

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: P227795

Luminaire Tested: **ISS-AF-600-LED-E1-T4FT-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227795
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29760)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISS-AF-600-LED-E1-T4FT-ULG
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV FORWARD THROW, 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: 5413.6 lumens
Efficiency: N/A
Efficacy: 107.4 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

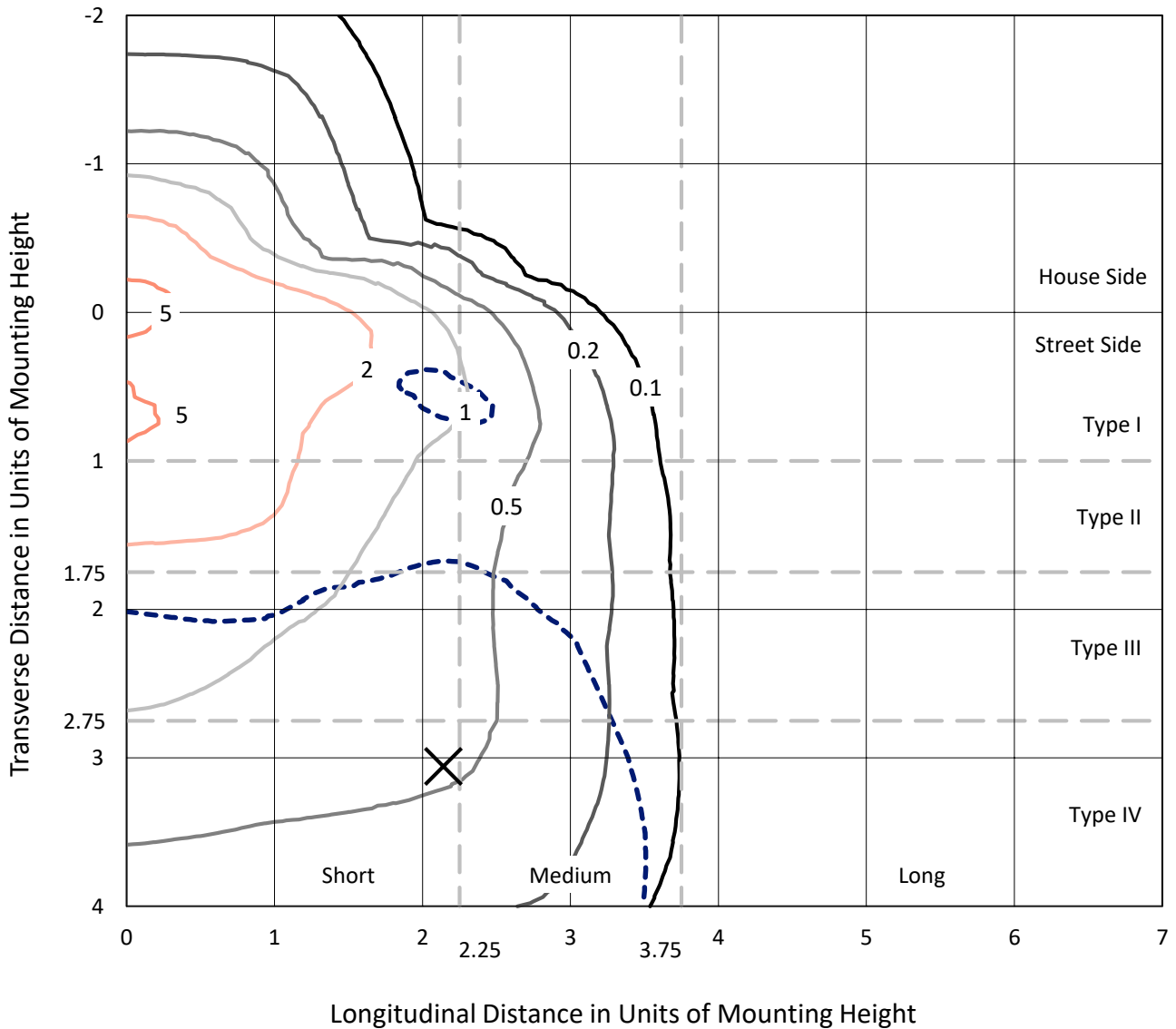
Input Watts (W): 50.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

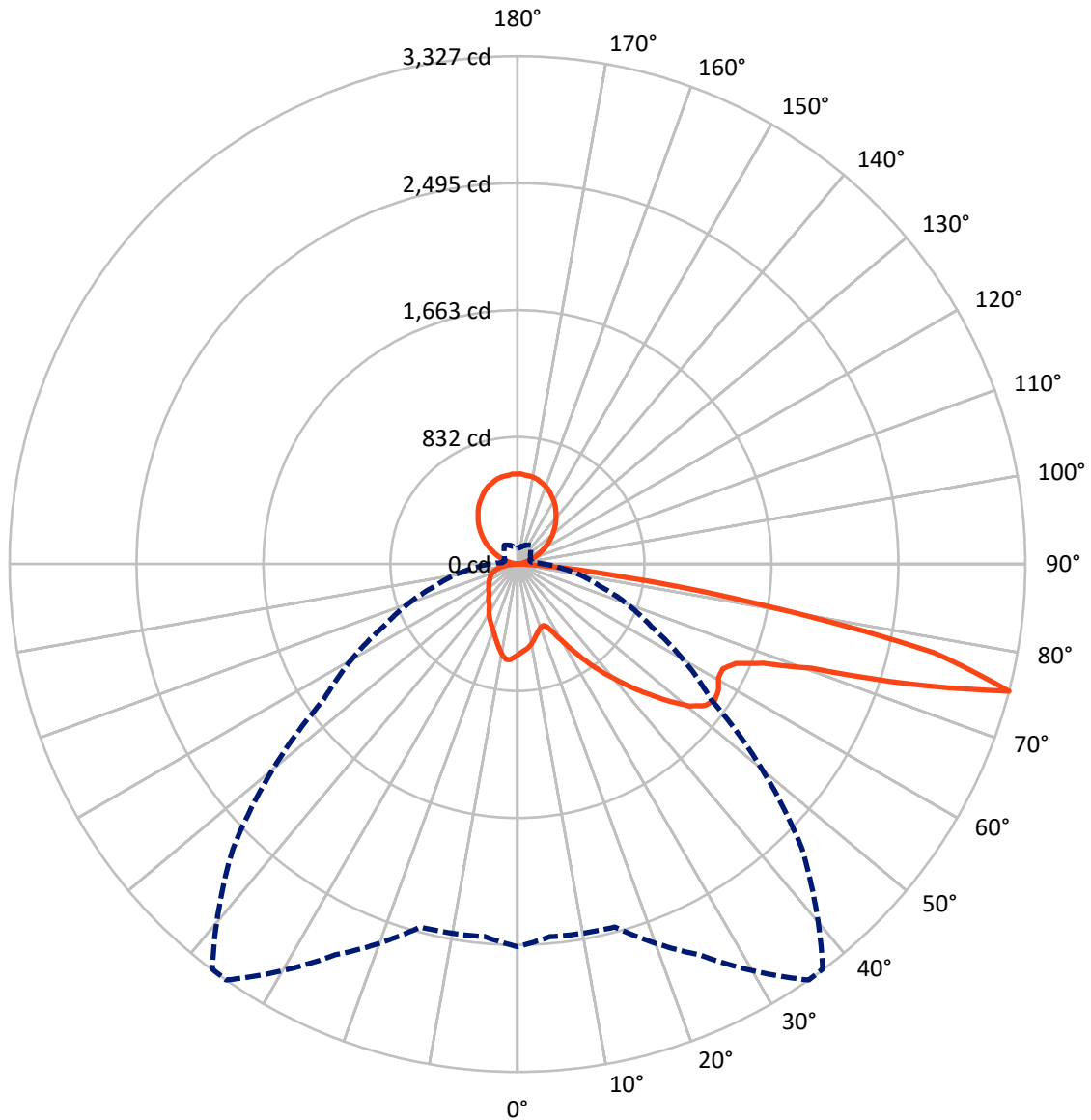
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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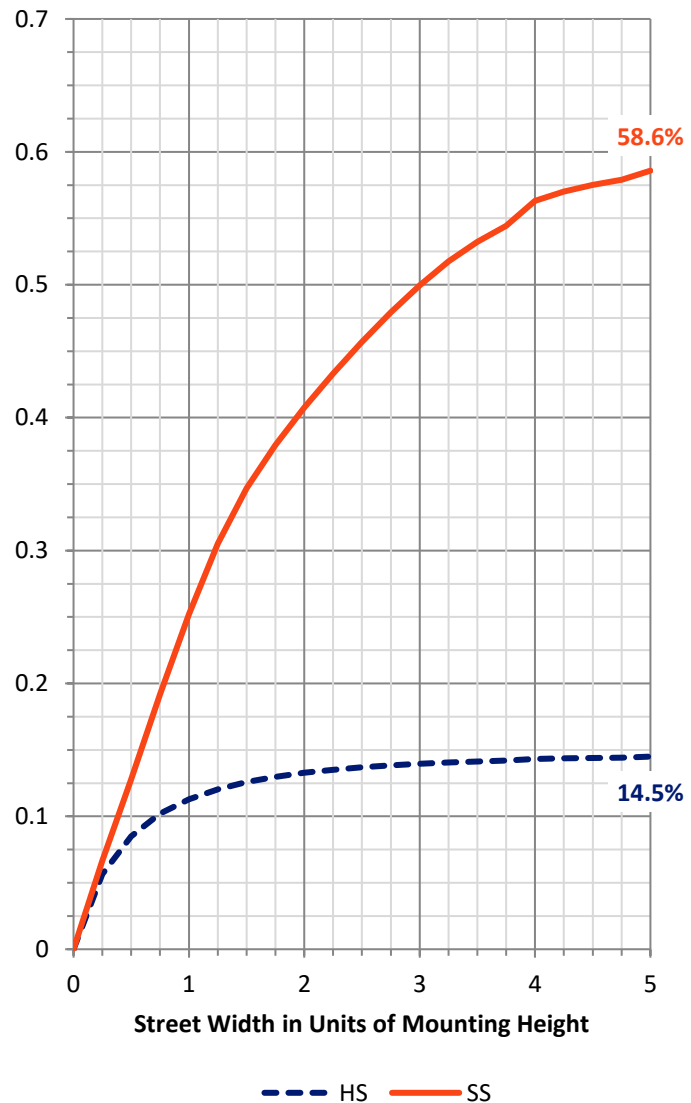
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	793.7	729.4	1523.2
	% Fixture	14.7	13.5	28.1
Street Side	Lumens	3161.0	729.4	3890.4
	% Fixture	58.4	13.5	71.9
Total	Lumens	3954.7	1458.9	5413.6
	% Fixture	73.1	26.9	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.8	1.0
10°-20°	147.2	2.7
20°-30°	232.8	4.3
30°-40°	375.8	6.9
40°-50°	556.0	10.3
50°-60°	714.9	13.2
60°-70°	885.1	16.3
70°-80°	892.0	16.5
80°-90°	95.2	1.8
90°-100°	4.8	0.1
100°-110°	70.6	1.3
110°-120°	156.6	2.9
120°-130°	229.0	4.2
130°-140°	271.7	5.0
140°-150°	275.5	5.1
150°-160°	236.4	4.4
160°-170°	158.7	2.9
170°-180°	55.6	1.0
0°-90°	3954.7	73.1
0°-180°	5413.6	100.0



