.2	346.6	347.0	345.0	346.0	346.0	345.0	340.0	339.0	17.5°	399.2	342.0
379.4	379.6	379.8	380.0	379.0	381.0	381.0	377.0	372.0	370.0	20°	280.0	258.8
414.4	414.6	414.8	415.0	414.0	414.0	416.0	411.0	405.0	404.0	22.5°	216.3	217.1
450.4	450.6	450.8	451.0	450.0	447.0	448.0	443.0	437.0	435.0	25°	179.6	187.7
481.4	481.6	481.8	482.0	481.0	476.0	475.0	473.0	468.0	464.0	27.5°	158.4	166.5
509.8	510.2	510.6	511.0	509.0	504.0	502.0	500.0	497.0	491.0	30°	145.3	152.6
534.8	535.2	535.6	536.0	534.0	533.0	533.0	527.0	525.0	521.0	32.5°	136.3	139.6
558.8	559.2	559.6	560.0	558.0	561.0	562.0	556.0	551.0	550.0	35°	125.7	127.3
583.8	584.2	584.6	585.0	583.0	586.0	585.0	580.0	575.0	574.0	37.5°	116.7	116.7
607.6	608.4	609.2	610.0	606.0	603.0	600.0	597.0	593.0	593.0	40°	108.6	107.8
625.0	626.0	627.0	628.0	623.0	618.0	614.0	611.0	610.0	610.0	42.5°	101.2	100.4
639.2	639.8	640.4	641.0	638.0	636.0	631.0	626.0	628.0	630.0	45°	93.9	94.7
652.0	653.0	654.0	655.0	650.0	650.0	648.0	644.0	645.0	646.0	47.5°	89.8	90.6
662.4	663.6	664.8	666.0	660.0	661.0	664.0	658.0	655.0	655.0	50°	85.7	86.5
670.4	671.6	672.8	674.0	668.0	670.0	671.0	667.0	663.0	661.0	52.5°	82.4	82.4
679.6	680.4	681.2	682.0	678.0	680.0	677.0	672.0	673.0	673.0	55°	79.2	78.4
690.4	691.6	692.8	694.0	688.0	688.0	684.0	678.0	685.0	688.0	57.5°	76.7	75.1
698.0	699.0	700.0	701.0	696.0	694.0	689.0	686.0	691.0	693.0	60°	74.3	72.7
698.0	699.0	700.0	701.0	696.0	694.0	692.0	689.0	690.0	690.0	62.5°	72.7	70.2
696.0	697.0	698.0	699.0	694.0	696.0	695.0	690.0	690.0	691.0	65°	71.0	69.4
699.6	700.4	701.2	702.0	698.0	701.0	699.0	694.0	695.0	697.0	66°	70.2	68.6
700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	67.5°	69.4	67.8
										70°	66.1	64.5
										72.5°	61.2	60.4
										75°	56.3	54.7
										77.5°	49.8	49.0
										80°	42.4	41.6
										82.5°	35.9	34.3
										85°	28.6	26.9
										87.5°	19.6	18.0
										90°	12.9	12.7
										92.5°	6.0	5.0
										95°	7.0	6.0
										97.5°	8.0	8.0
										100°	10.0	9.0
										102.5°	18.0	13.0
										105°	36.0	27.0
										107.5°	58.0	49.0

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tinued):

175°	180°
1143.6	1143.6
1124.9	1132.2
1050.6	1048.1
945.3	946.1
817.9	819.6
653.0	643.2
467.7	471.8
325.7	324.9
261.2	262.8
223.7	223.7
199.2	199.2
175.5	176.3
159.2	160.8
144.5	145.3
129.8	130.6
117.5	117.5
109.4	110.2
103.7	103.7
98.0	98.0
93.1	94.7
88.2	89.0
83.3	84.1
78.4	78.4
74.3	74.3
71.0	70.2
68.6	66.9
66.1	65.3
65.3	64.5
64.5	63.7
62.9	62.0
60.4	59.6
55.5	53.9
50.6	49.0
46.5	44.1
39.2	37.5
28.6	26.9
17.1	17.1
9.1	9.1
4.0	4.0
5.0	5.0
7.0	7.0
8.0	8.0
11.0	11.0
22.0	21.0
42.0	41.0

CANDELA DISTRIBUTION (continued):

	155°	165°	175°
110°	87.0	74.0	68.0
112.5°	121.0	106.0	99.0
115°	159.0	147.0	139.0
117.5°	197.0	189.0	184.0
120°	233.0	226.0	223.0
122.5°	267.0	261.0	260.0
125°	299.0	296.0	294.0
127.5°	333.0	329.0	329.0
130°	366.0	362.0	361.0
132.5°	401.0	393.0	394.0
135°	432.0	426.0	426.0
137.5°	460.0	459.0	457.0
140°	489.0	487.0	485.0
142.5°	518.0	517.0	515.0
145°	547.0	544.0	546.0
147.5°	574.0	571.0	572.0
150°	593.0	593.0	592.0
152.5°	609.0	608.0	608.0
155°	627.0	625.0	625.0
157.5°	644.0	643.0	643.0
160°	656.0	659.0	660.0
162.5°	665.0	669.0	669.0
165°	676.0	676.0	678.0
167.5°	686.0	684.0	687.0
170°	692.0	692.0	695.0
172.5°	693.0	695.0	697.0
175°	695.0	697.0	698.0
177.5°	699.0	700.0	705.0
180°	700.0	700.0	700.0



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180°
66.0
99.0
140.0
184.0
225.0
263.0
298.0
330.0
363.0
396.0
429.0
460.0
488.0
518.0
550.0
575.0
595.0
611.0
629.0
646.0
663.0
673.0
681.0
690.0
698.0
699.0
700.0
707.0
700.0

(END OF REPORT)