

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: P227089

Luminaire Tested: **IST-AF-450-LED-E1-SL4-7030-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227089
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35947)-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-SL4-7030-ULG
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV W/SPILL CONTROL, WITH UPLIGHT
GLOW
Light Source: (16) 3000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4220.1 lumens
Efficiency: N/A
Efficacy: 100.5 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: B0 - 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

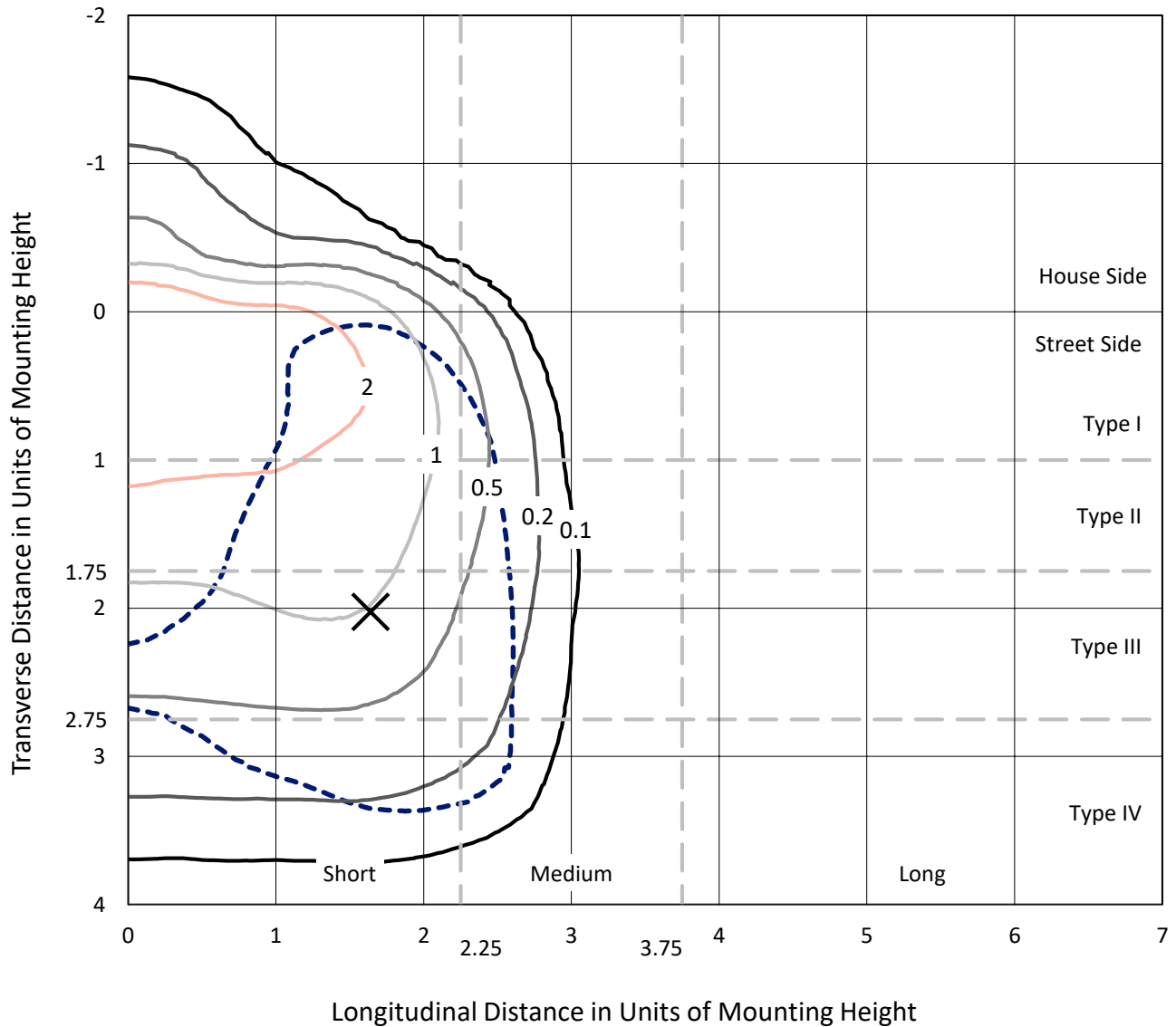


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

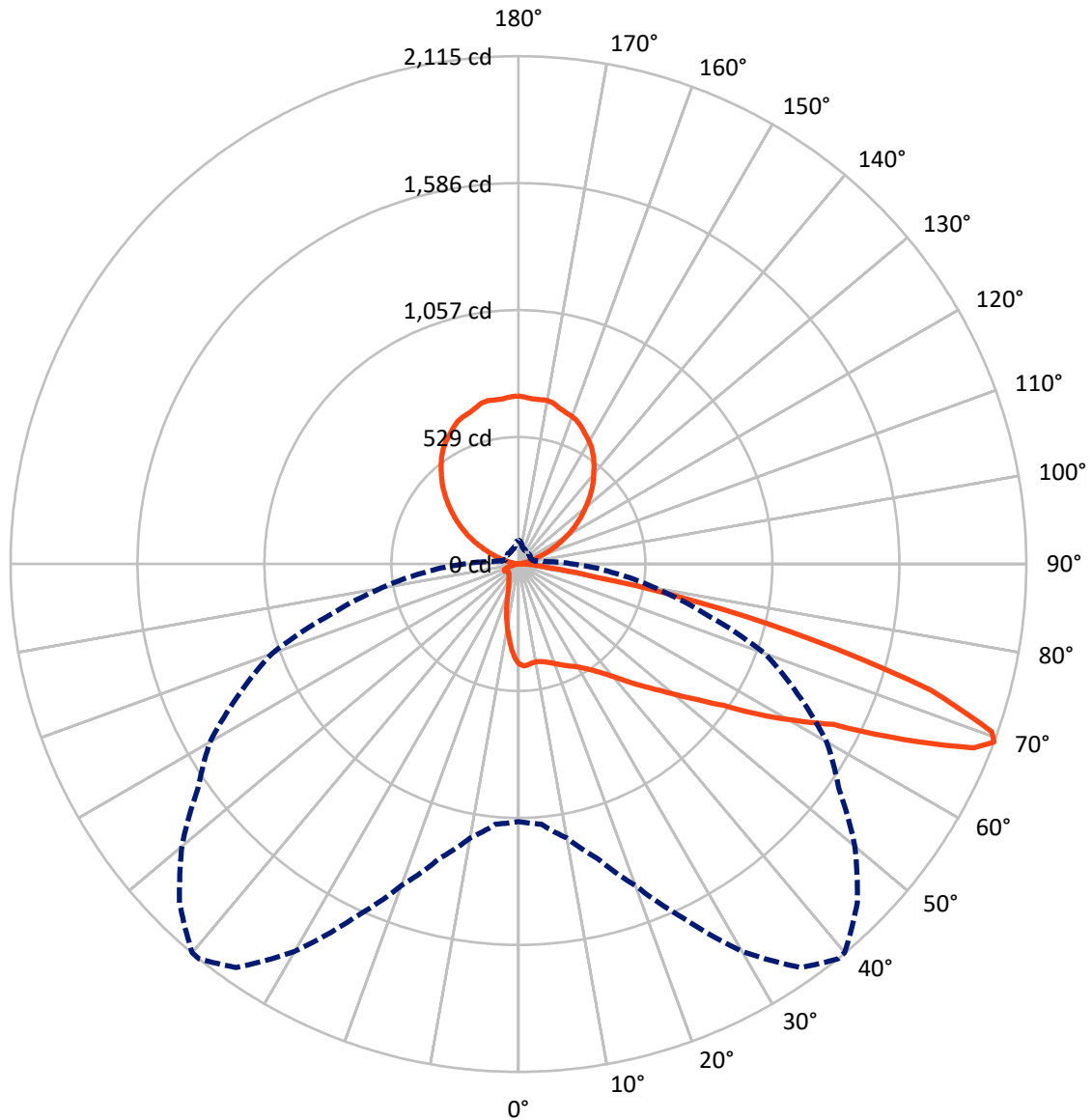