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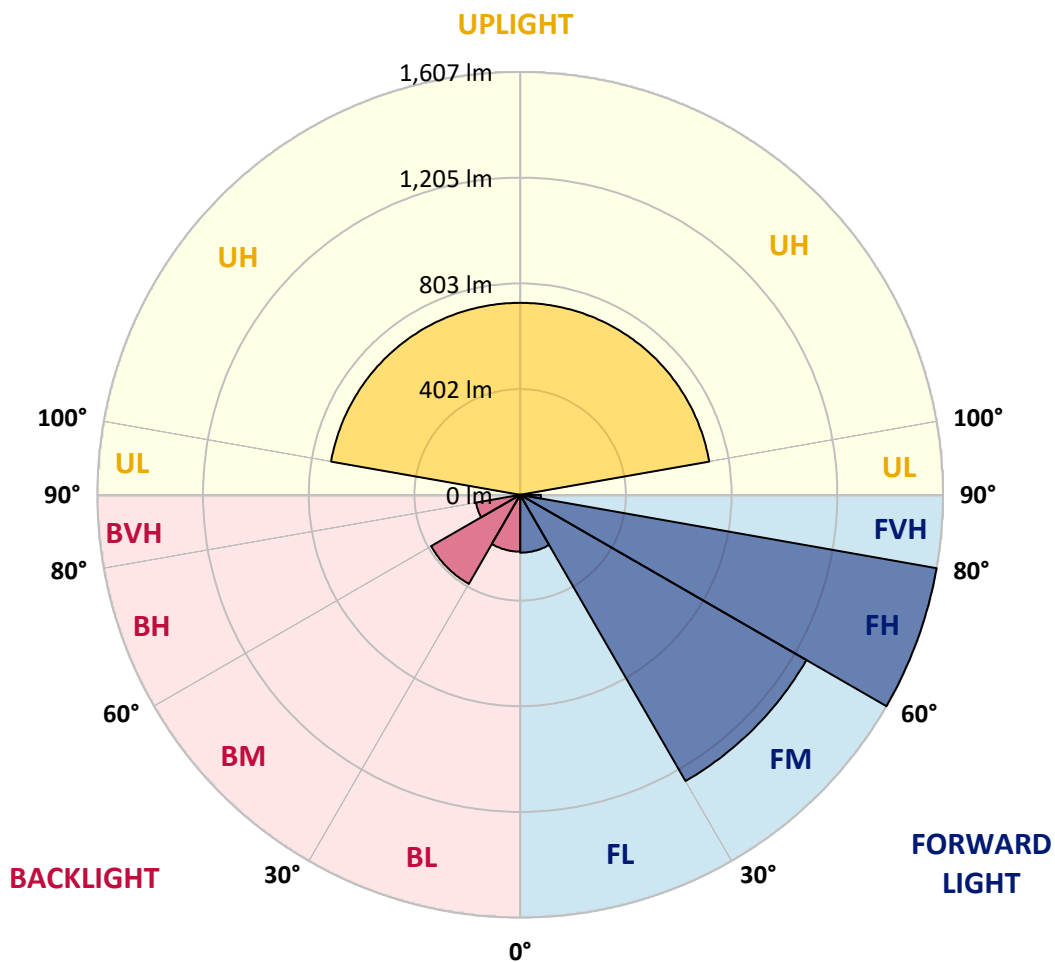
CATALOG NUMBER: ISS-AF-600-LED-E1-T4FT-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	219.9	4.1			
FM	(30°-60°)	1255.8	23.2			
FH	(60°-80°)	1606.6	29.7			G1/1800
FVH	(80°-90°)	78.8	1.5			G1/100
BL	(0°-30°)	215.9	4.0	B1/500		
BM	(30°-60°)	390.9	7.2	B1/1000		
BH	(60°-80°)	170.5	3.1	B1/500		G1/500
BVH	(80°-90°)	16.5	0.3			G1/100
UL	(90°-100°)	4.8	0.1		U1/10	
UH	(100°-180°)	729.4	13.5		U4/1000	

BUG Rating: B1-U5-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
0°	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1
2.5°	576.9	575.6	574.3	574.3	576.9	576.9	578.3	579.6	580.9	584.8	590.1
5°	561.1	559.8	558.4	559.8	563.7	563.7	567.7	570.3	573.0	579.6	586.2
7.5°	540.0	540.0	538.7	543.9	547.9	546.6	551.9	554.5	561.1	567.7	578.3
10°	512.3	512.3	512.3	518.8	525.5	525.5	529.4	536.0	541.2	550.6	563.7
12.5°	488.5	487.1	487.1	492.4	500.3	501.7	508.3	517.5	524.2	536.0	550.6
15°	480.6	477.9	471.3	471.3	475.3	475.3	485.8	499.0	509.6	521.5	538.7
17.5°	481.9	477.9	460.7	455.5	455.5	456.7	467.4	481.9	495.1	509.6	532.0
20°	493.8	487.1	455.5	443.6	441.0	442.3	451.5	466.1	481.9	501.7	526.8
22.5°	545.2	534.7	475.3	448.9	437.0	437.0	442.3	458.1	477.9	504.3	536.0
25°	664.1	646.9	541.2	493.8	458.1	454.2	444.9	460.7	484.6	516.2	562.4
27.5°	785.5	768.3	623.2	571.6	516.2	504.3	470.0	473.9	500.3	542.6	602.0
30°	887.2	872.7	726.1	666.8	592.8	579.6	526.8	501.7	528.0	579.6	661.4
32.5°	895.1	888.5	837.0	776.3	686.5	668.0	598.0	558.4	571.6	629.7	726.1
