

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: P226568

Luminaire Tested: **IST-AF-450-LED-E1-T4FT-7050-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P226568
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35943)-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-T4FT-7050-ULG
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV FORWARD THROW, WITH UPLIGHT GLOW
Light Source: (16) 5000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4914.4 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U5 - G1

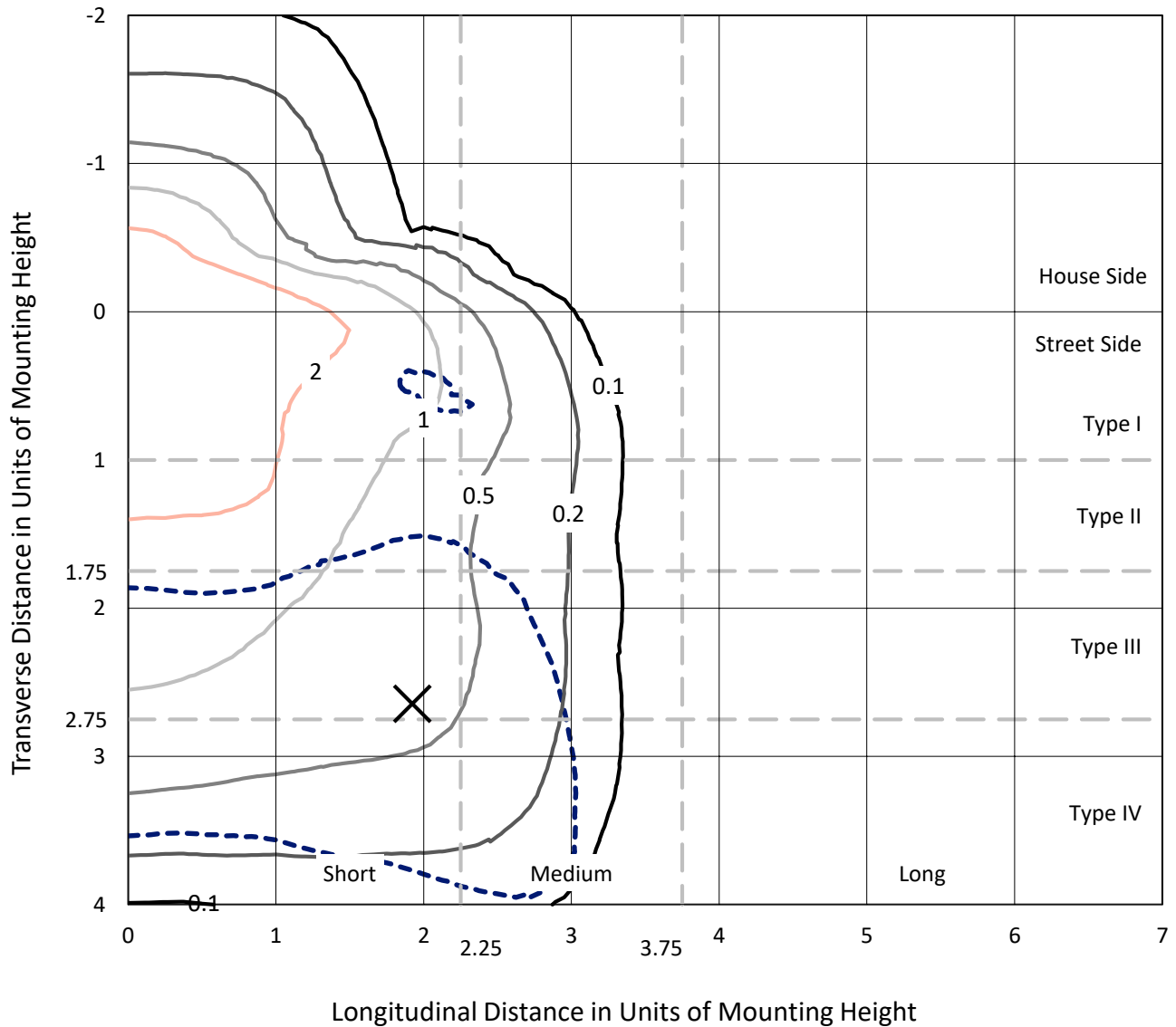
Input Watts (W): 42.01
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P226568
 CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