Based on 10 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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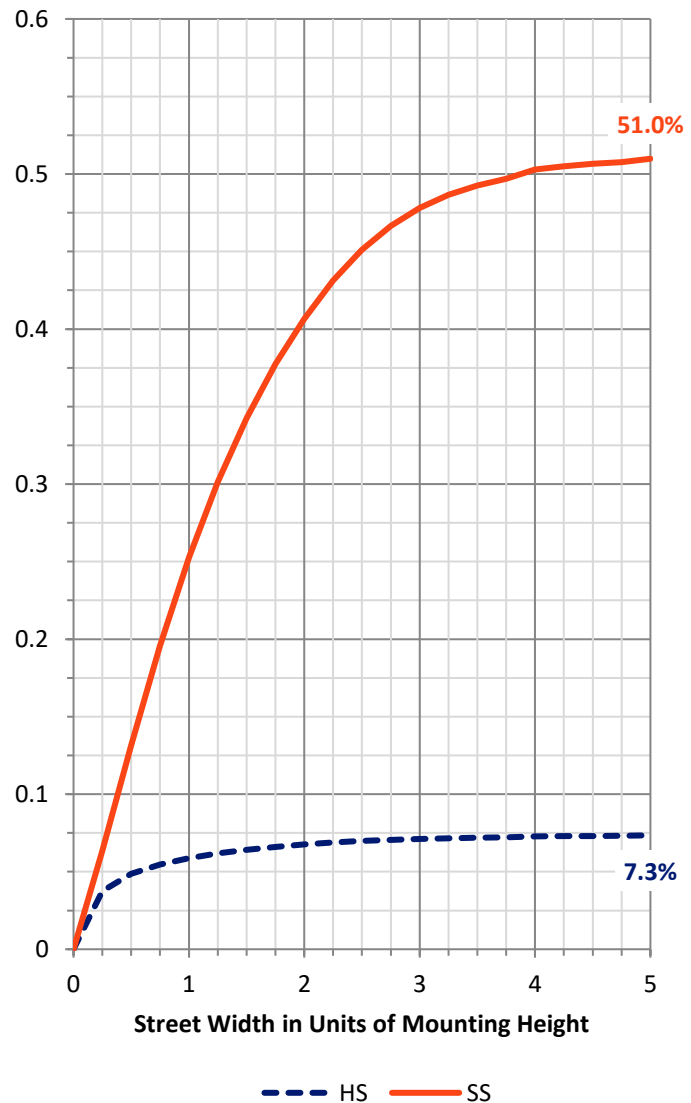
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	314.8	867.6	1182.4
	% Fixture	7.5	20.6	28.0
Street Side	Lumens	2169.5	868.2	3037.7
	% Fixture	51.4	20.6	72.0
Total	Lumens	2484.3	1735.8	4220.1
	% Fixture	58.9	41.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.9	0.9
10°-20°	90.6	2.1
20°-30°	140.9	3.3
30°-40°	213.0	5.0
40°-50°	340.9	8.1
50°-60°	535.7	12.7
60°-70°	721.4	17.1
70°-80°	357.8	8.5
80°-90°	48.0	1.1
90°-100°	9.9	0.2
100°-110°	57.4	1.4
110°-120°	166.1	3.9
120°-130°	273.2	6.5
130°-140°	336.8	8.0
140°-150°	344.6	8.2
150°-160°	290.3	6.9
160°-170°	191.2	4.5
170°-180°	66.3	1.6
0°-90°	2484.3	58.9
0°-180°	4220.1	100.0