35°	969.0	963.7	936.0	878.0	788.2	767.0	693.2	632.4	628.4	685.2	800.0
37.5°	1041.7	1035.0	1016.6	976.9	893.8	876.7	818.6	720.9	693.2	749.9	872.7
40°	1110.3	1101.1	1077.3	1054.9	994.1	994.1	932.1	805.4	755.1	806.7	933.4
42.5°	1237.1	1208.0	1144.7	1127.5	1110.3	1110.3	1019.2	863.5	805.4	868.7	991.4
45°	1358.5	1330.8	1244.9	1210.7	1219.9	1214.7	1089.1	896.4	850.2	926.8	1046.9
47.5°	1454.8	1429.8	1342.6	1318.9	1345.3	1324.2	1147.2	922.8	906.9	988.9	1093.1
50°	1540.7	1481.3	1396.8	1428.4	1461.5	1425.8	1198.8	962.4	963.7	1054.9	1160.4
52.5°	1423.2	1416.6	1435.1	1509.1	1540.7	1501.1	1244.9	1012.6	1024.5	1139.4	1237.1
55°	1282.0	1280.6	1388.9	1532.8	1571.0	1534.1	1275.3	1073.4	1087.9	1243.6	1333.4
57.5°	1254.2	1241.0	1314.9	1482.6	1552.5	1526.1	1291.2	1130.2	1148.6	1375.7	1428.4
60°	1344.0	1318.9	1307.0	1428.4	1512.9	1499.7	1311.0	1197.5	1222.5	1526.1	1516.9
62.5°	1539.3	1505.1	1420.6	1432.4	1509.1	1498.4	1358.5	1276.6	1305.7	1676.7	1567.1
65°	1798.1	1773.1	1638.4	1542.0	1571.0	1556.5	1444.3	1377.0	1392.8	1784.9	1510.3
67.5°	2082.0	2047.6	1901.2	1769.1	1732.2	1704.4	1580.4	1495.9	1439.1	1769.1	1358.5
70°	2402.8	2365.9	2239.1	2103.1	2039.8	2009.4	1818.0	1598.8	1421.9	1594.8	1072.1
72.5°	2797.6	2747.3	2677.4	2691.9	2681.4	2596.9	2196.9	1633.1	1296.5	1186.9	640.3
75°	2507.2	2450.4	2462.2	2825.3	3326.9	3323.0	2635.1	1548.6	966.4	559.8	277.2
77.5°	899.1	994.1	1466.8	2116.3	2789.6	2785.7	2039.8	969.0	414.5	239.0	167.7
80°	225.8	229.8	364.4	868.7	1629.2	1616.0	1156.5	365.7	173.0	145.3	114.9