Iso-Footcandle Lines of Horizontal Illumination

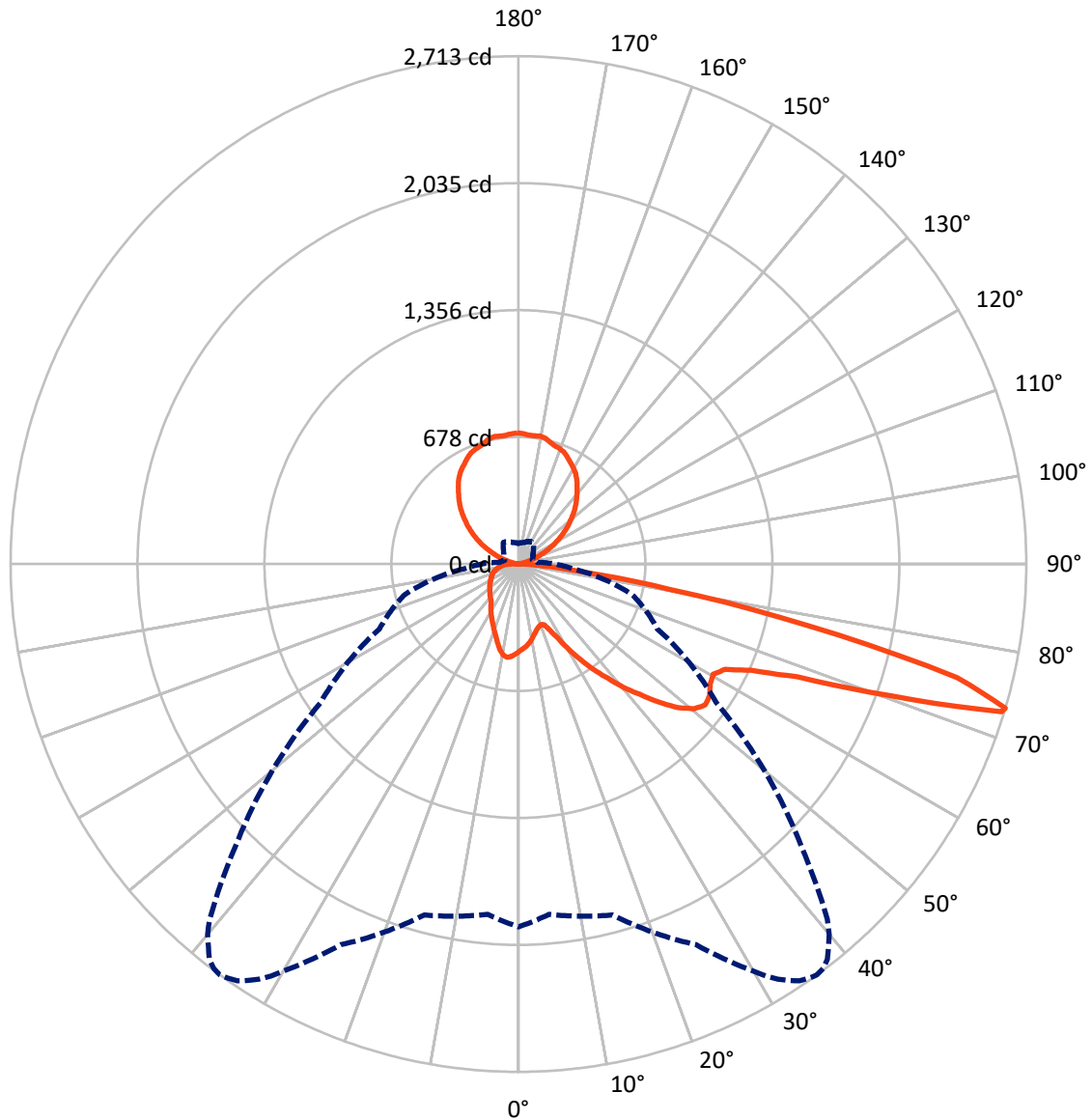
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P226568
CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

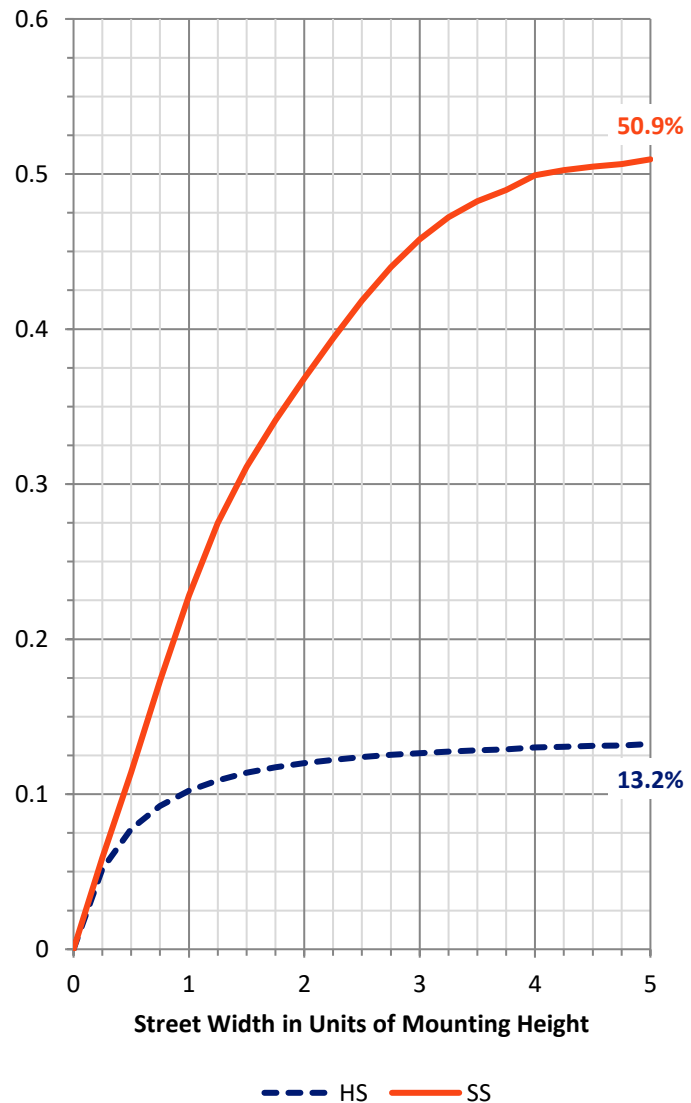
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	670.7	868.3	1539.0
	% Fixture	13.6	17.7	31.3
Street Side	Lumens	2507.6	867.8	3375.4
	% Fixture	51.0	17.7	68.7
Total	Lumens	3178.3	1736.1	4914.4
	% Fixture	64.7	35.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.9	0.9
10°-20°	116.4	2.4
20°-30°	190.8	3.9
30°-40°	316.1	6.4
40°-50°	464.6	9.5
50°-60°	585.8	11.9
60°-70°	767.1	15.6
70°-80°	621.0	12.6
80°-90°	72.5	1.5
90°-100°	10.3	0.2
100°-110°	57.4	1.2
110°-120°	166.1	3.4
120°-130°	273.2	5.6
130°-140°	336.8	6.9
140°-150°	344.6	7.0
150°-160°	290.3	5.9
160°-170°	191.2	3.9
170°-180°	66.3	1.3
0°-90°	3178.3	64.7
0°-180°	4914.4	100.0



