

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: P226955

Luminaire Tested: **IST-AF-450-LED-E1-SL3-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226955
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35946)-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-450-LED-E1-SL3-ULG
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCUED OPTICS-TYPE III W/SPILL CONTROL, WITH UPLIGHT
GLOW
Light Source: (16) 4000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4815.1 lumens
Efficiency: N/A
Efficacy: 114.6 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 - 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



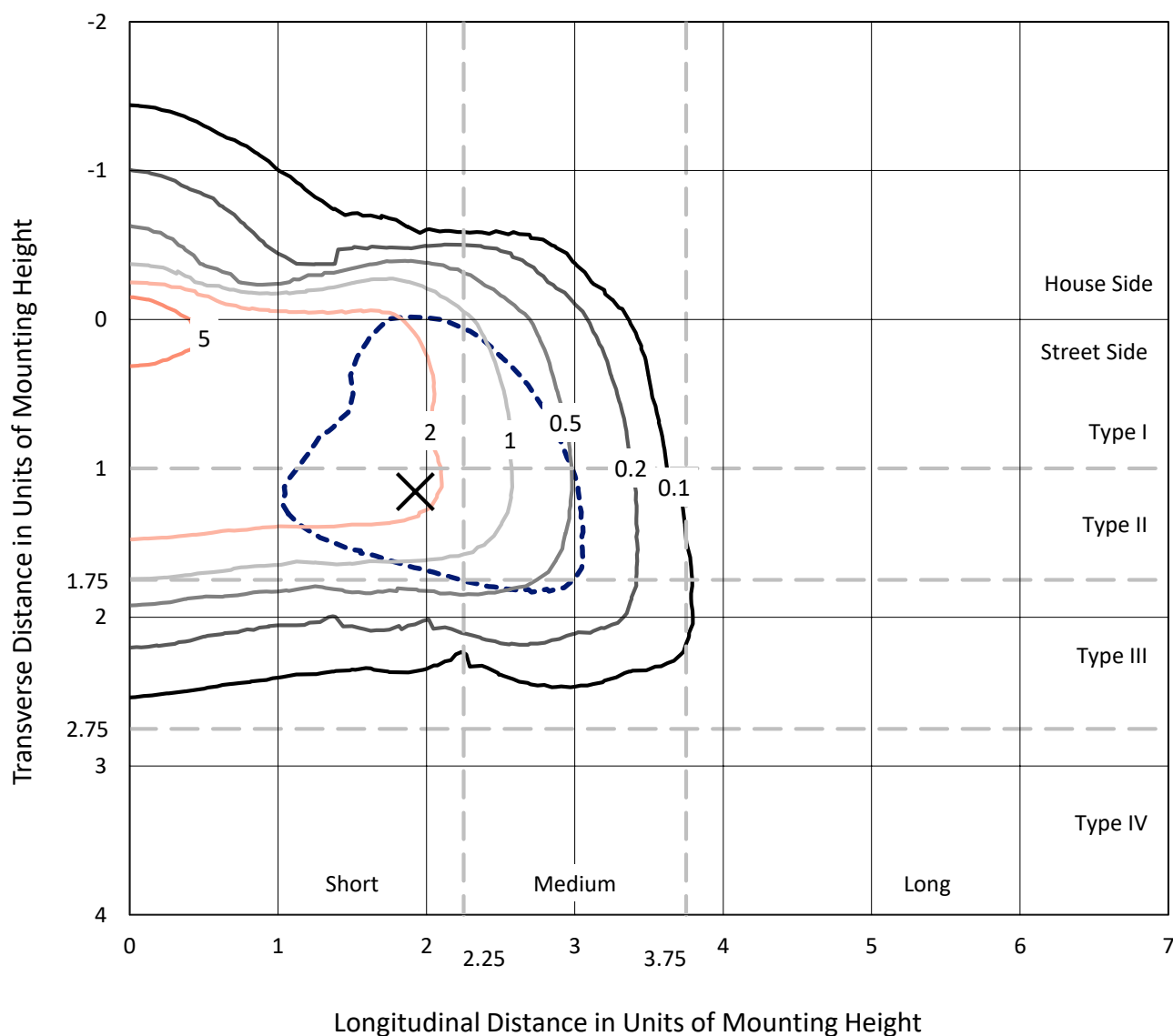
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