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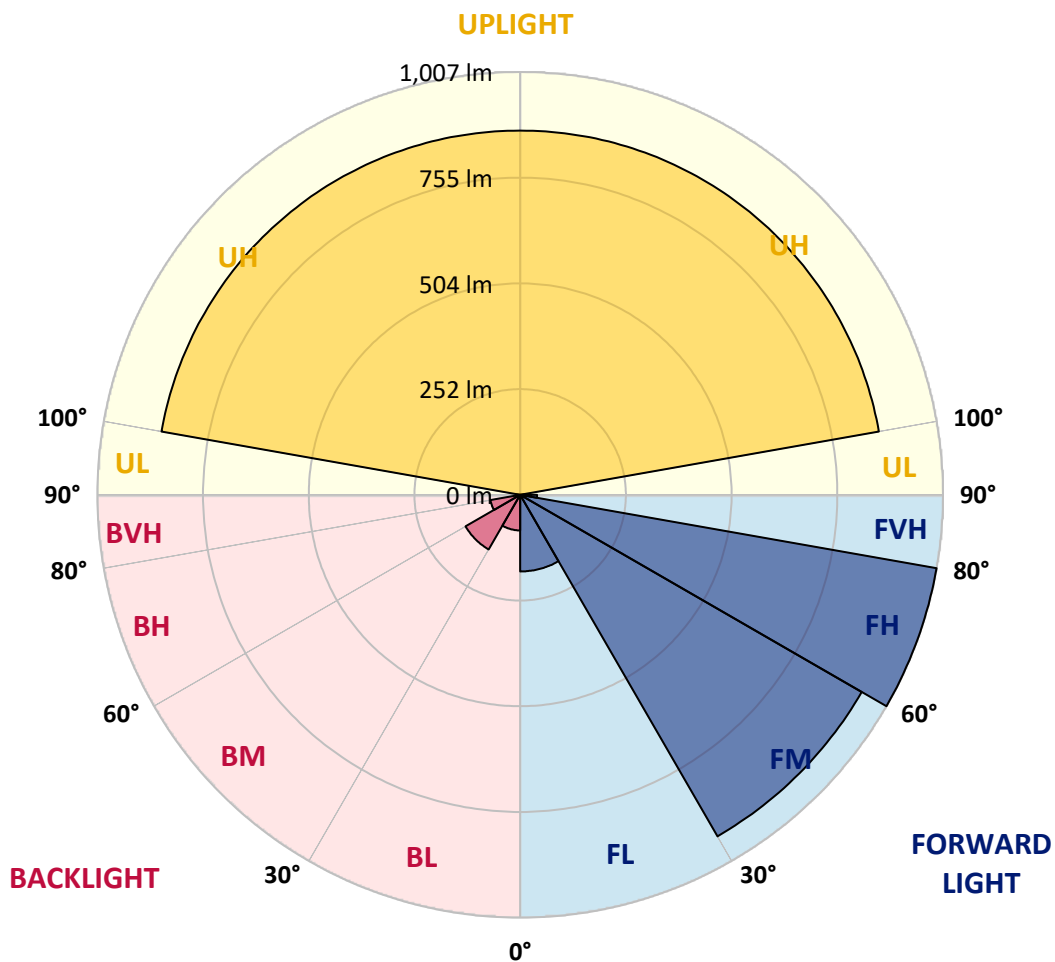
CATALOG NUMBER: IST-AF-450-LED-E1-SL4-7030-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	182.6	4.3			
FM	(30°-60°)	939.5	22.3			
FH	(60°-80°)	1007.2	23.9			G1/1800
FVH	(80°-90°)	40.1	1.0			G1/100
BL	(0°-30°)	84.8	2.0	B0/110		
BM	(30°-60°)	150.1	3.6	B0/220		
BH	(60°-80°)	71.9	1.7	B0/110		G0/110
BVH	(80°-90°)	7.9	0.2			G0/10
UL	(90°-100°)	9.9	0.2		U1/10	
UH	(100°-180°)	867.6	20.6		U4/1000	