REPORT NUMBER: P226568

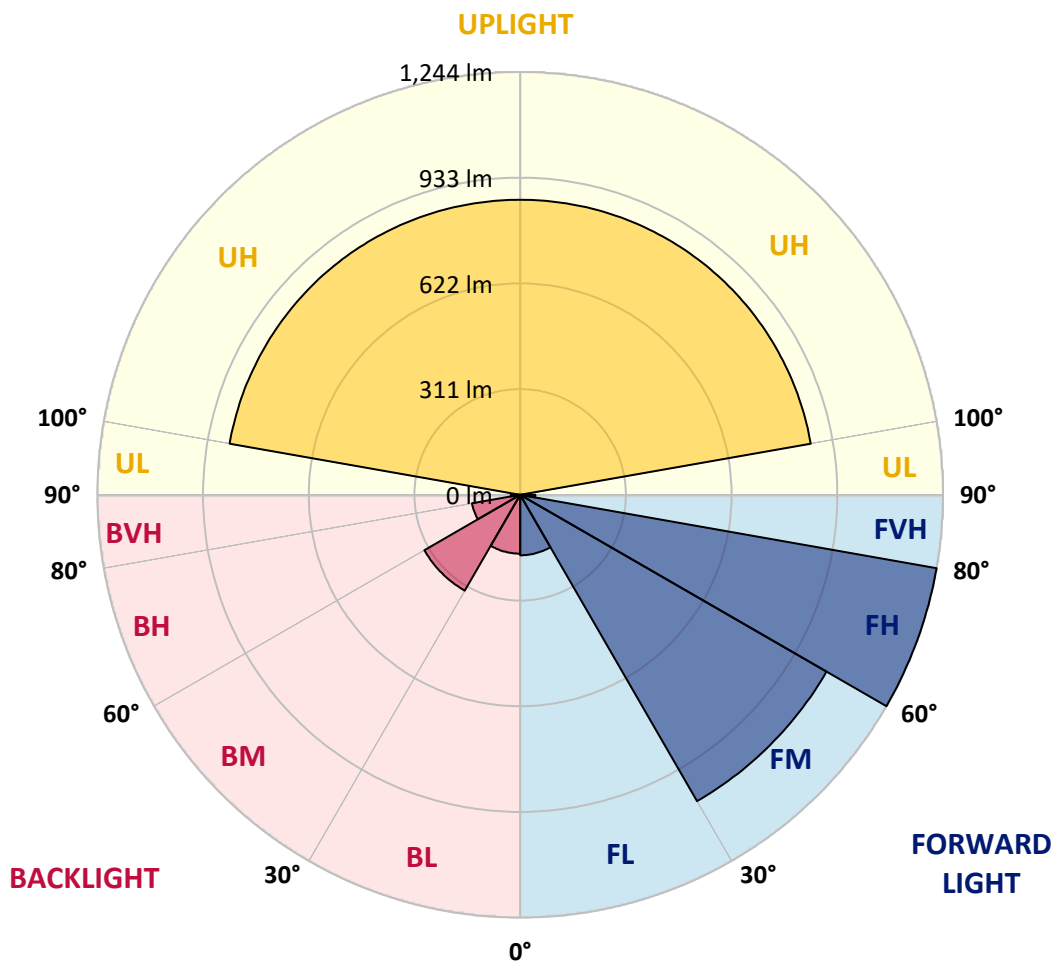
CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	177.9	3.6			
FM (30°-60°)	1040.8	21.2			
FH (60°-80°)	1244.3	25.3			G1/1800
FVH (80°-90°)	44.6	0.9			G1/100
BL (0°-30°)	173.3	3.5	B1/500		
BM (30°-60°)	325.7	6.6	B1/1000		
BH (60°-80°)	143.8	2.9	B1/500		G1/500
BVH (80°-90°)	27.9	0.6			G1/100
UL (90°-100°)	10.3	0.2		U2/50	
UH (100°-180°)	868.3	17.7		U4/1000	