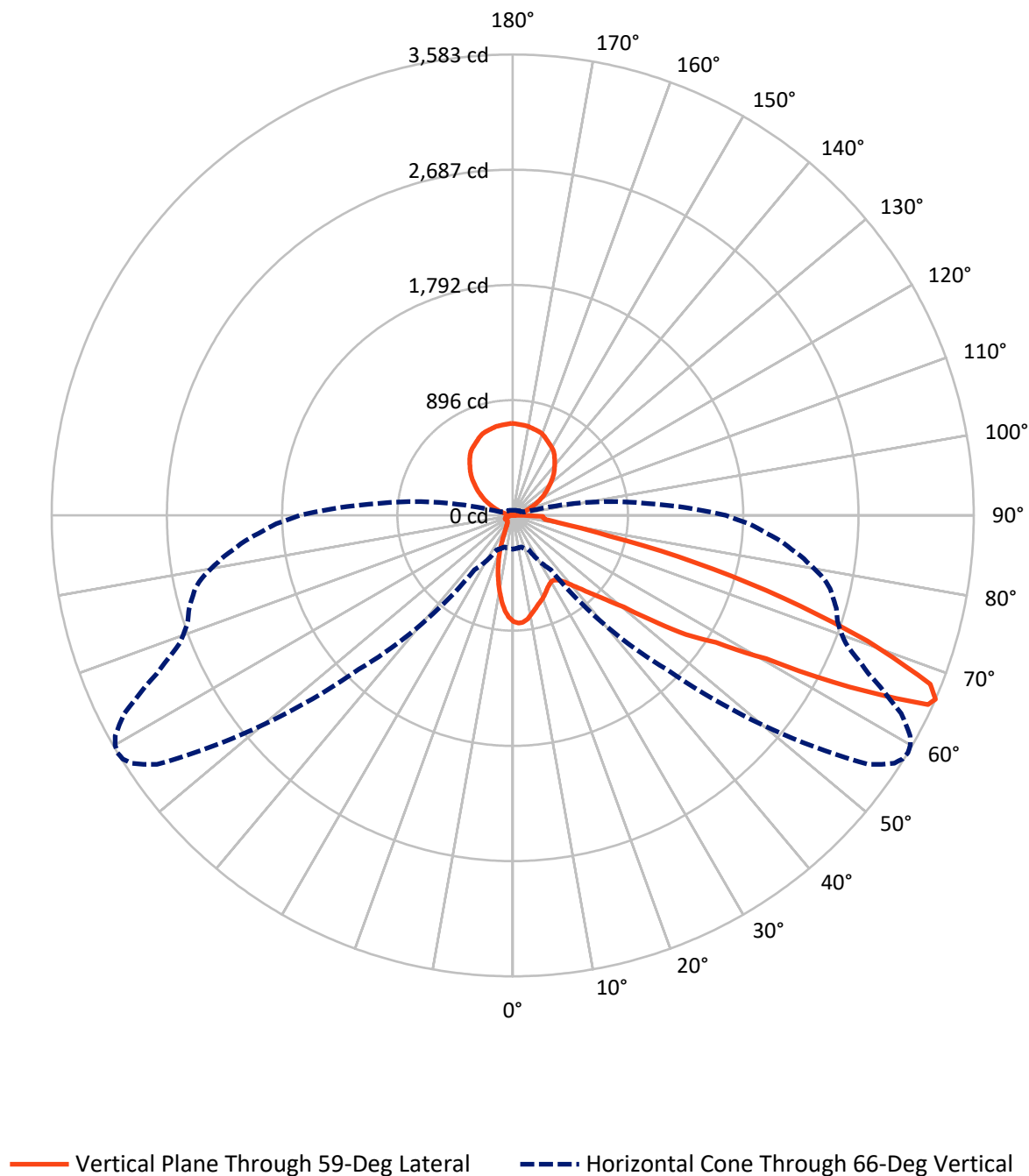


Based on 10 foot mounting height. Maximum calculated value = 8.3 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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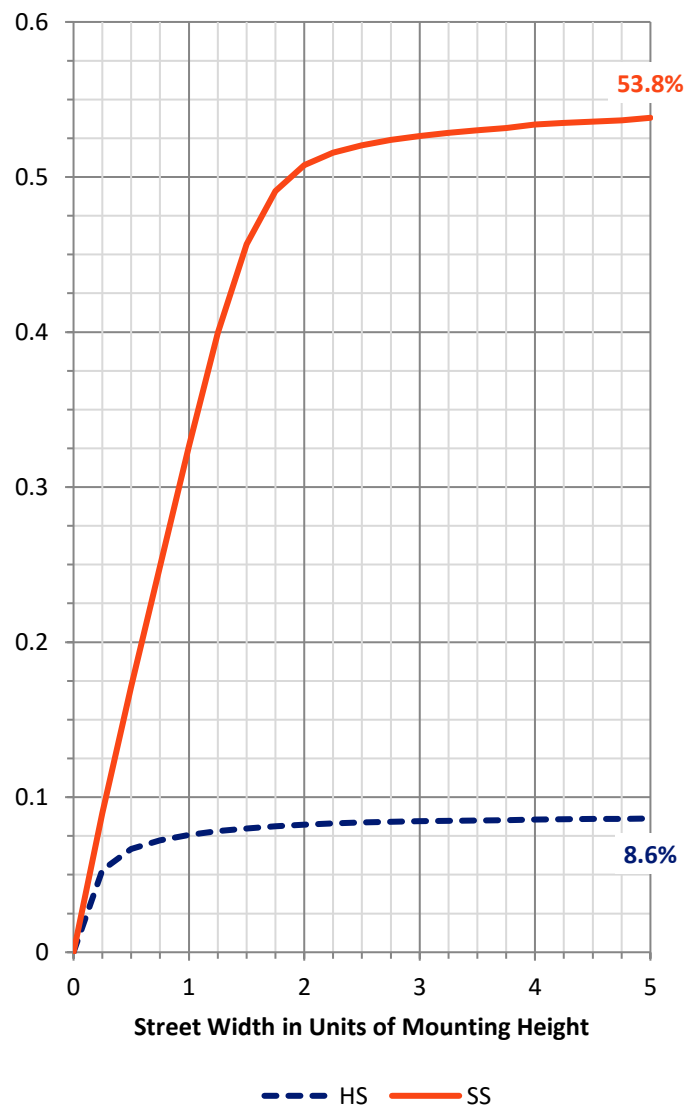
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	422.2	887.7	1309.9
	% Fixture	8.8	18.4	27.2
Street Side	Lumens	2616.7	888.6	3505.3
	% Fixture	54.3	18.5	72.8
Total	Lumens	3038.9	1776.3	4815.1
	% Fixture	63.1	36.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.4	1.5
10°-20°	148.7	3.1
20°-30°	186.5	3.9
30°-40°	255.2	5.3
40°-50°	410.5	8.5
50°-60°	713.2	14.8
60°-70°	866.6	18.0
70°-80°	323.3	6.7
80°-90°	64.6	1.3
90°-100°	10.8	0.2
100°-110°	58.7	1.2
110°-120°	169.9	3.5
120°-130°	279.4	5.8
130°-140°	344.6	7.2
140°-150°	352.5	7.3
150°-160°	297.0	6.2
160°-170°	195.5	4.1
170°-180°	67.8	1.4
0°-90°	3038.9	63.1
0°-180°	4815.1	100.0

Coefficient of Utilization



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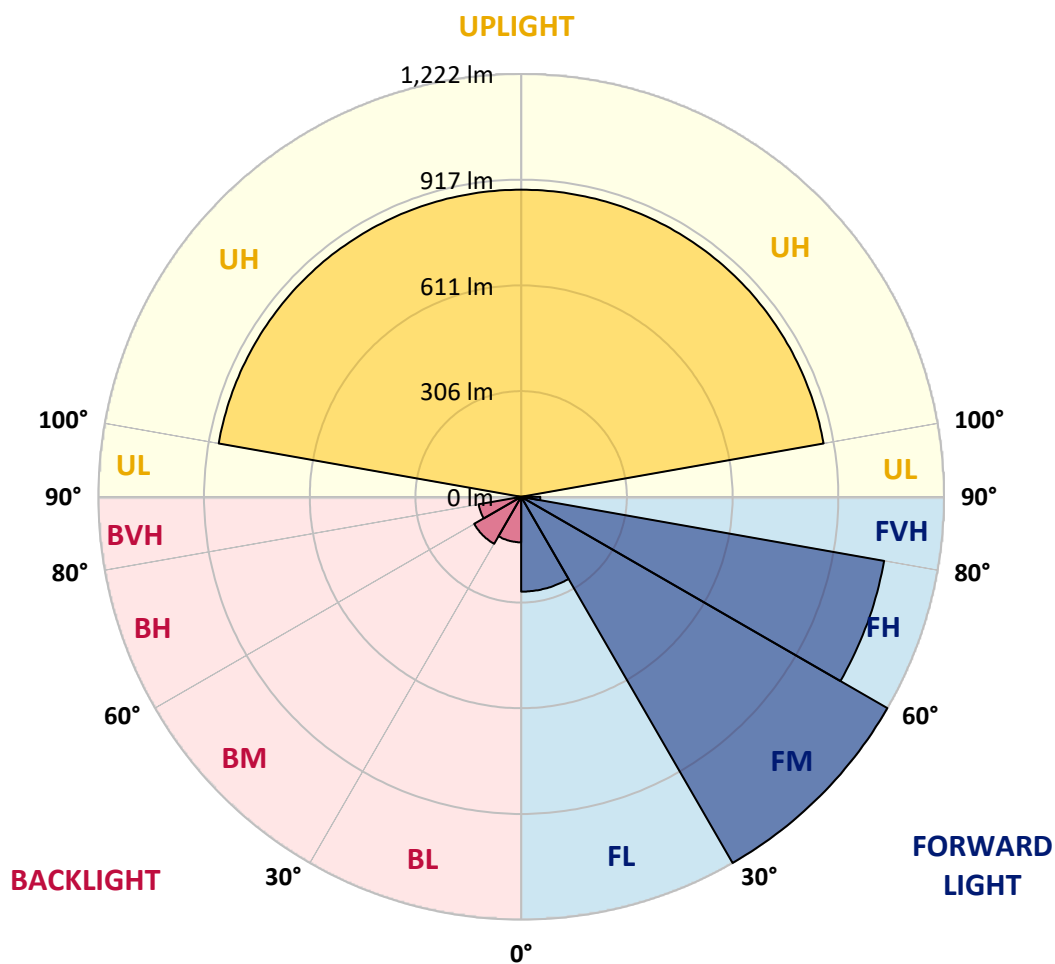
CATALOG NUMBER: IST-AF-450-LED-E1-SL3-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	274.1	5.7			
FM	(30°-60°)	1222.1	25.4			
FH	(60°-80°)	1065.2	22.1			G1/1800
FVH	(80°-90°)	55.4	1.2			G1/100
BL	(0°-30°)	131.5	2.7	B1/500		
BM	(30°-60°)	156.8	3.3	B0/220		
BH	(60°-80°)	124.7	2.6	B1/500		G1/500
BVH	(80°-90°)	9.2	0.2			G0/10
UL	(90°-100°)	10.8	0.2		U2/50	
UH	(100°-180°)	887.7	18.4		U4/1000	