82.5°	72.6	77.8	133.4	299.7	697.0	681.3	359.1	120.1	108.2	93.7	70.0
85°	23.7	23.7	47.6	103.0	229.8	220.4	72.6	43.6	59.4	48.9	31.7
87.5°	0.0	0.0	1.3	2.7	5.3	2.7	0.0	2.7	7.9	9.2	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	2.0	2.0	2.0	3.1	4.1	5.1	9.2	13.3	7.2	5.1	4.1
100°	8.2	8.2	10.2	14.3	22.5	24.1	30.7	32.7	30.7	27.6	26.6
102.5°	28.6	28.6	32.7	38.9	46.0	47.1	51.1	52.2	51.1	49.1	50.1
105°	55.2	55.2	57.3	62.4	67.5	68.3	71.6	72.6	72.6	70.6	72.6
107.5°	79.8	78.8	81.8	85.9	90.0	90.6	93.1	95.1	94.1	93.1	94.1
110°	103.3	104.3	105.4	108.4	112.5	112.9	114.6	116.6	116.6	115.6	116.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
112.5°	126.8	126.8	128.9	132.0	135.0	135.4	137.1	139.1	139.1	138.1	140.1
115°	149.4	150.4	152.4	154.5	157.5	157.9	159.6	161.6	161.6	161.6	163.7
117.5°	172.9	173.9	175.9	178.0	181.1	181.5	183.1	184.1	185.2	184.1	186.2
120°	197.4	199.5	200.5	202.5	205.6	205.8	206.6	208.7	208.7	208.7	210.7
122.5°	224.0	225.0	226.1	228.1	231.2	231.4	232.2	233.2	233.2	234.3	238.3
125°	249.6	251.6	252.7	253.7	256.8	257.0	257.8	258.8	259.8	259.8	262.9
127.5°	273.1	275.2	276.2	278.2	280.3	280.7	282.3	284.4	283.4	284.4	287.4
130°	296.7	298.7	299.7	300.7	304.8	305.0	305.9	307.9	307.9	308.9	312.0
132.5°	320.2	321.2	324.3	325.3	328.4	328.6	329.4	332.5	332.5	333.5	336.6
135°	343.7	344.7	346.8	348.8	352.9	352.9	352.9	356.0	356.0	357.0	359.1
137.5°	367.2	368.3	371.3	372.4	375.4	375.4	375.4	377.5	377.5	378.5	382.6
140°	390.8	391.8	393.8	394.9	396.9	397.1	397.9	399.0	399.0	401.0	405.1
142.5°	413.3	415.3	417.4	416.3	419.4	419.4	419.4	421.5	421.5	422.5	425.5