BUG Rating: B1-U5-G1

Type IV Short





REPORT NUMBER: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	30°	31°	32°	33°	34°	35°	36°
0°	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8
2.5°	449.9	450.8	451.7	451.7	451.7	453.1	452.6	452.6	453.1	453.6	453.6
5°	433.1	433.5	436.3	437.2	439.9	439.4	439.4	439.4	441.3	439.9	440.8
7.5°	413.9	414.8	417.6	420.8	423.0	423.5	423.0	422.1	424.4	425.3	424.4
10°	391.2	391.6	395.3	398.0	401.6	401.2	402.6	402.6	403.5	403.0	404.8
12.5°	379.8	378.9	377.1	378.4	379.3	379.3	379.3	380.7	380.2	381.2	382.5
15°	378.4	376.1	367.0	363.8	362.9	362.9	362.5	362.0	363.4	364.8	364.8
17.5°	384.8	380.2	362.5	353.4	351.6	350.6	351.1	350.2	350.2	352.0	351.6
20°	415.8	407.6	372.0	352.0	346.5	346.5	346.1	344.7	344.7	345.2	345.2
22.5°	494.5	484.1	422.1	380.7	361.6	361.1	359.7	358.4	354.7	353.8	352.0
25°	604.3	592.0	485.9	441.3	414.4	413.5	406.7	405.7	397.1	397.5	391.6
27.5°	689.4	681.2	571.0	511.8	486.3	480.9	477.7	469.5	462.2	456.3	449.0
30°	718.6	717.2	657.1	609.3	571.0	564.7	556.0	552.4	541.9	533.7	528.7
32.5°	764.6	765.9	740.9	688.1	654.8	648.5	641.2	632.5	625.2	619.8	607.9
35°	830.2	830.6	813.3	773.7	735.4	726.8	722.7	712.7	705.8	699.0	693.1
37.5°	875.7	878.0	865.7	835.2	812.4	800.1	799.6	792.4	784.6	778.7	773.2
40°	963.1	950.8	910.3	890.7	872.0	870.7	866.6	862.5	864.3	861.1	867.0
42.5°	1051.5	1036.0	979.5	951.7	940.4	942.6	941.3	941.7	947.2	945.8	952.2
45°	1127.1	1109.3	1055.6	1022.8	1031.9	1034.6	1042.4	1046.9	1044.6	1052.8	1052.8
47.5°	1202.7	1161.2	1097.5	1112.5	1118.9	1139.8	1145.3	1143.9	1151.7	1155.3	1145.3
50°	1149.4	1138.4	1133.4	1179.4	1208.1	1214.9	1222.7	1226.8	1230.4	1225.4	1215.4
52.5°	1036.9	1036.0	1106.6	1219.0	1243.2	1252.3	1259.6	1262.8	1261.4	1258.7	1250.5
55°	999.1	991.8	1052.8	1178.1	1214.9	1223.6	1234.1	1240.4	1246.8	1245.9	1239.5
57.5°	1050.6	1044.6	1045.1	1142.1	1178.1	1185.8	1192.6	1199.9	1201.7	1207.7	1208.1
60°	1199.9	1192.2	1129.8	1140.7	1177.2	1185.8	1186.7	1190.8	1191.3	1194.5	1194.9
62.5°	1415.3	1401.2	1306.0	1224.1	1236.8	1240.9	1244.1	1243.2	1241.4	1239.1	1239.1
65°	1651.2	1638.0	1515.5	1419.9	1383.0	1393.0	1377.1	1373.9	1370.2	1370.2	1366.1
67.5°	1931.7	1906.7	1811.9	1704.5	1651.2	1656.2	1663.5	1635.7	1625.7	1626.6	1605.2
70°	2217.7	2191.3	2149.8	2148.5	2175.3	2163.5	2129.8	2174.4	2121.6	2108.9	2104.3
72.5°	2059.7	2028.3	2036.9	2294.2	2535.5	2574.7	2612.0	2646.7	2677.6	2696.3	2699.0
73°	1938.5	1878.9	1940.8	2243.2	2511.0	2568.8	2615.2	2652.1	2685.4	2702.2	2712.7
75°	968.1	971.3	1276.4	1850.7	2194.5	2244.1	2316.5	2357.0	2417.1	2448.1	2420.8
77.5°	224.5	232.7	386.6	878.4	1315.6	1386.6	1444.5	1503.7	1573.3	1599.3	1576.5
80°	79.2	82.9	136.2	333.8	549.2	588.3	638.0	703.1	767.8	783.7	823.8
82.5°	41.9	46.0	71.9	144.8	234.5	256.4	269.1	296.0	318.8	332.4	339.7
85°	24.1	24.6	41.0	80.1	107.5	116.1	124.3	130.7	138.0	133.0	133.0
87.5°	9.6	10.5	20.9	37.8	51.9	57.8	57.8	57.8	57.4	50.5	46.0
90°	6.8	7.7	11.1	15.7	14.8	14.8	14.4	13.5	13.0	13.5	11.1
92.5°	4.0	4.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
95°	5.0	5.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
97.5°	7.0	7.0	8.0	8.0	8.5	8.6	8.7	8.8	8.9	9.0	9.0
100°	8.0	8.0	9.0	10.0	11.0	11.2	11.4	11.6	11.8	12.0	12.9
102.5°	11.0	11.0	13.0	18.0	22.5	23.4	24.3	25.2	26.1	27.0	28.3
105°	21.0	22.0	27.0	36.0	42.0	43.2	44.4	45.6	46.8	48.0	49.5
107.5°	41.0	42.0	49.0	58.0	65.5	67.0	68.5	70.0	71.5	73.0	74.5



