

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: P227805

Luminaire Tested: **ISS-AF-350-LED-E1-T4FT-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P227805  
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-350-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**

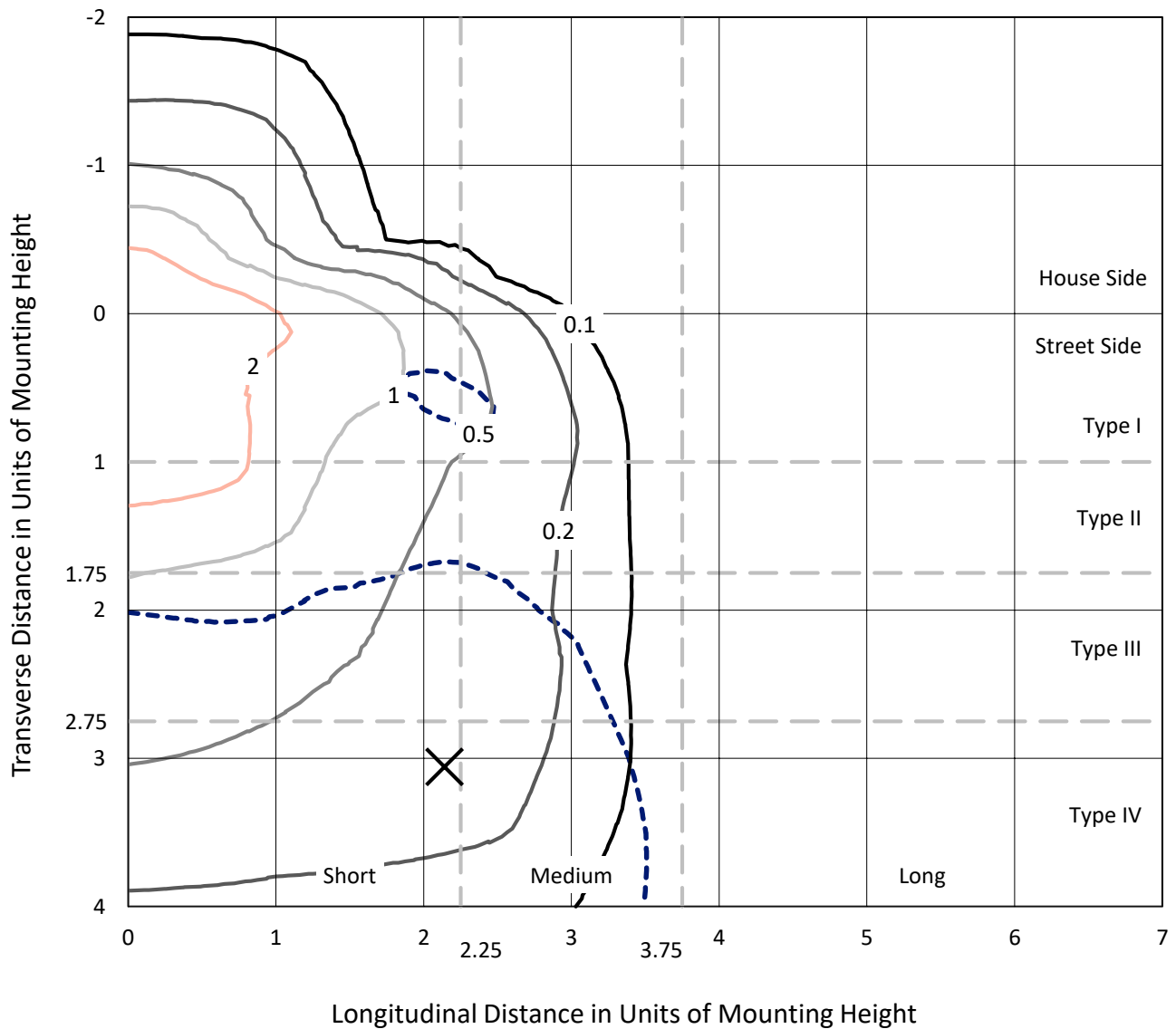
Lumens per Lamp: N/A  
Luminaire Lumens: 3873 lumens  
Efficiency: N/A  
Efficacy: 105.3 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U5 - G1  
  