BUG Rating: B1-U5-G1

Type II Short



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CATALOG NUMBER: IST-AF-450-LED-E1-SL3-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6
2.5°	847.1	844.2	849.4	847.5	848.9	842.0	840.6	839.1	840.0	838.7	838.7
5°	827.1	825.6	831.7	834.9	837.8	836.8	836.4	836.4	836.8	833.6	834.0
7.5°	768.3	767.4	775.8	781.8	795.3	803.2	813.6	814.0	814.9	813.6	816.3
10°	705.9	708.7	716.2	725.9	745.9	758.1	777.6	781.3	782.8	783.3	783.7
12.5°	646.3	643.4	652.7	671.4	698.5	718.0	742.7	744.6	746.9	750.1	753.4
15°	593.1	596.4	603.8	623.4	651.8	679.3	711.5	713.3	718.0	720.8	725.5
17.5°	556.8	556.8	565.2	583.4	609.9	644.9	685.4	688.7	692.3	696.1	701.2
20°	538.6	538.6	541.9	552.6	575.9	609.5	658.4	662.1	668.6	672.8	679.8
22.5°	537.3	536.7	536.3	538.6	552.6	578.7	629.5	634.6	640.2	646.7	652.7
25°	552.1	553.5	547.9	544.2	545.6	557.7	602.0	604.8	615.5	619.7	627.2
27.5°	573.6	575.9	571.2	565.7	557.3	549.3	578.7	583.4	590.3	597.3	606.6
30°	604.4	603.8	603.3	599.7	583.4	558.6	571.7	575.0	581.0	586.6	594.5
32.5°	637.4	641.1	643.9	642.1	625.3	583.4	581.4	584.3	589.8	593.1	598.2
35°	680.3	682.1	692.8	692.8	676.1	627.6	609.0	611.3	614.1	615.5	619.2
37.5°	727.3	733.9	749.7	759.0	732.9	682.6	652.3	652.3	653.7	654.6	656.9
40°	781.8	791.2	813.0	830.7	814.0	751.1	709.1	713.3	712.0	710.1	715.2
42.5°	845.2	855.5	882.0	898.8	889.0	833.6	785.5	782.8	787.0	781.3	783.3
45°	918.8	926.7	953.8	971.5	979.4	934.7	885.8	880.1	880.1	868.1	873.2
47.5°	985.0	987.4	1013.4	1044.6	1070.2	1071.1	1002.2	998.5	989.6	981.7	979.9
50°	1046.5	1053.4	1070.2	1104.3	1157.9	1204.4	1162.5	1150.8	1141.1	1111.7	1120.5
52.5°	1153.2	1166.7	1177.4	1197.9	1261.3	1355.8	1407.6	1389.4	1387.1	1360.5	1354.5
55°	1173.2	1174.7	1210.0	1328.4	1477.4	1545.5	1644.7	1644.3	1651.8	1643.4	1635.4
57.5°	1079.1	1068.0	1127.1	1283.2	1582.8	1932.3	1902.0	1905.2	1895.4	1869.7	1861.9
60°	840.6	849.9	913.7	1112.7	1506.8	2182.0	2381.8	2322.7	2365.1	2298.5	2262.6
62.5°	472.9	462.2	505.5	714.7	1236.1	2195.0	3035.6	3042.1	3062.6	3025.3	2937.7
65°	305.1	300.5	296.3	361.6	740.8	1920.1	3397.1	3477.2	3525.3	3544.8	3546.3
66°	262.3	258.6	253.5	295.8	516.3	1691.8	3373.8	3459.5	3535.9	3572.3	3583.0
67.5°	223.2	217.6	216.7	245.1	359.3	1312.5	3151.6	3286.2	3353.7	3448.0	3499.2
70°	170.5	167.8	176.2	211.5	275.8	617.9	2511.3	2687.1	2803.5	2877.2	2924.6
72.5°	143.0	142.1	153.7	193.3	261.4	350.4	1757.9	1946.7	2068.3	2138.7	2203.8
75°	111.8	112.7	128.2	184.5	260.0	305.1	1021.3	1201.1	1272.0	1382.9	1467.7
77.5°	83.9	83.0	95.0	149.1	253.5	309.3	530.7	605.3	683.0	739.4	760.0
80°	58.7	59.6	68.0	102.5	197.5	318.2	330.8	348.0	364.4	382.5	386.3
82.5°	39.2	39.6	50.3	70.4	137.0	303.8	308.9	301.0	288.4	272.6	255.3
85°	23.7	24.7	35.9	47.6	106.2	274.9	319.7	298.7	279.6	258.6	237.6
87.5°	12.1	13.5	21.5	27.9	62.9	135.5	332.7	317.3	291.2	259.0	235.8
90°	8.4	8.4	11.9	15.1	20.8	34.7	91.0	82.9	45.3	79.5	43.4
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	7.2	7.2	7.2
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.3	7.4	7.5	7.6
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	12.1	11.9	11.7	11.5
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	29.4	29.1	28.7	28.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	50.8	50.5	50.2	49.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	73.4	73.2	73.0	72.8
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	97.1	97.0	96.9	96.8