BUG Rating: B0-U5-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	39°	40°	45°
0°	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0
2.5°	426.1	426.5	426.5	426.9	425.3	425.3	425.7	424.1	424.9	424.5	422.5
5°	426.9	427.3	426.9	427.3	425.3	424.5	422.9	420.9	421.7	421.3	418.5
7.5°	424.9	425.3	424.5	424.9	422.5	420.9	418.5	416.8	415.6	415.2	411.6
10°	420.5	421.7	420.1	421.3	419.3	417.6	416.4	414.8	414.0	413.6	409.6
12.5°	414.0	414.8	415.2	416.8	416.8	417.2	417.2	416.0	416.4	416.0	412.8
15°	408.0	410.8	413.6	415.2	418.5	420.5	422.1	421.7	422.9	422.5	420.5
17.5°	408.0	410.4	415.2	420.5	426.5	429.3	431.8	431.8	432.2	431.4	428.1
20°	409.6	414.0	422.1	431.0	438.2	443.9	445.5	445.1	443.4	443.4	437.8
22.5°	422.9	425.7	434.6	444.3	454.3	460.0	460.4	459.2	455.9	455.1	448.3
25°	441.8	445.1	453.1	465.6	473.3	477.7	476.5	472.5	469.3	466.4	459.2
27.5°	471.3	473.7	481.7	490.2	494.6	496.3	491.4	485.8	482.2	480.9	471.3
30°	501.5	504.7	511.2	516.4	520.0	515.2	507.5	501.1	497.9	497.1	488.2
32.5°	538.6	539.0	543.4	544.6	545.0	537.0	526.5	520.4	519.2	517.6	510.8
35°	572.5	574.5	573.7	573.3	569.6	559.6	550.7	547.1	545.8	545.4	539.8
37.5°	602.7	605.9	603.9	600.3	595.8	587.8	578.5	574.5	578.5	576.1	577.3
40°	632.1	632.1	629.7	627.7	622.4	614.8	611.6	612.0	618.4	620.0	621.6
42.5°	657.5	657.1	654.7	653.1	652.3	650.7	649.0	656.7	669.2	671.6	675.3
45°	685.3	684.9	675.7	678.9	684.5	685.7	691.4	709.1	724.4	725.6	733.3
47.5°	712.3	709.1	700.2	703.5	719.6	728.1	737.3	762.3	783.7	788.1	809.5
50°	740.6	737.3	727.7	733.7	756.3	772.0	793.8	828.4	857.9	863.9	891.7
52.5°	770.0	769.6	761.9	771.2	799.0	830.9	865.1	904.2	940.1	947.8	988.9
55°	805.5	803.4	800.2	811.5	851.0	893.8	947.4	1000.6	1039.7	1053.4	1094.9
57.5°	845.4	844.6	845.0	868.4	915.9	980.8	1046.5	1118.3	1182.8	1192.5	1231.2
60°	880.0	881.7	890.9	927.6	987.3	1075.2	1167.5	1264.6	1321.9	1332.0	1369.9
62.5°	922.4	931.6	952.2	998.6	1068.7	1175.1	1294.9	1397.7	1471.4	1492.0	1563.8
65°	1024.0	1031.2	1069.5	1125.6	1215.1	1351.3	1488.8	1638.3	1760.1	1778.6	1840.3
67.5°	1098.1	1116.7	1176.8	1268.3	1397.7	1571.8	1760.5	1941.5	2044.3	2052.8	2099.6
69°	1072.3	1087.7	1158.6	1269.1	1425.1	1627.9	1862.5	2051.6	2114.9	2113.2	1995.9
70°	1032.8	1046.9	1125.2	1232.4	1402.1	1621.4	1864.1	2052.4	2090.7	2076.2	1941.9
72.5°	865.1	877.6	951.0	1063.1	1227.5	1445.2	1673.8	1802.4	1794.4	1782.3	1560.5
75°	540.2	539.4	603.5	668.4	796.2	1016.3	1186.4	1289.6	1273.1	1263.8	1001.8
77.5°	202.0	216.1	239.5	309.2	368.1	487.0	624.5	739.4	771.2	730.5	539.4
80°	105.2	112.9	128.2	152.8	175.8	201.2	241.9	311.2	322.1	300.3	217.7
82.5°	83.0	92.3	107.6	128.6	144.7	135.1	127.4	131.8	131.0	125.0	110.9
85°	62.9	73.8	98.8	120.1	143.1	120.9	96.3	84.3	75.0	75.4	80.2
87.5°	31.4	40.7	77.8	104.8	124.6	80.2	62.9	48.8	40.7	39.1	52.4
90°	14.7	14.7	21.7	27.6	35.7	22.1	21.7	18.5	15.3	15.2	19.1
92.5°	4.0	4.0	4.5	5.0	5.5	6.0	6.0	6.0	6.0	6.0	6.0
95°	5.0	5.0	5.5	6.0	6.5	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	7.0	7.0	7.5	8.0	8.0	8.0	8.5	9.0	9.0	9.0	9.0
100°	8.0	8.0	8.5	9.0	9.5	10.0	11.0	12.0	15.6	16.5	21.0
102.5°	11.0	11.0	12.0	13.0	15.5	18.0	22.5	27.0	32.2	33.5	40.0
105°	21.0	22.0	24.5	27.0	31.5	36.0	42.0	48.0	54.0	55.5	63.0
107.5°	41.0	42.0	45.5	49.0	53.5	58.0	65.5	73.0	79.0	80.5	88.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	39°	40°	45°
110°	66.0	68.0	71.0	74.0	80.5	87.0	94.5	102.0	106.8	108.0	114.0
112.5°	99.0	99.0	102.5	106.0	113.5	121.0	127.5	134.0	137.6	138.5	143.0
115°	140.0	139.0	143.0	147.0	153.0	159.0	163.5	168.0	170.4	171.0	174.0
117.5°	184.0	184.0	186.5	189.0	193.0	197.0	199.5	202.0	203.2	203.5	205.0
120°	225.0	223.0	224.5	226.0	229.5	233.0	235.0	237.0	239.4	240.0	243.0
122.5°	263.0	260.0	260.5	261.0	264.0	267.0	269.0	271.0	273.4	274.0	277.0
125°	298.0	294.0	295.0	296.0	297.5	299.0	302.0	305.0	307.0	307.5	310.0
127.5°	330.0	329.0	329.0	329.0	331.0	333.0	336.0	339.0	339.4	339.5	340.0
130°	363.0	361.0	361.5	362.0	364.0	366.0	368.0	370.0	370.8	371.0	372.0
132.5°	396.0	394.0	393.5	393.0	397.0	401.0	402.5	404.0	404.4	404.5	405.0
135°	429.0	426.0	426.0	426.0	429.0	432.0	433.5	435.0	435.8	436.0	437.0
137.5°	460.0	457.0	458.0	459.0	459.5	460.0	462.0	464.0	465.6	466.0	468.0
140°	488.0	485.0	486.0	487.0	488.0	489.0	490.0	491.0	493.4	494.0	497.0