145°	434.8	435.8	437.8	437.8	440.9	441.1	441.9	444.0	442.9	444.0	447.0
147.5°	454.2	454.2	457.3	458.3	462.4	462.6	463.4	464.4	462.4	463.4	466.5
150°	471.6	472.6	474.6	475.7	479.8	480.0	480.8	481.8	479.8	479.8	483.9
152.5°	490.0	491.0	494.1	493.1	496.1	496.3	497.2	498.2	497.2	497.2	500.2
155°	510.5	511.5	513.5	512.5	514.5	514.5	514.5	515.6	514.5	515.6	518.6
157.5°	524.8	526.8	528.9	527.8	530.9	530.9	530.9	530.9	528.9	529.9	535.0
160°	537.0	539.1	541.1	541.1	544.2	544.2	544.2	544.2	542.2	542.2	545.2
162.5°	547.3	548.3	551.4	550.3	553.4	553.4	553.4	554.4	552.4	550.3	552.4
165°	558.5	559.6	561.6	560.6	564.7	564.7	564.7	565.7	562.6	560.6	562.6
167.5°	567.7	568.8	571.8	570.8	573.9	573.7	572.9	572.9	570.8	571.8	575.9
170°	574.9	575.9	579.0	578.0	580.0	579.8	579.0	578.0	576.9	579.0	584.1
172.5°	578.0	579.0	582.1	580.0	582.1	581.9	581.0	582.1	580.0	581.0	584.1
175°	580.0	582.1	583.1	582.1	585.1	585.1	585.1	586.2	583.1	581.0	584.1
177.5°	585.1	586.2	588.2	587.2	591.3	591.1	590.2	590.2	587.2	587.2	590.2
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1
2.5°	594.1	592.8	598.0	602.0	603.3	607.3	611.2	613.9	612.5	611.2	611.2
5°	592.8	594.1	603.3	611.2	617.9	624.5	629.7	632.4	631.1	631.1	631.1
7.5°	584.8	590.1	600.7	613.9	623.2	627.1	628.4	624.5	621.9	617.9	617.9
10°	571.6	579.6	596.8	611.2	615.2	610.0	602.0	594.1	583.5	576.9	576.9
12.5°	561.1	570.3	591.5	603.3	598.0	584.8	567.7	554.5	543.9	536.0	534.7
15°	551.9	563.7	586.2	588.8	576.9	554.5	532.0	517.5	505.6	500.3	500.3