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CATALOG NUMBER: IST-AF-450-LED-E1-SL3-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	122.9	123.0	123.1	123.2
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	151.6	151.8	152.0	152.2
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	183.4	183.7	184.0	184.3
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	216.3	216.7	217.1	217.5
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	252.1	252.5	252.9	253.3
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	285.8	286.2	286.6	287.0
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	320.4	320.6	320.8	321.0
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.0	353.1	353.2	353.3
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	386.1	386.5	386.9	387.3
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	420.9	421.5	422.0	422.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	453.7	454.2	454.7	455.2
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.1	484.3	484.5	484.7
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	511.7	511.9	512.1	512.3
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	539.7	540.3	540.9	541.6
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	569.4	570.0	570.6	571.2
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	593.8	594.3	594.8	595.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	611.0	611.3	611.6	611.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	625.3	625.6	625.9	626.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	640.9	641.4	641.9	642.4
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	659.2	659.6	660.0	660.4
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	673.7	674.3	674.9	675.6
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	682.7	683.1	683.5	683.9
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	687.9	688.4	689.0	689.5
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	694.2	694.8	695.4	696.0
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	702.1	702.4	702.7	703.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	705.1	705.4	705.7	706.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	706.3	706.9	707.4	707.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	710.4	711.0	711.5	712.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

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CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6
2.5°	838.2	839.1	838.2	836.8	838.2	836.8	836.4	835.9	836.4	835.4	834.9
5°	834.0	834.9	834.9	832.2	831.7	833.6	830.7	831.7	830.7	829.8	828.0
7.5°	814.0	814.5	814.9	813.0	814.5	814.5	813.6	813.6	812.6	813.0	811.2
10°	786.0	787.9	789.7	788.8	788.4	792.6	790.6	792.1	792.1	790.6	791.2
12.5°	755.8	759.0	761.4	761.4	763.2	767.8	767.4	768.3	772.0	772.0	770.7
15°	727.8	731.0	734.8	737.5	741.3	744.6	746.9	750.6	752.5	752.5	754.8
17.5°	705.9	710.5	714.7	716.2	721.3	726.8	728.2	732.9	735.7	737.1	739.9
20°	684.5	689.6	694.7	699.4	704.0	710.5	713.8	716.6	721.3	724.0	728.2
22.5°	659.3	667.2	673.7	679.3	687.2	692.8	699.4	704.0	709.6	713.8	717.1
25°	635.6	646.3	655.1	660.7	671.4	679.3	687.2	694.3	701.2	707.3	712.0
27.5°	613.7	625.7	636.5	645.3	656.9	669.5	677.5	689.2	698.5	706.9	712.4
30°	602.9	613.2	624.3	634.6	646.3	662.1	675.1	690.1	701.7	712.4	720.8
32.5°	605.3	614.6	624.3	633.2	645.3	663.0	676.6	693.8	711.1	725.0	735.7
35°	623.9	632.3	638.8	646.7	657.5	671.0	685.4	703.6	725.0	743.6	757.6
37.5°	663.0	665.3	671.9	677.9	683.5	696.1	709.6	725.0	749.7	769.3	788.8
40°	711.5	717.5	723.6	726.4	732.9	740.8	746.9	763.2	785.1	810.7	832.2
42.5°	783.7	786.0	787.0	787.9	790.2	795.9	804.7	819.6	841.0	863.9	887.6
45°	864.8	867.6	870.3	871.8	868.5	871.8	881.1	888.0	909.0	930.5	960.8
47.5°	977.0	968.6	964.4	970.1	967.3	974.3	978.5	982.6	1007.8	1033.5	1059.1
50°	1121.1	1115.9	1109.4	1109.9	1115.0	1110.3	1113.1	1128.5	1136.9	1158.3	1192.4
52.5°	1351.2	1335.4	1310.7	1300.0	1306.0	1302.3	1303.6	1306.9	1301.4	1321.3	1350.3
55°	1635.4	1614.9	1598.7	1589.3	1554.8	1552.0	1529.2	1520.8	1502.6	1521.7	1515.2
57.5°	1838.1	1825.0	1816.7	1788.7	1772.9	1741.2	1731.9	1720.7	1695.5	1708.1	1719.3
60°	2229.5	2182.9	2167.0	2118.1	2101.9	2071.6	2032.9	2013.8	2000.7	2012.9	2005.4
62.5°	2882.8	2817.9	2805.3	2689.3	2660.9	2591.0	2518.4	2508.6	2467.6	2442.0	2435.9
65°	3520.6	3427.9	3358.4	3231.7	3146.0	3046.2	2935.4	2854.3	2770.9	2728.9	2673.5
66°	3568.2	3531.3	3461.5	3387.3	3262.5	3153.5	3027.6	2940.1	2846.4	2772.8	2725.2
67.5°	3487.0	3467.5	3442.7	3392.4	3314.2	3212.6	3093.3	2981.5	2868.8	2782.1	2706.1
70°	2947.5	2968.9	2996.8	2983.8	2939.1	2899.6	2794.2	2731.8	2647.0	2533.2	2486.7
72.5°	2224.8	2282.1	2262.6	2188.9	2154.4	2127.0	2088.8	2046.8	1925.2	1911.3	1856.2
75°	1431.3	1412.3	1424.9	1335.4	1274.3	1249.1	1158.3	1121.1	1029.7	970.6	925.4
77.5°	754.3	717.1	688.1	609.5	553.1	520.0	475.7	423.5	343.4	338.7	265.6
80°	350.0	321.5	295.4	267.9	240.4	204.1	177.1	144.4	127.7	109.5	102.1
82.5°	237.6	219.4	203.6	185.5	164.5	139.3	120.2	102.1	87.2	78.3	71.3
85°	215.2	195.7	178.0	155.2	133.3	112.3	91.8	75.9	62.0	54.0	49.4
87.5°	209.2	184.9	166.3	141.7	120.2	98.8	79.2	61.5	48.0	39.2	33.6
90°	34.8	36.8	29.1	28.3	17.4	19.9	17.1	13.9	14.3	12.9	13.4
92.5°	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.0	6.9	6.8	6.6
95°	7.7	7.8	7.9	8.0	8.1	8.2	8.1	8.0	7.9	7.8	7.7
97.5°	11.3	11.0	10.8	10.6	10.4	10.2	10.1	10.0	9.9	9.8	9.7
100°	28.1	27.8	27.5	27.2	26.9	26.6	26.3	26.0	25.7	25.4	25.1
102.5°	49.6	49.3	49.0	48.7	48.4	48.1	47.6	47.1	46.5	46.0	45.5
105°	72.6	72.4	72.2	72.0	71.8	71.6	71.1	70.6	70.1	69.6	69.0
107.5°	96.7	96.6	96.5	96.4	96.3	96.2	95.7	95.3	94.9	94.5	94.1

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CATALOG NUMBER: IST-AF-450-LED-E1-SL3-ULG