142.5°	518.0	515.0	516.0	517.0	517.5	518.0	519.5	521.0	522.6	523.0	525.0
145°	550.0	546.0	545.0	544.0	545.5	547.0	548.5	550.0	550.4	550.5	551.0
147.5°	575.0	572.0	571.5	571.0	572.5	574.0	574.0	574.0	574.4	574.5	575.0
150°	595.0	592.0	592.5	593.0	593.0	593.0	593.0	593.0	593.0	593.0	593.0
152.5°	611.0	608.0	608.0	608.0	608.5	609.0	609.5	610.0	610.0	610.0	610.0
155°	629.0	625.0	625.0	625.0	626.0	627.0	628.5	630.0	629.2	629.0	628.0
157.5°	646.0	643.0	643.0	643.0	643.5	644.0	645.0	646.0	645.6	645.5	645.0
160°	663.0	660.0	659.5	659.0	657.5	656.0	655.5	655.0	655.0	655.0	655.0
162.5°	673.0	669.0	669.0	669.0	667.0	665.0	663.0	661.0	661.8	662.0	663.0
165°	681.0	678.0	677.0	676.0	676.0	676.0	674.5	673.0	673.0	673.0	673.0
167.5°	690.0	687.0	685.5	684.0	685.0	686.0	687.0	688.0	686.8	686.5	685.0
170°	698.0	695.0	693.5	692.0	692.0	692.0	692.5	693.0	692.2	692.0	691.0
172.5°	699.0	697.0	696.0	695.0	694.0	693.0	691.5	690.0	690.0	690.0	690.0
175°	700.0	698.0	697.5	697.0	696.0	695.0	693.0	691.0	690.6	690.5	690.0
177.5°	707.0	705.0	702.5	700.0	699.5	699.0	698.0	697.0	696.2	696.0	695.0
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0
2.5°	420.9	420.9	420.1	419.7	418.5	416.8	415.6	413.6	412.4	410.4	408.0
5°	415.6	414.0	413.2	411.6	409.2	407.2	404.7	401.9	398.7	394.7	390.2
7.5°	408.8	406.4	403.5	402.7	399.9	397.5	394.7	390.6	386.2	378.9	373.3
10°	406.0	403.5	401.1	399.5	395.9	393.1	389.8	384.6	378.9	369.3	358.8
12.5°	408.8	406.4	403.9	401.1	397.9	394.7	390.2	383.8	376.1	363.6	350.7
15°	415.6	413.2	409.2	406.4	401.9	399.1	393.1	385.8	374.5	359.2	342.3
17.5°	423.3	419.7	416.0	411.6	407.6	403.9	397.5	388.2	374.1	356.0	334.2
20°	430.5	426.5	420.9	417.6	413.6	408.4	401.5	390.2	373.3	349.5	325.7
22.5°	439.0	433.8	427.7	424.1	420.9	416.4	408.4	393.9	373.3	345.9	316.1
25°	449.9	443.0	437.0	433.4	431.4	428.1	418.5	402.3	376.1	343.9	308.0
27.5°	462.8	453.9	448.7	446.3	445.9	443.4	433.8	413.6	382.6	343.9	300.3
30°	478.1	470.5	463.6	463.6	468.4	466.8	455.9	431.0	392.7	345.1	294.7
32.5°	499.5	491.8	487.8	491.8	497.1	498.7	486.2	455.5	409.2	350.7	289.0
35°	530.9	526.1	523.3	529.3	539.8	543.8	528.5	492.2	433.4	361.6	285.8
37.5°	572.5	568.8	565.2	575.7	595.4	603.5	581.3	534.6	468.0	379.8	284.2
40°	620.0	620.4	624.5	645.4	664.4	681.3	656.3	598.7	515.6	405.6	285.8
42.5°	676.5	680.9	694.6	723.6	760.3	773.6	749.4	676.1	574.9	436.6	289.9
45°	746.6	758.3	781.7	824.8	869.2	889.7	855.5	773.6	649.5	486.2	301.1
47.5°	821.2	847.0	886.5	938.9	990.5	1003.8	961.5	861.9	722.4	530.1	318.5
50°	916.7	948.2	987.7	1050.6	1105.4	1113.5	1057.4	943.7	786.1	568.4	335.0
52.5°	1005.8	1048.6	1098.9	1171.9	1227.5	1217.5	1144.9	1016.7	836.5	594.6	344.3
55°	1127.6	1171.9	1228.8	1292.5	1347.7	1323.5	1224.3	1078.8	876.8	614.0	347.1
57.5°	1266.7	1300.5	1356.1	1421.5	1457.7	1416.2	1302.5	1139.3	915.1	614.4	324.9
60°	1403.3	1442.8	1504.1	1568.2	1588.4	1516.6	1357.0	1148.5	877.2	548.3	260.0
62.5°	1605.7	1645.6	1676.6	1687.1	1650.8	1506.5	1293.7	1050.6	756.3	432.6	184.2
65°	1831.8	1786.7	1726.6	1670.2	1571.4	1352.1	1115.5	863.1	587.0	289.0	127.0
67.5°	1891.1	1753.6	1623.0	1497.2	1313.0	1076.8	841.3	607.1	376.5	164.5	86.3
69°	1829.4	1628.7	1483.1	1283.6	1093.3	805.9	579.7	389.0	224.9	114.5	72.2
70°	1716.6	1507.7	1310.6	1096.9	847.0	615.6	385.4	254.8	146.7	83.4	64.9
72.5°	1295.3	1035.7	798.2	518.4	316.1	175.4	123.4	88.3	69.7	61.3	55.6
75°	749.0	498.7	326.5	174.2	103.2	76.6	66.9	59.7	55.2	53.2	48.4
77.5°	316.1	197.5	133.8	98.0	69.3	59.3	51.6	47.6	47.2	46.0	41.5
80°	143.9	123.4	105.2	73.8	52.8	45.2	39.5	38.7	39.5	38.3	33.9
82.5°	106.8	105.2	87.9	56.8	40.3	30.2	24.6	25.8	29.0	31.4	27.4
85°	89.1	89.1	73.8	42.3	26.6	19.4	18.9	21.4	24.2	26.2	22.2
87.5°	81.8	78.6	42.3	21.8	15.3	12.5	11.7	10.5	10.5	18.1	15.3
90°	15.1	10.6	10.0	10.6	11.0	10.6	10.4	9.0	9.0	9.0	10.0
92.5°	6.5	7.0	7.0	7.0	6.5	6.0	6.0	6.0	6.0	6.0	6.0
95°	7.0	7.0	7.5	8.0	7.5	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	10.5	12.0	11.0	10.0	9.5	9.0	8.5	8.0	8.0	8.0	8.5
100°	25.0	29.0	27.5	26.0	24.5	23.0	21.0	19.0	19.0	19.0	21.0
102.5°	45.0	50.0	48.5	47.0	44.5	42.0	40.5	39.0	38.0	39.0	40.5
105°	67.5	72.0	71.0	70.0	67.5	65.0	63.0	61.0	61.0	61.0	63.0
107.5°	91.5	95.0	94.5	94.0	92.0	90.0	88.5	87.0	86.0	87.0	88.5