17.5°	545.2	561.1	580.9	573.0	549.2	520.2	499.0	487.1	477.9	472.6	471.3
20°	546.6	566.4	575.6	553.2	518.8	488.5	468.7	462.1	455.5	452.9	452.9
22.5°	561.1	579.6	574.3	536.0	491.1	456.7	443.6	442.3	439.7	437.0	435.7
25°	592.8	606.0	578.3	518.8	462.1	427.8	421.1	425.1	423.8	421.1	421.1
27.5°	636.4	639.0	584.8	501.7	430.4	400.1	400.1	406.6	404.0	400.1	402.6
30°	689.2	674.6	587.5	473.9	393.4	373.6	377.6	381.6	378.9	373.6	373.6
32.5°	745.9	711.6	587.5	438.3	357.8	349.8	351.2	352.5	347.2	340.6	340.6
35°	801.4	747.3	580.9	396.1	330.1	326.1	324.8	330.1	326.1	316.8	316.8
37.5°	854.2	775.0	563.7	352.5	308.9	307.6	311.6	308.9	303.6	290.4	287.9
40°	891.2	793.5	529.4	316.8	291.7	299.7	297.1	282.5	274.6	265.4	265.4
42.5°	924.1	802.7	487.1	289.1	279.9	290.4	279.9	261.4	250.8	249.5	250.8
45°	954.5	810.6	446.2	266.7	265.4	279.9	266.7	246.8	235.0	235.0	236.3
47.5°	983.6	818.6	405.3	245.6	248.2	264.0	256.1	236.3	224.4	216.6	216.6
50°	1029.8	837.0	345.9	223.1	228.4	250.8	248.2	225.8	212.6	200.7	198.0
52.5°	1085.2	868.7	281.2	199.4	213.9	239.0	239.0	216.6	202.0	186.2	183.5
55°	1159.1	903.1	225.8	182.2	199.4	225.8	229.8	212.6	191.4	176.9	174.3
57.5°	1233.1	914.9	182.2	165.0	180.9	212.6	223.1	204.6	179.5	169.0	167.7
60°	1284.6	876.7	153.1	150.5	167.7	196.7	213.9	195.4	171.7	161.1	161.1
62.5°	1276.6	760.5	137.3	141.3	157.1	184.8	205.9	187.5	166.3	159.8	158.5
65°	1164.4	574.3	124.1	133.4	147.8	173.0	198.0	183.5	163.7	157.1	154.5
67.5°	980.9	381.6	114.9	125.4	138.6	163.7	191.4	178.2	155.8	151.8	149.1