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
110°	123.3	123.4	123.5	123.6	123.7	123.8	123.6	123.4	123.2	123.0	122.8
112.5°	152.4	152.6	152.8	153.0	153.2	153.4	153.3	153.2	153.1	153.0	152.9
115°	184.6	184.9	185.3	185.6	185.9	186.2	185.9	185.6	185.3	184.9	184.6
117.5°	217.9	218.3	218.7	219.1	219.5	219.9	219.4	218.9	218.4	217.9	217.4
120°	253.7	254.1	254.5	254.9	255.3	255.7	255.2	254.7	254.2	253.7	253.2
122.5°	287.4	287.9	288.3	288.7	289.1	289.5	289.0	288.5	288.0	287.4	286.9
125°	321.2	321.4	321.6	321.8	322.0	322.2	321.7	321.2	320.7	320.2	319.7
127.5°	353.4	353.5	353.6	353.7	353.8	353.9	353.9	353.9	353.9	353.9	353.9
130°	387.7	388.1	388.5	388.9	389.3	389.7	389.7	389.7	389.7	389.7	389.7
132.5°	423.0	423.5	424.0	424.5	425.0	425.5	425.3	425.1	424.9	424.7	424.5
135°	455.7	456.2	456.7	457.3	457.8	458.3	458.2	458.1	458.0	457.9	457.8
137.5°	484.9	485.1	485.3	485.5	485.7	485.9	486.0	486.1	486.2	486.3	486.4
140°	512.5	512.7	512.9	513.1	513.3	513.5	513.7	513.9	514.1	514.3	514.5
142.5°	542.2	542.8	543.4	544.0	544.6	545.2	545.2	545.2	545.2	545.2	545.2
145°	571.8	572.4	573.1	573.7	574.3	574.9	574.8	574.7	574.6	574.5	574.4
147.5°	595.9	596.4	596.9	597.4	597.9	598.4	598.5	598.6	598.7	598.8	598.9
150°	612.2	612.5	612.8	613.2	613.5	613.8	614.1	614.4	614.7	615.0	615.3
152.5°	626.6	626.9	627.2	627.5	627.8	628.1	628.5	628.9	629.3	629.7	630.1
155°	642.9	643.4	643.9	644.5	645.0	645.5	646.0	646.5	647.0	647.5	648.0
157.5°	660.8	661.2	661.6	662.1	662.5	662.9	663.1	663.3	663.5	663.7	663.9
160°	676.2	676.8	677.4	678.0	678.6	679.2	678.9	678.6	678.3	678.0	677.7
162.5°	684.4	684.8	685.2	685.6	686.0	686.4	686.3	686.2	686.1	686.0	685.9
165°	690.0	690.5	691.0	691.5	692.0	692.5	692.8	693.2	693.5	693.8	694.1
167.5°	696.6	697.2	697.9	698.5	699.1	699.7	700.1	700.5	700.9	701.3	701.7
170°	703.3	703.6	703.9	704.2	704.5	704.8	705.3	705.8	706.3	706.9	707.4
172.5°	706.3	706.7	707.0	707.3	707.6	707.9	708.1	708.3	708.5	708.7	708.9
175°	708.4	708.9	709.4	709.9	710.4	711.0	711.1	711.2	711.3	711.4	711.5
177.5°	712.5	713.0	713.5	714.0	714.5	715.0	715.2	715.5	715.7	715.9	716.1
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

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CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°
0°	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6
2.5°	834.0	832.6	834.0	833.6	831.7	832.2	832.6	830.7	829.8	829.8	829.4
5°	826.5	825.6	826.5	826.1	823.3	822.9	822.9	821.4	819.6	818.2	817.2
7.5°	808.8	809.8	809.4	807.9	806.5	806.5	805.2	801.9	800.0	798.1	796.3
10°	788.8	788.8	789.3	788.8	786.4	785.5	783.7	781.8	782.4	777.6	774.0
12.5°	771.1	771.1	770.7	769.8	768.3	767.8	767.8	762.3	760.9	759.4	755.2
15°	754.3	755.2	755.2	755.2	753.0	753.0	750.6	746.9	746.9	742.7	738.5
17.5°	741.3	742.7	742.3	742.7	743.2	740.4	736.2	733.9	731.0	728.8	723.1
20°	730.1	731.0	731.5	731.5	730.1	728.2	724.6	720.8	718.9	714.3	707.3
22.5°	719.9	721.7	722.2	722.2	720.4	718.9	715.2	709.6	705.9	700.3	693.8
25°	715.7	718.0	716.6	717.5	715.7	712.4	707.3	702.7	697.0	690.1	683.0
27.5°	717.1	720.4	719.4	718.9	716.6	714.3	707.8	702.2	695.6	687.2	678.4
30°	725.5	731.0	728.8	726.8	726.4	720.8	714.7	706.9	699.4	689.6	679.3
32.5°	741.3	744.1	744.6	743.2	740.8	736.2	727.8	717.5	709.1	697.6	685.4
35°	767.4	770.2	769.3	769.3	766.9	759.4	749.2	739.0	727.3	714.3	701.7
37.5°	803.7	808.8	807.9	806.1	803.2	794.4	786.4	774.0	760.9	743.6	729.2
40°	849.4	857.3	864.3	862.9	856.4	848.4	841.0	826.5	813.6	794.4	778.6
42.5°	910.9	921.6	930.5	937.0	934.2	923.9	910.9	904.8	886.2	866.6	850.4
45°	989.6	1012.0	1019.9	1027.9	1027.9	1021.3	1018.6	1006.4	986.8	960.8	945.4
47.5°	1093.5	1123.4	1132.2	1145.7	1153.7	1146.6	1141.5	1121.1	1108.0	1072.2	1068.4
50°	1219.8	1249.6	1273.9	1289.7	1287.4	1293.4	1281.3	1269.7	1251.5	1222.1	1211.9
52.5°	1381.0	1404.8	1426.7	1436.0	1445.8	1444.4	1441.6	1433.7	1410.9	1395.0	1368.9
55°	1546.4	1566.0	1592.5	1608.0	1620.6	1618.2	1607.5	1588.3	1592.5	1559.5	1545.1
57.5°	1734.7	1756.1	1784.9	1799.5	1805.0	1833.4	1826.5	1824.1	1816.2	1804.6	1789.7
60°	2058.5	2064.5	2088.4	2124.7	2169.4	2160.6	2171.7	2179.2	2184.7	2158.6	2156.8
62.5°	2444.2	2451.7	2472.3	2479.7	2486.2	2487.2	2472.3	2472.3	2446.6	2413.0	2387.0
65°	2654.9	2639.5	2625.5	2617.6	2600.3	2585.0	2562.6	2532.3	2489.0	2437.3	2390.7
66°	2685.1	2653.9	2635.7	2615.8	2588.3	2559.8	2533.2	2491.8	2441.1	2379.5	2318.0
67.5°	2655.8	2612.9	2570.6	2541.2	2503.0	2451.7	2405.2	2356.7	2308.7	2224.4	2167.0
70°	2387.9	2336.6	2290.1	2225.7	2165.2	2114.8	2034.8	1950.4	1881.0	1792.4	1736.0
72.5°	1773.4	1712.7	1652.2	1561.8	1473.8	1460.7	1360.0	1260.8	1207.7	1136.4	1079.1
75°	876.0	799.5	691.0	642.5	572.1	537.7	518.5	446.8	429.6	359.3	358.3
77.5°	247.5	212.5	188.7	164.5	154.3	146.8	121.1	116.0	105.3	103.4	97.4
80°	93.7	88.5	86.2	83.9	81.5	80.1	79.2	75.5	73.7	70.8	69.5
82.5°	67.5	65.7	61.5	60.1	58.2	55.4	54.9	52.7	51.2	48.5	47.6
85°	45.6	43.4	41.0	38.7	37.7	37.2	35.9	35.0	34.1	32.6	32.1
87.5°	30.8	28.4	25.7	24.7	24.2	24.7	25.2	24.2	23.7	22.8	22.4
90°	12.9	14.3	13.9	13.9	14.8	13.7	13.5	13.7	13.1	12.9	12.2
92.5°	6.5	6.4	6.3	6.2	6.1	6.1	6.1	6.1	6.1	6.1	6.1
95°	7.6	7.5	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2
97.5°	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6
100°	24.8	24.4	24.1	23.8	23.5	23.1	22.7	22.3	21.9	21.5	21.1
102.5°	45.0	44.5	44.0	43.5	43.0	42.7	42.4	42.0	41.7	41.4	41.1
105°	68.5	68.0	67.5	67.0	66.5	66.1	65.7	65.3	64.9	64.4	64.0
107.5°	93.7	93.3	92.9	92.5	92.1	91.8	91.5	91.1	90.8	90.5	90.2