REPORT NUMBER: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	30°	31°	32°	33°	34°	35°	36°
110°	66.0	68.0	74.0	87.0	94.5	96.0	97.5	99.0	100.5	102.0	103.2
112.5°	99.0	99.0	106.0	121.0	127.5	128.8	130.1	131.4	132.7	134.0	134.9
115°	140.0	139.0	147.0	159.0	163.5	164.4	165.3	166.2	167.1	168.0	168.6
117.5°	184.0	184.0	189.0	197.0	199.5	200.0	200.5	201.0	201.5	202.0	202.3
120°	225.0	223.0	226.0	233.0	235.0	235.4	235.8	236.2	236.6	237.0	237.6
122.5°	263.0	260.0	261.0	267.0	269.0	269.4	269.8	270.2	270.6	271.0	271.6
125°	298.0	294.0	296.0	299.0	302.0	302.6	303.2	303.8	304.4	305.0	305.5
127.5°	330.0	329.0	329.0	333.0	336.0	336.6	337.2	337.8	338.4	339.0	339.1
130°	363.0	361.0	362.0	366.0	368.0	368.4	368.8	369.2	369.6	370.0	370.2
132.5°	396.0	394.0	393.0	401.0	402.5	402.8	403.1	403.4	403.7	404.0	404.1
135°	429.0	426.0	426.0	432.0	433.5	433.8	434.1	434.4	434.7	435.0	435.2
137.5°	460.0	457.0	459.0	460.0	462.0	462.4	462.8	463.2	463.6	464.0	464.4
140°	488.0	485.0	487.0	489.0	490.0	490.2	490.4	490.6	490.8	491.0	491.6
142.5°	518.0	515.0	517.0	518.0	519.5	519.8	520.1	520.4	520.7	521.0	521.4
145°	550.0	546.0	544.0	547.0	548.5	548.8	549.1	549.4	549.7	550.0	550.1
147.5°	575.0	572.0	571.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.1
150°	595.0	592.0	593.0	593.0	593.0	593.0	593.0	593.0	593.0	593.0	593.0
152.5°	611.0	608.0	608.0	609.0	609.5	609.6	609.7	609.8	609.8	609.9	610.0
155°	629.0	625.0	625.0	627.0	628.5	628.8	629.1	629.4	629.7	630.0	629.8
157.5°	646.0	643.0	643.0	644.0	645.0	645.2	645.4	645.6	645.8	646.0	645.9
160°	663.0	660.0	659.0	656.0	655.5	655.4	655.3	655.2	655.1	655.0	655.0
162.5°	673.0	669.0	669.0	665.0	663.0	662.6	662.2	661.8	661.4	661.0	661.2
165°	681.0	678.0	676.0	676.0	674.5	674.2	673.9	673.6	673.3	673.0	673.0
167.5°	690.0	687.0	684.0	686.0	687.0	687.2	687.4	687.6	687.8	688.0	687.7
170°	698.0	695.0	692.0	692.0	692.5	692.6	692.7	692.8	692.9	693.0	692.8
172.5°	699.0	697.0	695.0	693.0	691.5	691.2	690.9	690.6	690.3	690.0	690.0
175°	700.0	698.0	697.0	695.0	693.0	692.6	692.2	691.8	691.4	691.0	690.9
177.5°	707.0	705.0	700.0	699.0	698.0	697.8	697.6	697.4	697.2	697.0	696.8
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: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

CANDELA DISTRIBUTION (continued):