REPORT NUMBER: P227089

CATALOG NUMBER: IST-AF-450-LED-E1-SL4-7030-ULG

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
110°	117.0	120.0	120.5	121.0	120.0	119.0	117.5	116.0	117.0	116.0	117.5
112.5°	145.5	148.0	149.0	150.0	149.5	149.0	148.0	147.0	147.0	147.0	148.0
115°	176.5	179.0	180.5	182.0	180.5	179.0	178.0	177.0	178.0	177.0	178.0
117.5°	208.0	211.0	213.0	215.0	212.5	210.0	209.0	208.0	209.0	208.0	209.0
120°	244.5	246.0	248.0	250.0	247.5	245.0	244.0	243.0	243.0	243.0	244.0
122.5°	278.0	279.0	281.0	283.0	280.5	278.0	277.0	276.0	277.0	276.0	277.0
125°	311.5	313.0	314.0	315.0	312.5	310.0	310.0	310.0	310.0	310.0	310.0
127.5°	342.5	345.0	345.5	346.0	346.0	346.0	345.5	345.0	347.0	345.0	345.5
130°	374.5	377.0	379.0	381.0	381.0	381.0	380.0	379.0	380.0	379.0	380.0
132.5°	408.0	411.0	413.5	416.0	415.0	414.0	414.0	414.0	415.0	414.0	414.0
135°	440.0	443.0	445.5	448.0	447.5	447.0	448.5	450.0	451.0	450.0	448.5
137.5°	470.5	473.0	474.0	475.0	475.5	476.0	478.5	481.0	482.0	481.0	478.5
140°	498.5	500.0	501.0	502.0	503.0	504.0	506.5	509.0	511.0	509.0	506.5
142.5°	526.0	527.0	530.0	533.0	533.0	533.0	533.5	534.0	536.0	534.0	533.5
145°	553.5	556.0	559.0	562.0	561.5	561.0	559.5	558.0	560.0	558.0	559.5
147.5°	577.5	580.0	582.5	585.0	585.5	586.0	584.5	583.0	585.0	583.0	584.5
150°	595.0	597.0	598.5	600.0	601.5	603.0	604.5	606.0	610.0	606.0	604.5
152.5°	610.5	611.0	612.5	614.0	616.0	618.0	620.5	623.0	628.0	623.0	620.5
155°	627.0	626.0	628.5	631.0	633.5	636.0	637.0	638.0	641.0	638.0	637.0
157.5°	644.5	644.0	646.0	648.0	649.0	650.0	650.0	650.0	655.0	650.0	650.0
160°	656.5	658.0	661.0	664.0	662.5	661.0	660.5	660.0	666.0	660.0	660.5
162.5°	665.0	667.0	669.0	671.0	670.5	670.0	669.0	668.0	674.0	668.0	669.0
165°	672.5	672.0	674.5	677.0	678.5	680.0	679.0	678.0	682.0	678.0	679.0
167.5°	681.5	678.0	681.0	684.0	686.0	688.0	688.0	688.0	694.0	688.0	688.0
170°	688.5	686.0	687.5	689.0	691.5	694.0	695.0	696.0	701.0	696.0	695.0
172.5°	689.5	689.0	690.5	692.0	693.0	694.0	695.0	696.0	701.0	696.0	695.0
175°	690.0	690.0	692.5	695.0	695.5	696.0	695.0	694.0	699.0	694.0	695.0
177.5°	694.5	694.0	696.5	699.0	700.0	701.0	699.5	698.0	702.0	698.0	699.5
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0