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REPORT N
CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	71°	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	
110°	122.5	122.3	122.1	121.9	121.7	121.4	121.1	120.8	120.5	120.2	119.9	0°
112.5°	152.8	152.7	152.6	152.5	152.4	152.2	152.0	151.8	151.6	151.4	151.2	2.5°
115°	184.3	184.0	183.7	183.4	183.1	182.9	182.7	182.5	182.3	182.1	181.9	5°
117.5°	216.9	216.4	215.8	215.3	214.8	214.6	214.4	214.2	214.0	213.8	213.6	7.5°
120°	252.7	252.2	251.6	251.1	250.6	250.4	250.2	250.0	249.8	249.6	249.4	10°
122.5°	286.4	285.9	285.4	284.9	284.4	284.2	284.0	283.8	283.6	283.4	283.2	12.5°
125°	319.2	318.6	318.1	317.6	317.1	317.1	317.1	317.1	317.1	317.1	317.1	15°
127.5°	353.9	353.9	353.9	353.9	353.9	353.8	353.7	353.6	353.5	353.4	353.3	17.5°
130°	389.7	389.7	389.7	389.7	389.7	389.5	389.3	389.1	388.9	388.7	388.5	20°
132.5°	424.3	424.1	423.9	423.7	423.5	423.5	423.5	423.5	423.5	423.5	423.5	22.5°
135°	457.7	457.6	457.5	457.4	457.3	457.6	457.9	458.2	458.5	458.8	459.1	25°
137.5°	486.5	486.6	486.7	486.8	486.9	487.4	487.9	488.5	489.0	489.5	490.0	27.5°
140°	514.7	515.0	515.2	515.4	515.6	516.1	516.6	517.1	517.6	518.1	518.6	30°
142.5°	545.2	545.2	545.2	545.2	545.2	545.3	545.4	545.5	545.6	545.7	545.8	32.5°
145°	574.3	574.2	574.1	574.0	573.9	573.6	573.3	573.0	572.6	572.3	572.0	35°
147.5°	599.0	599.1	599.2	599.3	599.4	599.1	598.8	598.5	598.2	597.9	597.6	37.5°
150°	615.6	615.9	616.2	616.5	616.8	617.1	617.5	617.8	618.1	618.4	618.7	40°
152.5°	630.5	631.0	631.4	631.8	632.2	632.7	633.2	633.7	634.2	634.7	635.3	42.5°
155°	648.6	649.1	649.6	650.1	650.6	650.8	651.0	651.2	651.4	651.6	651.8	45°
157.5°	664.1	664.3	664.5	664.7	664.9	664.9	664.9	664.9	664.9	664.9	664.9	47.5°
160°	677.4	677.1	676.8	676.5	676.2	676.1	676.0	675.9	675.8	675.7	675.6	50°
162.5°	685.8	685.7	685.6	685.5	685.4	685.2	685.0	684.8	684.6	684.4	684.1	52.5°
165°	694.4	694.7	695.0	695.3	695.6	695.4	695.2	695.0	694.8	694.6	694.4	55°
167.5°	702.2	702.6	703.0	703.4	703.8	703.8	703.8	703.8	703.8	703.8	703.8	57.5°
170°	707.9	708.4	708.9	709.4	709.9	710.1	710.3	710.5	710.7	711.0	711.2	60°
172.5°	709.1	709.3	709.5	709.7	709.9	710.1	710.3	710.5	710.7	711.0	711.2	62.5°
175°	711.6	711.7	711.8	711.9	712.0	711.8	711.6	711.4	711.2	711.0	710.7	65°
177.5°	716.3	716.5	716.7	716.9	717.1	716.8	716.5	716.2	715.9	715.6	715.2	66°
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	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°

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REPORT NUMBER: P
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DISTRIBUTION (continued):