	37°	38°	39°	40°	41°	45°	55°	65°	75°	85°	90°
0°	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8
2.5°	454.5	454.9	454.0	455.8	454.5	454.5	456.7	460.8	464.0	464.9	467.7
5°	441.7	442.2	442.2	442.6	442.2	443.1	447.2	450.8	457.2	460.4	464.5
7.5°	425.3	426.7	426.2	427.1	427.1	428.1	434.4	440.4	446.7	452.6	457.7
10°	405.7	406.7	408.5	407.6	407.6	410.3	417.1	425.8	433.5	442.2	448.1
12.5°	382.5	384.8	384.3	386.2	387.1	388.9	400.3	409.8	419.4	429.4	437.2
15°	364.3	365.7	366.6	367.0	367.0	371.1	382.5	394.4	407.1	418.9	427.1
17.5°	352.5	352.5	353.4	353.8	354.7	357.5	369.3	382.5	397.1	411.7	420.8
20°	345.6	345.6	346.1	346.5	346.5	349.7	360.7	375.7	391.6	410.3	421.2
22.5°	351.1	349.7	349.3	349.3	347.5	347.5	357.9	373.9	393.9	418.0	432.2
25°	388.4	384.3	378.0	376.6	374.3	363.4	362.0	380.2	404.8	434.9	456.3
27.5°	444.4	440.4	436.3	431.2	427.6	407.6	380.2	396.6	425.8	468.6	495.0
30°	517.8	509.6	503.6	498.2	482.2	460.4	418.0	422.1	458.1	515.5	548.7
32.5°	599.7	591.1	582.0	569.2	565.1	529.6	475.4	464.5	499.1	570.1	604.7
35°	679.0	674.9	668.5	663.5	653.9	624.3	550.1	515.5	546.5	634.3	661.2
37.5°	771.0	763.2	763.7	759.6	754.1	729.1	627.5	577.0	597.5	695.8	712.7
40°	861.6	859.8	862.5	855.7	846.5	812.8	684.4	622.0	650.7	755.0	750.9
42.5°	947.2	948.6	945.4	937.6	927.6	871.1	720.9	660.3	698.5	806.9	781.4
45°	1045.1	1040.1	1026.9	1013.2	1000.9	921.2	740.4	703.1	744.5	862.9	812.4
47.5°	1137.5	1118.0	1106.6	1085.6	1061.5	966.8	766.9	748.2	795.5	915.8	842.0
50°	1205.4	1187.2	1168.0	1142.5	1117.0	1006.4	801.9	799.2	853.4	975.0	882.5
52.5°	1236.4	1219.5	1200.8	1174.9	1149.4	1035.1	848.8	848.8	921.7	1053.3	938.5
55°	1231.3	1219.0	1202.7	1179.0	1159.4	1050.6	897.1	903.5	1007.3	1138.0	1003.2
57.5°	1204.9	1198.1	1188.5	1172.1	1156.2	1062.4	954.0	958.1	1122.1	1219.5	1064.2
60°	1195.8	1193.1	1187.6	1178.1	1165.8	1088.4	1014.6	1023.7	1250.5	1294.2	1098.8
62.5°	1236.4	1230.9	1226.8	1217.2	1205.8	1152.1	1090.6	1093.4	1371.1	1303.3	1065.1
65°	1350.2	1340.2	1333.3	1320.6	1307.8	1248.2	1187.6	1158.0	1430.3	1218.1	950.8
67.5°	1588.8	1572.4	1552.8	1528.7	1493.6	1439.9	1283.7	1167.1	1376.6	1031.9	750.0
70°	2060.6	2025.1	1980.0	1928.5	1915.3	1758.7	1343.8	1099.7	1144.4	720.9	497.3
72.5°	2694.5	2657.6	2617.5	2575.2	2491.4	2147.1	1317.4	887.1	711.8	370.7	236.8
73°	2704.9	2679.9	2631.6	2582.4	2514.1	2140.3	1288.7	817.9	627.5	291.9	194.0
75°	2425.8	2415.8	2368.4	2273.7	2215.9	1807.9	949.0	474.0	274.6	180.3	126.1
77.5°	1574.2	1563.3	1536.4	1527.3	1420.8	1172.1	424.9	184.4	149.4	119.8	89.3
80°	838.8	787.8	778.7	742.3	664.4	451.3	145.3	112.9	99.3	80.1	62.4
82.5°	340.2	318.3	310.1	281.0	264.1	135.2	72.9	78.3	66.5	47.4	38.3
85°	125.2	115.2	112.5	91.5	80.6	40.1	44.6	55.1	41.4	26.4	19.1
87.5°	43.3	37.3	32.3	25.0	23.2	16.4	24.6	30.1	26.4	15.9	9.1
90°	11.0	10.4	9.9	9.3	9.7	8.8	9.7	13.1	13.6	9.7	8.8
92.5°	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	6.0	6.0	6.0
95°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	8.0	7.0	7.0	7.0
97.5°	9.0	9.0	9.0	9.0	9.0	9.0	12.0	10.0	9.0	8.0	8.0
100°	13.8	14.7	15.6	16.5	17.4	21.0	29.0	26.0	23.0	19.0	19.0
102.5°	29.6	30.9	32.2	33.5	34.8	40.0	50.0	47.0	42.0	39.0	38.0
105°	51.0	52.5	54.0	55.5	57.0	63.0	72.0	70.0	65.0	61.0	61.0
107.5°	76.0	77.5	79.0	80.5	82.0	88.0	95.0	94.0	90.0	87.0	86.0



REPORT NUMBER: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

CANDELA DISTRIBUTION (continued):