REPORT NUMBER: P227089

CATALOG NUMBER: IST-AF-450-LED-E1-SL4-7030-ULG

CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0
2.5°	406.0	404.3	400.3	399.5	398.3	396.7	396.3	394.3	390.2	389.4	389.8
5°	387.4	381.0	376.5	372.9	370.1	362.8	360.0	356.8	351.1	349.5	347.1
7.5°	365.6	358.0	349.1	342.7	335.0	327.3	321.3	313.6	307.6	304.0	297.5
10°	348.7	338.2	326.5	313.6	303.6	291.9	284.2	275.3	265.7	256.8	250.3
12.5°	335.8	321.3	304.4	289.0	274.5	262.0	248.3	235.8	223.7	211.6	201.2
15°	325.3	307.2	285.8	266.5	248.7	230.2	214.9	197.5	182.2	171.7	158.4
17.5°	314.0	290.7	265.3	242.7	219.7	200.4	181.0	162.9	148.4	134.6	123.8
20°	300.3	272.1	244.7	218.5	192.3	170.1	150.4	133.0	118.9	108.0	100.0
22.5°	285.0	252.0	220.1	191.5	165.3	143.5	125.0	112.1	101.6	95.5	93.1
25°	270.1	232.2	196.3	164.9	138.7	120.1	107.6	96.8	91.5	89.1	89.1
27.5°	256.4	212.0	172.1	141.5	116.1	101.6	91.9	87.5	85.1	85.1	86.3
30°	243.5	191.9	149.2	118.1	98.0	87.1	81.8	80.2	80.6	82.2	83.9
32.5°	228.6	172.5	129.4	101.6	85.1	77.8	73.8	74.2	76.2	79.0	81.8
35°	212.9	152.0	112.1	89.1	76.2	70.5	68.1	68.5	71.4	75.0	77.8
37.5°	198.7	135.5	98.8	79.4	69.7	66.1	64.1	64.5	66.5	71.0	74.6
40°	184.6	121.3	87.9	73.8	66.1	62.5	61.3	60.9	62.5	66.5	71.0
42.5°	172.5	109.2	81.4	69.7	63.7	60.5	58.9	58.9	59.7	62.9	67.3
45°	165.3	102.0	77.0	66.9	61.7	58.9	57.2	56.4	57.6	59.7	63.7
47.5°	165.3	98.4	74.2	64.9	60.1	57.6	55.6	55.2	55.6	57.6	61.7
50°	170.9	99.2	73.8	64.1	59.3	56.0	54.0	54.0	54.8	57.6	60.9
52.5°	175.8	100.8	75.0	64.9	59.3	55.2	52.8	52.4	53.6	56.4	59.3
55°	175.0	100.8	76.2	66.1	60.5	55.6	52.4	52.0	52.8	55.6	58.5
57.5°	156.4	94.7	75.0	66.9	62.1	57.6	54.4	53.2	54.0	56.4	58.9
60°	126.6	84.3	71.8	66.9	64.5	61.3	58.1	57.2	57.6	60.1	62.9
62.5°	99.2	75.0	67.7	66.5	65.7	64.1	62.9	62.1	62.1	64.1	66.5
65°	80.6	67.7	64.5	64.9	65.7	65.3	64.9	64.5	64.5	65.7	68.1
67.5°	67.3	60.9	60.1	61.3	62.1	62.5	62.9	62.5	62.9	64.1	66.9
69°	61.3	57.2	56.4	57.2	58.9	59.3	60.1	59.7	60.1	61.3	64.1
70°	57.6	54.4	53.6	54.8	56.0	56.4	57.2	56.8	57.2	58.5	61.3
72.5°	50.0	46.4	45.2	46.0	47.2	47.2	48.4	48.8	48.0	48.4	50.4
75°	42.7	38.7	36.7	37.1	37.1	37.1	37.9	37.9	37.1	36.7	37.1
77.5°	35.9	31.4	29.0	29.0	29.0	28.6	27.4	27.8	28.2	27.8	28.2
80°	28.2	24.6	22.2	22.2	22.2	21.4	21.0	21.0	21.8	22.6	22.2
82.5°	21.8	18.1	16.9	16.5	16.5	15.7	15.7	16.5	16.1	16.5	17.3
85°	15.7	12.9	11.7	12.1	11.7	10.9	11.3	12.5	12.5	12.1	12.9
87.5°	9.7	8.1	7.7	8.1	7.3	6.0	5.6	6.0	6.9	6.5	7.3
90°	10.2	9.8	9.8	8.8	8.2	7.8	7.8	8.3	9.2	9.2	8.8
92.5°	6.0	6.5	7.0	7.0	7.0	6.5	6.0	6.0	6.0	6.0	6.0
95°	7.0	7.5	8.0	7.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	9.0	9.5	10.0	11.0	12.0	10.5	9.0	9.0	9.0	8.5	8.0
100°	23.0	24.5	26.0	27.5	29.0	25.0	21.0	16.5	12.0	11.0	10.0
102.5°	42.0	44.5	47.0	48.5	50.0	45.0	40.0	33.5	27.0	22.5	18.0
105°	65.0	67.5	70.0	71.0	72.0	67.5	63.0	55.5	48.0	42.0	36.0
107.5°	90.0	92.0	94.0	94.5	95.0	91.5	88.0	80.5	73.0	65.5	58.0



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	
110°	119.0	120.0	121.0	120.5	120.0	117.0	114.0	108.0	102.0	94.5	87.0	0°
112.5°	149.0	149.5	150.0	149.0	148.0	145.5	143.0	138.5	134.0	127.5	121.0	2.5°
115°	179.0	180.5	182.0	180.5	179.0	176.5	174.0	171.0	168.0	163.5	159.0	5°
117.5°	210.0	212.5	215.0	213.0	211.0	208.0	205.0	203.5	202.0	199.5	197.0	7.5°
120°	245.0	247.5	250.0	248.0	246.0	244.5	243.0	240.0	237.0	235.0	233.0	10°
122.5°	278.0	280.5	283.0	281.0	279.0	278.0	277.0	274.0	271.0	269.0	267.0	12.5°
125°	310.0	312.5	315.0	314.0	313.0	311.5	310.0	307.5	305.0	302.0	299.0	15°
127.5°	346.0	346.0	346.0	345.5	345.0	342.5	340.0	339.5	339.0	336.0	333.0	17.5°
130°	381.0	381.0	381.0	379.0	377.0	374.5	372.0	371.0	370.0	368.0	366.0	20°
132.5°	414.0	415.0	416.0	413.5	411.0	408.0	405.0	404.5	404.0	402.5	401.0	22.5°
135°	447.0	447.5	448.0	445.5	443.0	440.0	437.0	436.0	435.0	433.5	432.0	25°
137.5°	476.0	475.5	475.0	474.0	473.0	470.5	468.0	466.0	464.0	462.0	460.0	27.5°
140°	504.0	503.0	502.0	501.0	500.0	498.5	497.0	494.0	491.0	490.0	489.0	30°
142.5°	533.0	533.0	533.0	530.0	527.0	526.0	525.0	523.0	521.0	519.5	518.0	32.5°
145°	561.0	561.5	562.0	559.0	556.0	553.5	551.0	550.5	550.0	548.5	547.0	35°
147.5°	586.0	585.5	585.0	582.5	580.0	577.5	575.0	574.5	574.0	574.0	574.0	37.5°
150°	603.0	601.5	600.0	598.5	597.0	595.0	593.0	593.0	593.0	593.0	593.0	40°
152.5°	618.0	616.0	614.0	612.5	611.0	610.5	610.0	610.0	610.0	609.5	609.0	42.5°
155°	636.0	633.5	631.0	628.5	626.0	627.0	628.0	629.0	630.0	628.5	627.0	45°
157.5°	650.0	649.0	648.0	646.0	644.0	644.5	645.0	645.5	646.0	645.0	644.0	47.5°
160°	661.0	662.5	664.0	661.0	658.0	656.5	655.0	655.0	655.0	655.5	656.0	50°
162.5°	670.0	670.5	671.0	669.0	667.0	665.0	663.0	662.0	661.0	663.0	665.0	52.5°
165°	680.0	678.5	677.0	674.5	672.0	672.5	673.0	673.0	673.0	674.5	676.0	55°
167.5°	688.0	686.0	684.0	681.0	678.0	681.5	685.0	686.5	688.0	687.0	686.0	57.5°
170°	694.0	691.5	689.0	687.5	686.0	688.5	691.0	692.0	693.0	692.5	692.0	60°
172.5°	694.0	693.0	692.0	690.5	689.0	689.5	690.0	690.0	690.0	691.5	693.0	62.5°
175°	696.0	695.5	695.0	692.5	690.0	690.0	690.0	690.5	691.0	693.0	695.0	65°
177.5°	701.0	700.0	699.0	696.5	694.0	694.5	695.0	696.0	697.0	698.0	699.0	67.5°
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	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):