CANDELA DISTRIBUTION

82°	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	110°	82°
825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	110°	119.6
828.4	827.1	827.5	825.6	825.2	826.1	826.5	826.5	825.2	816.8	807.0	112.5°	151.0
816.3	813.6	813.0	811.6	809.4	812.1	810.7	808.4	805.6	795.9	776.7	115°	181.7
793.9	792.1	789.7	787.9	786.4	785.5	785.1	782.8	777.6	759.4	727.3	117.5°	213.4
772.5	770.2	767.4	763.2	761.4	758.5	758.5	753.0	749.2	726.4	678.8	120°	249.2
751.6	747.4	745.9	743.2	738.1	735.7	732.4	726.8	721.3	693.8	631.4	122.5°	282.9
735.7	731.5	725.5	723.6	718.0	712.9	708.7	701.2	695.2	658.8	581.4	125°	317.1
718.4	715.2	708.7	704.5	698.5	692.3	685.4	676.1	671.9	625.7	534.0	127.5°	353.2
704.5	697.0	689.6	685.9	678.4	671.4	664.4	653.3	644.9	593.1	483.7	130°	388.3
688.1	681.7	673.7	667.2	656.9	649.1	641.1	629.5	619.2	560.1	432.8	132.5°	423.5
677.0	667.7	659.3	651.8	640.2	630.9	619.7	607.1	596.9	528.4	377.0	135°	459.4
670.4	661.1	650.4	641.1	627.6	616.9	604.8	590.8	577.8	502.8	324.3	137.5°	490.5
668.6	657.5	646.3	634.6	620.6	607.1	592.7	578.7	561.9	478.0	267.0	140°	519.1
674.2	660.7	648.1	634.1	617.9	602.4	588.0	569.9	553.1	456.6	210.6	142.5°	545.9
689.6	673.3	658.8	643.4	624.8	608.0	590.8	570.3	551.7	441.7	161.2	145°	571.7
713.8	698.5	681.7	666.2	644.9	626.3	607.1	585.2	562.8	435.7	121.6	147.5°	597.3
762.7	742.3	725.0	708.7	683.9	664.9	643.0	616.4	591.3	441.2	101.6	150°	619.0
831.2	805.6	789.7	775.3	744.6	723.6	698.5	668.2	639.8	457.1	89.5	152.5°	635.8
925.8	906.2	877.8	855.5	824.2	801.0	772.9	736.6	704.9	479.5	83.4	155°	652.0
1044.1	1018.6	990.6	967.7	933.7	893.2	863.9	820.0	784.2	514.3	80.6	157.5°	664.9
1189.1	1158.3	1120.5	1101.5	1054.5	1022.7	983.6	936.5	890.9	568.5	82.0	160°	675.5
1346.5	1313.5	1284.1	1247.8	1204.9	1169.5	1132.2	1082.4	1025.1	671.0	87.6	162.5°	683.9
1512.8	1491.5	1463.5	1416.5	1393.2	1348.5	1300.9	1246.0	1204.4	804.2	101.1	165°	694.2
1755.2	1731.9	1728.6	1682.4	1647.1	1606.5	1569.3	1523.6	1474.7	1040.9	132.8	167.5°	703.8
2127.9	2103.7	2076.2	2040.3	1998.4	1948.1	1902.0	1840.4	1786.0	1278.1	147.7	170°	711.4
2348.8	2304.0	2254.7	2200.2	2139.1	2076.7	2014.7	1935.9	1856.8	1292.5	133.3	172.5°	711.4
2330.2	2274.7	2211.8	2137.7	2073.4	1996.5	1929.9	1828.3	1756.1	1150.8	108.5	175°	710.5
2261.1	2185.2	2126.1	2058.1	1977.5	1908.4	1838.1	1737.9	1655.4	1055.4	99.2	177.5°	714.9
2084.6	2019.8	1937.8	1872.6	1813.0	1730.5	1664.3	1570.6	1513.9	915.1	89.0	180°	716.1
1666.2	1576.7	1507.3	1456.5	1389.0	1314.4	1255.7	1176.9	1126.7	605.7	76.9		
970.6	948.2	870.3	826.5	785.5	725.0	678.4	640.7	574.5	293.6	68.0		
299.1	278.1	275.4	233.9	247.5	211.5	205.9	187.3	187.3	112.7	53.6		
95.5	93.7	89.9	84.8	83.0	83.0	80.6	80.1	76.4	60.6	40.1		
67.5	66.2	64.8	63.3	62.4	62.9	61.1	60.1	59.1	43.8	31.7		
46.5	45.2	42.4	42.4	41.4	41.0	41.4	39.6	39.2	30.8	26.6		
31.7	31.2	30.8	30.3	29.9	29.4	28.8	27.5	26.6	21.5	18.6		
21.0	17.7	17.3	14.9	14.4	14.0	13.1	14.0	15.3	15.3	12.1		
12.5	11.8	12.1	11.9	10.8	11.4	11.4	10.4	10.4	11.9	13.4		
6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1		
7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2		
8.5	8.4	8.3	8.2	8.2	8.2	8.2	8.2	8.2	8.2	9.2		
20.7	20.3	19.8	19.4	19.4	19.4	19.4	19.4	19.4	19.4	23.5		
40.8	40.5	40.2	39.9	39.7	39.5	39.3	39.1	38.9	39.9	43.0		
63.6	63.2	62.8	62.4	62.4	62.4	62.4	62.4	62.4	62.4	66.5		
89.9	89.6	89.3	89.0	88.8	88.6	88.4	88.2	88.0	89.0	92.1		

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IST-AF-450-LED-E1-SL3-ULG

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TION (continued):

CANDELA DISTRIBUTION (con

83°	84°	85°	86°	87°	88°	89°	90°	95°	105°		115°	125°
119.3	119.0	118.7	118.9	119.1	119.3	119.5	119.7	118.7	121.7	0°	825.6	825.6
150.8	150.6	150.4	150.4	150.4	150.4	150.4	150.4	150.4	152.4	2.5°	798.6	791.2
181.5	181.3	181.1	181.3	181.5	181.7	181.9	182.1	181.1	183.1	5°	756.2	739.4
213.2	213.0	212.8	213.0	213.2	213.4	213.6	213.8	212.8	214.8	7.5°	698.9	666.2
249.0	248.8	248.6	248.6	248.6	248.6	248.6	248.6	248.6	250.6	10°	633.2	586.2
282.7	282.5	282.3	282.5	282.7	282.9	283.2	283.4	282.3	284.4	12.5°	565.2	505.0
317.1	317.1	317.1	317.1	317.1	317.1	317.1	317.1	317.1	317.1	15°	501.9	422.2
353.1	353.0	352.9	353.3	353.7	354.1	354.6	355.0	352.9	353.9	17.5°	435.2	336.9
388.1	387.9	387.7	387.9	388.1	388.3	388.5	388.7	387.7	389.7	20°	371.3	254.4
423.5	423.5	423.5	423.7	423.9	424.1	424.3	424.5	423.5	423.5	22.5°	299.1	178.4
459.7	460.0	460.3	460.5	460.7	460.9	461.1	461.4	460.3	457.3	25°	219.4	129.5
491.0	491.5	492.0	492.2	492.4	492.7	492.9	493.1	492.0	486.9	27.5°	156.5	103.4
519.7	520.2	520.7	521.1	521.5	521.9	522.3	522.7	520.7	515.6	30°	116.9	87.2
546.1	546.2	546.3	546.7	547.1	547.5	547.9	548.3	546.3	545.2	32.5°	93.7	75.5
571.4	571.1	570.8	571.2	571.6	572.0	572.4	572.9	570.8	573.9	35°	79.7	68.5
597.0	596.7	596.4	596.8	597.2	597.6	598.0	598.4	596.4	599.4	37.5°	71.3	63.8
619.3	619.6	619.9	620.7	621.5	622.4	623.2	624.0	619.9	616.8	40°	66.6	61.5
636.3	636.8	637.3	638.3	639.3	640.4	641.4	642.4	637.3	632.2	42.5°	63.8	59.1
652.2	652.4	652.6	653.3	653.9	654.5	655.1	655.7	652.6	650.6	45°	62.4	57.8
664.9	664.9	664.9	665.9	667.0	668.0	669.0	670.0	664.9	664.9	47.5°	61.5	56.0
675.4	675.2	675.1	676.4	677.6	678.8	680.1	681.3	675.1	676.2	50°	60.6	56.0
683.7	683.5	683.3	684.6	685.8	687.0	688.2	689.5	683.3	685.4	52.5°	61.1	56.9
694.0	693.8	693.6	694.4	695.2	696.0	696.8	697.7	693.6	695.6	55°	63.3	56.9
703.8	703.8	703.8	705.0	706.2	707.5	708.7	709.9	703.8	703.8	57.5°	67.1	56.9
711.6	711.8	712.0	713.0	714.0	715.0	716.1	717.1	712.0	709.9	60°	69.9	57.8
711.6	711.8	712.0	713.0	714.0	715.0	716.1	717.1	712.0	709.9	62.5°	70.8	59.6
710.3	710.1	709.9	711.0	712.0	713.0	714.0	715.0	709.9	712.0	65°	69.9	60.6
714.6	714.3	714.0	714.8	715.7	716.5	717.3	718.1	714.0	717.1	66°	68.9	60.6
716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	67.5°	67.5	59.6
										70°	64.3	56.0
										72.5°	57.8	50.3
										75°	49.4	40.5
										77.5°	40.1	32.6
										80°	29.9	24.7
										82.5°	21.9	19.1
										85°	15.3	13.5
										87.5°	9.3	8.4
										90°	11.6	9.5
										92.5°	7.2	7.2
										95°	8.2	7.2
										97.5°	10.2	12.3
										100°	26.6	29.7
										102.5°	48.1	51.1
										105°	71.6	73.7
										107.5°	96.2	97.2