	37°	38°	39°	40°	41°	45°	55°	65°	75°	85°	90°
110°	104.4	105.6	106.8	108.0	109.2	114.0	120.0	121.0	119.0	116.0	117.0
112.5°	135.8	136.7	137.6	138.5	139.4	143.0	148.0	150.0	149.0	147.0	147.0
115°	169.2	169.8	170.4	171.0	171.6	174.0	179.0	182.0	179.0	177.0	178.0
117.5°	202.6	202.9	203.2	203.5	203.8	205.0	211.0	215.0	210.0	208.0	209.0
120°	238.2	238.8	239.4	240.0	240.6	243.0	246.0	250.0	245.0	243.0	243.0
122.5°	272.2	272.8	273.4	274.0	274.6	277.0	279.0	283.0	278.0	276.0	277.0
125°	306.0	306.5	307.0	307.5	308.0	310.0	313.0	315.0	310.0	310.0	310.0
127.5°	339.2	339.3	339.4	339.5	339.6	340.0	345.0	346.0	346.0	345.0	347.0
130°	370.4	370.6	370.8	371.0	371.2	372.0	377.0	381.0	381.0	379.0	380.0
132.5°	404.2	404.3	404.4	404.5	404.6	405.0	411.0	416.0	414.0	414.0	415.0
135°	435.4	435.6	435.8	436.0	436.2	437.0	443.0	448.0	447.0	450.0	451.0
137.5°	464.8	465.2	465.6	466.0	466.4	468.0	473.0	475.0	476.0	481.0	482.0
140°	492.2	492.8	493.4	494.0	494.6	497.0	500.0	502.0	504.0	509.0	511.0
142.5°	521.8	522.2	522.6	523.0	523.4	525.0	527.0	533.0	533.0	534.0	536.0
145°	550.2	550.3	550.4	550.5	550.6	551.0	556.0	562.0	561.0	558.0	560.0
147.5°	574.2	574.3	574.4	574.5	574.6	575.0	580.0	585.0	586.0	583.0	585.0
150°	593.0	593.0	593.0	593.0	593.0	593.0	597.0	600.0	603.0	606.0	610.0
152.5°	610.0	610.0	610.0	610.0	610.0	610.0	611.0	614.0	618.0	623.0	628.0
155°	629.6	629.4	629.2	629.0	628.8	628.0	626.0	631.0	636.0	638.0	641.0
157.5°	645.8	645.7	645.6	645.5	645.4	645.0	644.0	648.0	650.0	650.0	655.0
160°	655.0	655.0	655.0	655.0	655.0	655.0	658.0	664.0	661.0	660.0	666.0
162.5°	661.4	661.6	661.8	662.0	662.2	663.0	667.0	671.0	670.0	668.0	674.0
165°	673.0	673.0	673.0	673.0	673.0	673.0	672.0	677.0	680.0	678.0	682.0
167.5°	687.4	687.1	686.8	686.5	686.2	685.0	678.0	684.0	688.0	688.0	694.0
170°	692.6	692.4	692.2	692.0	691.8	691.0	686.0	689.0	694.0	696.0	701.0
172.5°	690.0	690.0	690.0	690.0	690.0	690.0	689.0	692.0	694.0	696.0	701.0
175°	690.8	690.7	690.6	690.5	690.4	690.0	690.0	695.0	696.0	694.0	699.0
177.5°	696.6	696.4	696.2	696.0	695.8	695.0	694.0	699.0	701.0	698.0	702.0
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: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8	466.8
2.5°	468.6	470.4	474.0	476.8	479.1	482.2	483.2	485.0	482.7	485.4
5°	466.8	472.2	479.1	485.4	491.4	496.4	498.6	499.1	499.5	501.4
7.5°	462.2	470.4	481.3	490.0	499.1	502.3	503.6	504.1	500.9	502.3
10°	453.1	466.3	480.0	490.4	495.0	492.7	489.1	483.2	480.4	480.4
12.5°	443.1	459.9	475.9	481.8	477.7	469.0	459.0	448.1	444.0	444.0
15°	434.9	456.3	469.5	465.4	453.6	437.2	423.5	412.1	408.5	407.1
17.5°	430.3	454.5	459.5	446.7	426.7	406.2	392.5	383.0	379.8	379.8
20°	434.0	456.3	448.1	424.4	399.4	380.7	368.9	362.5	359.3	360.7
22.5°	449.5	463.1	438.1	402.6	372.0	356.1	350.6	346.5	346.1	347.0
25°	475.4	472.2	429.4	379.8	346.5	335.2	334.7	333.3	332.9	332.4
27.5°	509.1	483.6	418.9	354.3	321.0	315.6	318.3	317.9	317.4	317.9
30°	553.7	493.6	403.5	326.5	296.9	296.9	301.0	299.6	297.8	298.3
32.5°	595.2	500.9	379.8	295.5	277.8	278.7	280.1	276.4	271.9	272.8
35°	630.7	500.9	347.9	267.8	258.2	258.2	259.1	255.9	252.3	250.9
37.5°	660.3	490.9	307.8	246.8	242.3	242.3	245.9	242.7	235.9	234.5
40°	678.1	469.0	270.9	231.3	234.5	235.0	230.0	224.5	218.1	216.8
42.5°	689.4	437.2	241.8	220.4	229.5	225.9	214.0	205.4	204.9	206.7
45°	699.5	401.2	218.6	209.5	224.0	216.3	200.4	192.2	194.9	196.7
47.5°	709.5	365.2	199.9	197.2	214.0	208.6	191.7	182.6	181.2	184.0
50°	733.2	315.1	178.5	182.6	201.7	199.9	184.0	173.5	164.8	164.4
52.5°	765.0	248.2	160.3	169.9	192.2	194.9	175.3	165.3	153.5	151.6
55°	800.6	190.3	145.3	159.8	183.1	187.6	172.1	157.1	144.4	142.5
57.5°	811.0	150.3	131.1	145.7	170.8	180.8	167.1	147.5	138.0	136.2
60°	775.1	124.8	119.3	133.9	158.5	174.0	159.4	140.3	131.6	130.2
62.5°	665.3	110.2	112.9	126.1	149.4	167.6	153.5	134.8	128.0	127.1
65°	507.7	100.2	107.5	119.8	141.2	161.7	149.4	132.5	127.1	126.1
67.5°	318.8	92.9	102.0	112.9	133.0	155.3	146.2	129.8	125.7	124.3
70°	176.7	85.2	94.7	105.2	124.8	149.4	142.1	125.7	125.2	122.5
72.5°	107.5	77.0	87.0	97.0	115.7	142.1	134.8	120.7	116.1	110.7
73°	102.5	76.0	85.2	95.2	113.4	140.3	133.4	118.9	114.3	108.8
75°	82.9	68.3	77.9	86.5	105.2	133.0	125.7	112.5	105.2	101.1
77.5°	61.0	58.3	67.4	75.6	94.7	123.0	114.8	102.9	94.3	92.0
80°	45.1	48.3	56.9	64.2	83.3	112.9	103.4	92.0	86.5	83.8
82.5°	30.5	37.3	45.5	51.5	73.8	102.0	91.5	80.6	84.2	70.1
85°	17.8	26.0	32.8	40.1	59.2	91.1	79.7	68.8	60.1	54.2
87.5°	11.8	14.6	20.0	27.3	42.8	71.5	63.3	53.7	39.2	39.2
90°	8.4	10.8	11.7	10.2	12.9	38.5	28.9	32.0	9.6	9.1
92.5°	6.0	6.0	7.0	7.0	6.0	6.0	6.0	5.0	4.0	4.0
95°	7.0	7.0	8.0	7.0	7.0	7.0	7.0	6.0	5.0	5.0
97.5°	8.0	9.0	10.0	12.0	9.0	9.0	8.0	8.0	7.0	7.0
100°	19.0	23.0	26.0	29.0	21.0	12.0	10.0	9.0	8.0	8.0
102.5°	39.0	42.0	47.0	50.0	40.0	27.0	18.0	13.0	11.0	11.0
105°	61.0	65.0	70.0	72.0	63.0	48.0	36.0	27.0	22.0	21.0
107.5°	87.0	90.0	94.0	95.0	88.0	73.0	58.0	49.0	42.0	41.0