160°	165°	170°	175°	180°
416.0	416.0	416.0	416.0	416.0
387.0	388.2	383.0	385.4	383.8
344.7	342.7	342.3	341.1	338.6
295.1	293.5	288.6	290.3	286.6
243.9	243.5	234.6	235.0	230.6
196.7	189.5	185.8	180.6	183.4
152.4	146.3	138.7	136.7	139.5
114.9	108.8	105.2	102.0	100.8
95.1	91.5	89.5	88.3	87.5
91.9	91.1	90.7	89.9	89.5
89.9	90.7	90.7	90.7	89.9
87.9	89.5	89.9	89.5	88.7
85.9	87.1	87.1	86.7	85.5
83.0	84.3	84.3	83.9	83.0
79.8	80.6	81.0	81.0	81.4
77.4	78.2	79.0	79.8	81.0
74.6	75.8	76.2	77.8	79.4
71.0	72.6	73.4	74.6	76.2
67.3	69.3	69.7	71.4	73.0
65.7	67.3	67.3	68.5	69.7
63.7	64.5	64.1	64.9	65.3
61.7	62.5	62.1	62.9	63.3
60.1	60.9	61.7	62.5	62.9
60.9	62.1	62.5	63.7	64.1
64.5	66.1	67.7	69.3	70.5
68.1	70.1	73.8	81.0	83.9
70.1	73.0	81.4	93.9	97.6
68.9	72.6	82.6	95.9	100.4
66.5	69.3	80.2	93.9	98.0
63.3	66.1	77.0	91.9	95.5
51.2	52.8	64.9	79.0	81.4
37.5	38.7	48.0	53.6	53.2
29.0	30.6	33.9	34.3	33.9
23.0	23.8	25.4	25.4	25.8
17.7	18.1	18.9	18.1	17.7
13.3	12.9	12.5	12.1	11.7
7.7	7.7	6.5	5.6	5.2
8.3	8.2	7.2	5.8	5.0
5.5	5.0	4.5	4.0	4.0
6.5	6.0	5.5	5.0	5.0
8.0	8.0	7.5	7.0	7.0
9.5	9.0	8.5	8.0	8.0
15.5	13.0	12.0	11.0	11.0
31.5	27.0	24.5	22.0	21.0
53.5	49.0	45.5	42.0	41.0

CANDELA DISTRIBUTION:

	160°
110°	80.5
112.5°	113.5
115°	153.0
117.5°	193.0
120°	229.5
122.5°	264.0
125°	297.5
127.5°	331.0
130°	364.0
132.5°	397.0
135°	429.0
137.5°	459.5
140°	488.0
142.5°	517.5
145°	545.5
147.5°	572.5
150°	593.0
152.5°	608.5
155°	626.0
157.5°	643.5
160°	657.5
162.5°	667.0
165°	676.0
167.5°	685.0
170°	692.0
172.5°	694.0
175°	696.0
177.5°	699.5
180°	700.0

'227089

IST-AF-450-LED-E1-SL4-7030-ULG

TION (continued):

165°	170°	175°	180°
74.0	71.0	68.0	66.0
106.0	102.5	99.0	99.0
147.0	143.0	139.0	140.0
189.0	186.5	184.0	184.0
226.0	224.5	223.0	225.0
261.0	260.5	260.0	263.0
296.0	295.0	294.0	298.0
329.0	329.0	329.0	330.0
362.0	361.5	361.0	363.0
393.0	393.5	394.0	396.0
426.0	426.0	426.0	429.0
459.0	458.0	457.0	460.0
487.0	486.0	485.0	488.0
517.0	516.0	515.0	518.0
544.0	545.0	546.0	550.0
571.0	571.5	572.0	575.0
593.0	592.5	592.0	595.0
608.0	608.0	608.0	611.0
625.0	625.0	625.0	629.0
643.0	643.0	643.0	646.0
659.0	659.5	660.0	663.0
669.0	669.0	669.0	673.0
676.0	677.0	678.0	681.0
684.0	685.5	687.0	690.0
692.0	693.5	695.0	698.0
695.0	696.0	697.0	699.0
697.0	697.5	698.0	700.0
700.0	702.5	705.0	707.0
700.0	700.0	700.0	700.0

(END OF REPORT)