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tinued):

135°	145°	155°	165°	175°	180°
825.6	825.6	825.6	825.6	825.6	825.6
786.0	785.5	774.0	771.6	763.6	767.8
719.4	711.5	690.5	686.3	677.5	675.1
639.8	617.9	601.1	582.4	564.7	573.6
546.6	509.7	472.9	448.7	438.9	435.7
458.0	391.9	345.8	298.2	281.4	287.4
350.9	275.4	213.9	186.4	170.5	167.8
247.5	176.6	148.1	141.2	137.9	137.9
167.8	134.6	124.0	120.7	120.7	121.1
127.7	113.2	108.5	109.0	110.9	111.4
105.8	100.1	97.9	101.1	104.9	105.3
91.3	89.9	90.4	94.6	98.3	98.8
80.1	81.5	83.4	87.2	90.4	91.3
72.2	74.6	75.9	78.3	80.1	80.6
66.6	69.5	68.9	70.4	71.7	72.2
63.3	64.8	63.3	64.3	64.3	65.3
60.6	61.1	58.7	59.1	60.1	60.1
57.8	57.3	54.9	56.0	57.3	57.8
54.9	54.0	52.2	54.0	56.4	56.9
52.7	51.8	50.7	53.1	56.0	56.4
51.8	50.7	49.8	53.1	56.0	56.4
51.8	50.7	49.8	52.2	54.9	55.4
52.2	51.2	49.4	51.8	53.6	54.0
52.7	51.8	48.5	49.8	50.7	51.2
52.7	50.7	47.6	48.0	48.0	48.5
51.8	49.4	45.6	45.6	45.2	45.2
51.8	47.6	43.8	42.9	41.9	41.9
51.2	47.1	43.4	41.9	40.5	40.5
50.3	46.1	42.4	40.5	39.2	39.2
47.1	44.3	40.1	38.2	36.8	36.3
41.9	40.5	37.2	35.9	34.5	34.1
35.4	35.9	34.1	33.0	31.7	31.2
29.9	30.8	29.9	29.4	28.4	27.9
23.7	25.7	24.7	24.7	25.2	24.2
18.2	20.5	19.5	20.5	21.5	20.0
12.6	14.9	14.9	15.3	15.9	14.9
7.9	9.8	9.3	9.8	9.8	9.3
9.0	11.5	10.0	9.9	7.5	7.0
6.1	6.1	6.1	5.1	4.1	4.1
7.2	7.2	7.2	6.1	5.1	5.1
9.2	9.2	8.2	8.2	7.2	7.2
21.5	12.3	10.2	9.2	8.2	8.2
40.9	27.6	18.4	13.3	11.3	11.3
64.4	49.1	36.8	27.6	22.5	21.5
90.0	74.7	59.3	50.1	43.0	41.9

CANDELA DISTRIBUTION (continued):

	115°	125°	135°
110°	123.8	122.8	116.6
112.5°	153.4	151.4	146.3
115°	186.2	183.1	178.0
117.5°	219.9	215.8	209.7
120°	255.7	251.6	248.6
122.5°	289.5	285.4	283.4
125°	322.2	320.2	317.1
127.5°	353.9	352.9	347.8
130°	389.7	385.7	380.5
132.5°	425.5	420.4	414.3
135°	458.3	453.2	447.0
137.5°	485.9	483.9	478.7
140°	513.5	511.5	508.4
142.5°	545.2	539.1	537.0
145°	574.9	568.8	563.6
147.5°	598.4	593.3	588.2
150°	613.8	610.7	606.6
152.5°	628.1	625.0	624.0
155°	645.5	640.4	642.4
157.5°	662.9	658.8	659.8
160°	679.2	673.1	670.0
162.5°	686.4	682.3	678.2
165°	692.5	687.4	688.4
167.5°	699.7	693.6	700.7
170°	704.8	701.7	706.9
172.5°	707.9	704.8	705.8
175°	711.0	705.8	705.8
177.5°	715.0	709.9	711.0
180°	716.1	716.1	716.1

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145°	155°	165°	175°	180°
104.3	89.0	75.7	69.6	67.5
137.1	123.8	108.4	101.3	101.3
171.9	162.6	150.4	142.2	143.2
206.6	201.5	193.3	188.2	188.2
242.4	238.3	231.2	228.1	230.2
277.2	273.1	267.0	266.0	269.0
312.0	305.9	302.8	300.7	304.8
346.8	340.6	336.6	336.6	337.6
378.5	374.4	370.3	369.3	371.3
413.3	410.2	402.0	403.0	405.1
445.0	441.9	435.8	435.8	438.8
474.6	470.6	469.5	467.5	470.6
502.3	500.2	498.2	496.1	499.2
533.0	529.9	528.9	526.8	529.9
562.6	559.6	556.5	558.5	562.6
587.2	587.2	584.1	585.1	588.2
606.6	606.6	606.6	605.6	608.7
624.0	623.0	622.0	622.0	625.0
644.5	641.4	639.3	639.3	643.4
660.8	658.8	657.8	657.8	660.8
670.0	671.1	674.1	675.1	678.2
676.2	680.3	684.4	684.4	688.4
688.4	691.5	691.5	693.6	696.6
703.8	701.7	699.7	702.8	705.8
708.9	707.9	707.9	711.0	714.0
705.8	708.9	711.0	713.0	715.0
706.9	711.0	713.0	714.0	716.1
713.0	715.0	716.1	721.2	723.2
716.1	716.1	716.1	716.1	716.1

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