REPORT NUMBER: P226568

CATALOG NUMBER: IST-AF-450-LED-E1-T4FT-7050-ULG

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	116.0	119.0	121.0	120.0	114.0	102.0	87.0	74.0	68.0	66.0
112.5°	147.0	149.0	150.0	148.0	143.0	134.0	121.0	106.0	99.0	99.0
115°	177.0	179.0	182.0	179.0	174.0	168.0	159.0	147.0	139.0	140.0
117.5°	208.0	210.0	215.0	211.0	205.0	202.0	197.0	189.0	184.0	184.0
120°	243.0	245.0	250.0	246.0	243.0	237.0	233.0	226.0	223.0	225.0
122.5°	276.0	278.0	283.0	279.0	277.0	271.0	267.0	261.0	260.0	263.0
125°	310.0	310.0	315.0	313.0	310.0	305.0	299.0	296.0	294.0	298.0
127.5°	345.0	346.0	346.0	345.0	340.0	339.0	333.0	329.0	329.0	330.0
130°	379.0	381.0	381.0	377.0	372.0	370.0	366.0	362.0	361.0	363.0
132.5°	414.0	414.0	416.0	411.0	405.0	404.0	401.0	393.0	394.0	396.0
135°	450.0	447.0	448.0	443.0	437.0	435.0	432.0	426.0	426.0	429.0
137.5°	481.0	476.0	475.0	473.0	468.0	464.0	460.0	459.0	457.0	460.0
140°	509.0	504.0	502.0	500.0	497.0	491.0	489.0	487.0	485.0	488.0
142.5°	534.0	533.0	533.0	527.0	525.0	521.0	518.0	517.0	515.0	518.0
145°	558.0	561.0	562.0	556.0	551.0	550.0	547.0	544.0	546.0	550.0
147.5°	583.0	586.0	585.0	580.0	575.0	574.0	574.0	571.0	572.0	575.0
150°	606.0	603.0	600.0	597.0	593.0	593.0	593.0	593.0	592.0	595.0
152.5°	623.0	618.0	614.0	611.0	610.0	610.0	609.0	608.0	608.0	611.0
155°	638.0	636.0	631.0	626.0	628.0	630.0	627.0	625.0	625.0	629.0
157.5°	650.0	650.0	648.0	644.0	645.0	646.0	644.0	643.0	643.0	646.0
160°	660.0	661.0	664.0	658.0	655.0	655.0	656.0	659.0	660.0	663.0
162.5°	668.0	670.0	671.0	667.0	663.0	661.0	665.0	669.0	669.0	673.0
165°	678.0	680.0	677.0	672.0	673.0	673.0	676.0	676.0	678.0	681.0
167.5°	688.0	688.0	684.0	678.0	685.0	688.0	686.0	684.0	687.0	690.0
170°	696.0	694.0	689.0	686.0	691.0	693.0	692.0	692.0	695.0	698.0
172.5°	696.0	694.0	692.0	689.0	690.0	690.0	693.0	695.0	697.0	699.0
175°	694.0	696.0	695.0	690.0	690.0	691.0	695.0	697.0	698.0	700.0
177.5°	698.0	701.0	699.0	694.0	695.0	697.0	699.0	700.0	705.0	707.0
180°	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0	700.0

(END OF REPORT)