70°	710.2	223.1	105.6	117.5	129.4	153.1	182.2	167.7	146.6	143.9	137.3
72.5°	384.2	139.9	95.0	106.9	117.5	139.9	167.7	154.5	134.6	124.1	120.1
75°	175.6	101.7	84.5	95.0	103.0	122.8	150.5	136.0	120.1	106.9	104.3
77.5°	117.5	76.6	71.3	81.8	85.8	103.0	133.4	108.2	93.7	84.5	81.8
80°	80.5	56.8	58.1	67.3	66.0	81.8	100.4	87.2	74.0	76.6	70.0
82.5°	51.5	39.6	44.9	47.6	46.2	62.1	77.8	66.0	55.4	46.2	39.6
85°	22.4	21.1	26.4	27.7	27.7	34.4	40.9	33.0	25.1	18.5	18.5
87.5°	1.3	2.7	2.7	4.0	2.7	1.3	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	4.1	4.1	5.1	7.2	13.3	9.2	4.1	3.1	2.0	2.0	2.0
100°	25.6	26.6	27.6	30.7	32.7	30.7	22.5	14.3	10.2	8.2	8.2
102.5°	49.1	50.1	49.1	51.1	52.2	51.1	46.0	38.9	32.7	28.6	28.6
105°	70.6	72.6	70.6	72.6	72.6	71.6	67.5	62.4	57.3	55.2	55.2
107.5°	93.1	94.1	93.1	94.1	95.1	93.1	90.0	85.9	81.8	78.8	79.8
110°	115.6	116.6	115.6	116.6	116.6	114.6	112.5	108.4	105.4	104.3	103.3



REPORT NUMBER: P227795

CATALOG NUMBER: ISS-AF-600-LED-E1-T4FT-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	138.1	140.1	138.1	139.1	139.1	137.1	135.0	132.0	128.9	126.8	126.8
115°	162.6	163.7	161.6	161.6	161.6	159.6	157.5	154.5	152.4	150.4	149.4
117.5°	184.1	186.2	184.1	185.2	184.1	183.1	181.1	178.0	175.9	173.9	172.9
120°	208.7	210.7	208.7	208.7	208.7	206.6	205.6	202.5	200.5	199.5	197.4
122.5°	237.3	238.3	234.3	233.2	233.2	232.2	231.2	228.1	226.1	225.0	224.0
125°	261.9	262.9	259.8	259.8	258.8	257.8	256.8	253.7	252.7	251.6	249.6
127.5°	284.4	287.4	284.4	283.4	284.4	282.3	280.3	278.2	276.2	275.2	273.1
130°	310.0	312.0	308.9	307.9	307.9	305.9	304.8	300.7	299.7	298.7	296.7
132.5°	334.5	336.6	333.5	332.5	332.5	329.4	328.4	325.3	324.3	321.2	320.2
135°	358.0	359.1	357.0	356.0	356.0	352.9	352.9	348.8	346.8	344.7	343.7
137.5°	380.5	382.6	378.5	377.5	377.5	375.4	375.4	372.4	371.3	368.3	367.2
140°	403.0	405.1	401.0	399.0	399.0	397.9	396.9	394.9	393.8	391.8	390.8
142.5°	424.5	425.5	422.5	421.5	421.5	419.4	419.4	416.3	417.4	415.3	413.3
145°	445.0	447.0	444.0	442.9	444.0	441.9	440.9	437.8	437.8	435.8	434.8
147.5°	463.4	466.5	463.4	462.4	464.4	463.4	462.4	458.3	457.3	454.2	454.2
150°	480.8	483.9	479.8	479.8	481.8	480.8	479.8	475.7	474.6	472.6	471.6
152.5°	497.2	500.2	497.2	497.2	498.2	497.2	496.1	493.1	494.1	491.0	490.0
155°	516.6	518.6	515.6	514.5	515.6	514.5	514.5	512.5	513.5	511.5	510.5
157.5°	531.9	535.0	529.9	528.9	530.9	530.9	530.9	527.8	528.9	526.8	524.8
160°	543.2	545.2	542.2	542.2	544.2	544.2	544.2	541.1	541.1	539.1	537.0
162.5°	549.3	552.4	550.3	552.4	554.4	553.4	553.4	550.3	551.4	548.3	547.3
165°	560.6	562.6	560.6	562.6	565.7	564.7	564.7	560.6	561.6	559.6	558.5
167.5°	573.9	575.9	571.8	570.8	572.9	572.9	573.9	570.8	571.8	568.8	567.7
170°	582.1	584.1	579.0	576.9	578.0	579.0	580.0	578.0	579.0	575.9	574.9
172.5°	581.0	584.1	581.0	580.0	582.1	581.0	582.1	580.0	582.1	579.0	578.0
175°	581.0	584.1	581.0	583.1	586.2	585.1	585.1	582.1	583.1	582.1	580.0
177.5°	587.2	590.2	587.2	587.2	590.2	590.2	591.3	587.2	588.2	586.2	585.1
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2

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