Input Watts (W): 36.79  
Input Voltage (V): 120  
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

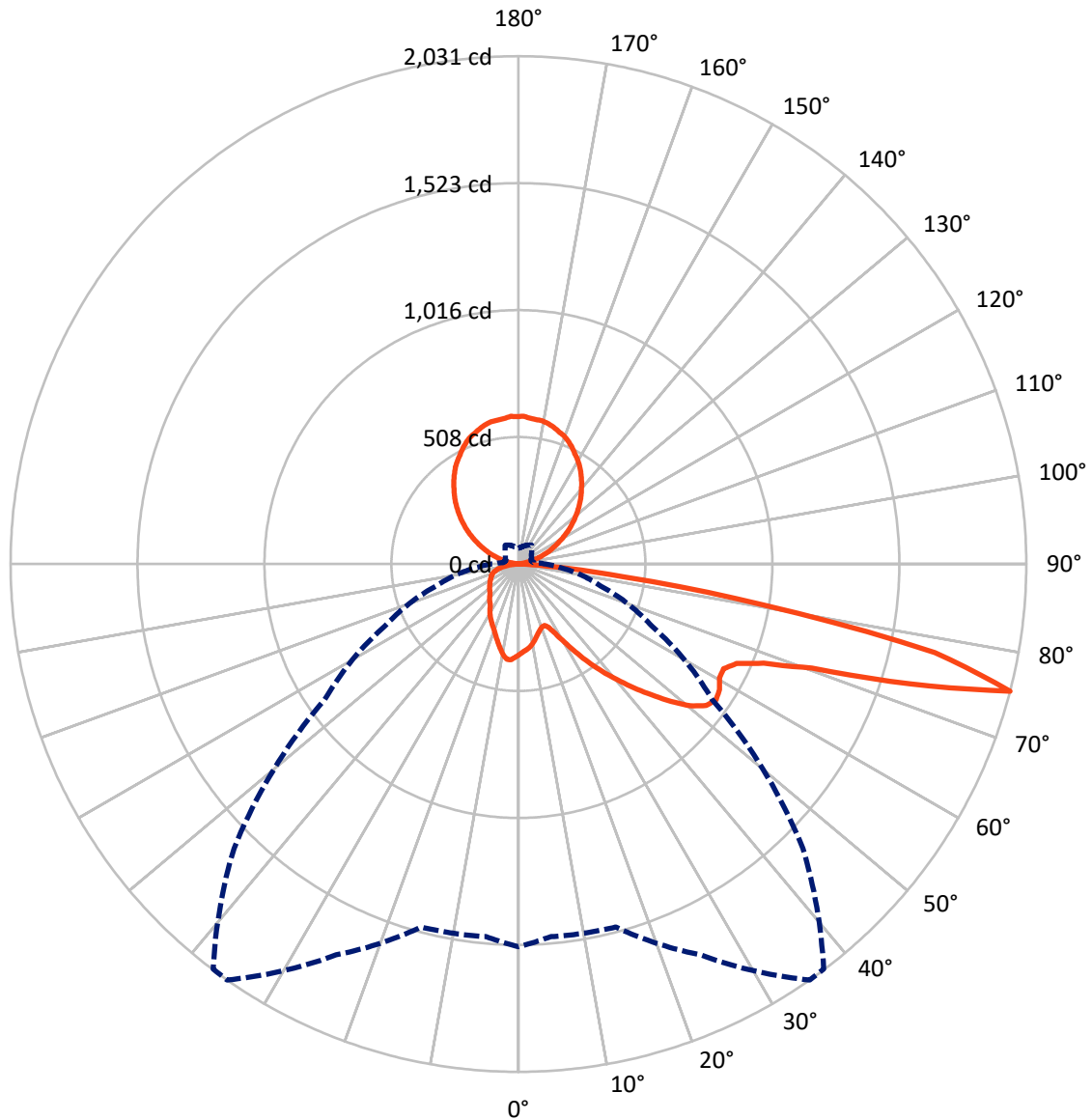
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 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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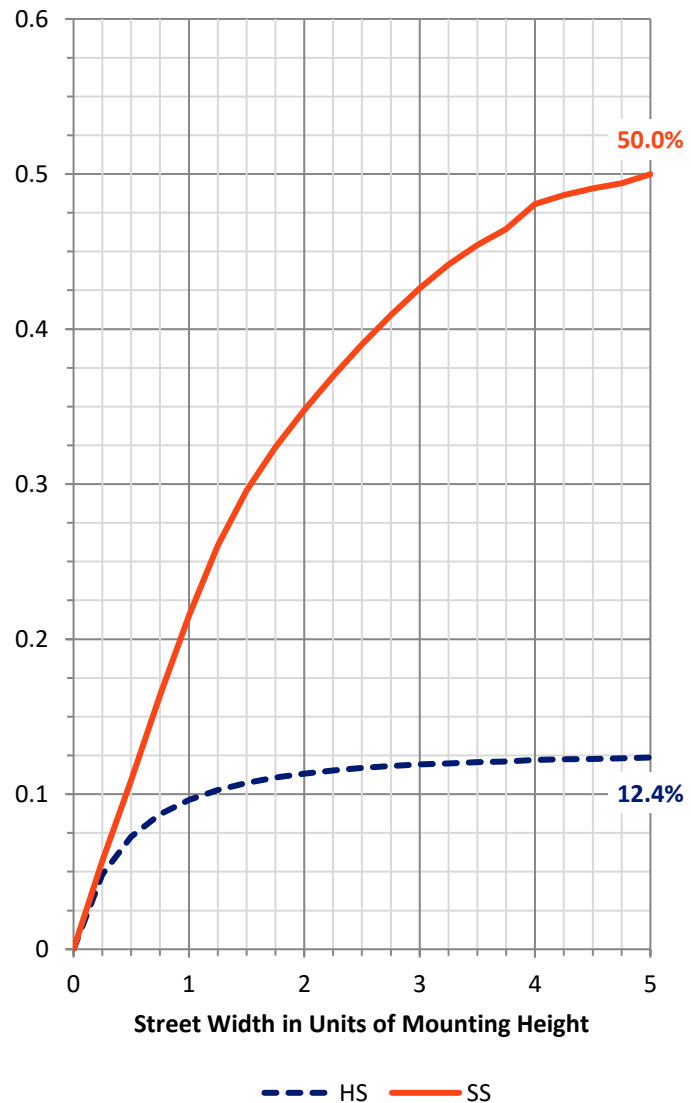
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	484.5	729.4	1214.0
	% Fixture	12.5	18.8	31.3
<b>Street Side</b>	Lumens	1929.6	729.4	2659.1
	% Fixture	49.8	18.8	68.7
<b>Total</b>	Lumens	2414.2	1458.9	3873.0
	% Fixture	62.3	37.7	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.0	0.9
10°-20°	89.8	2.3
20°-30°	142.1	3.7
30°-40°	229.4	5.9
40°-50°	339.4	8.8
50°-60°	436.4	11.3
60°-70°	540.3	14.0
70°-80°	544.5	14.1
80°-90°	58.1	1.5
90°-100°	4.8	0.1
100°-110°	70.6	1.8
110°-120°	156.6	4.0
120°-130°	229.0	5.9
130°-140°	271.7	7.0
140°-150°	275.5	7.1
150°-160°	236.4	6.1
160°-170°	158.7	4.1
170°-180°	55.6	1.4
0°-90°	2414.2	62.3
0°-180°	3873.0	100.0



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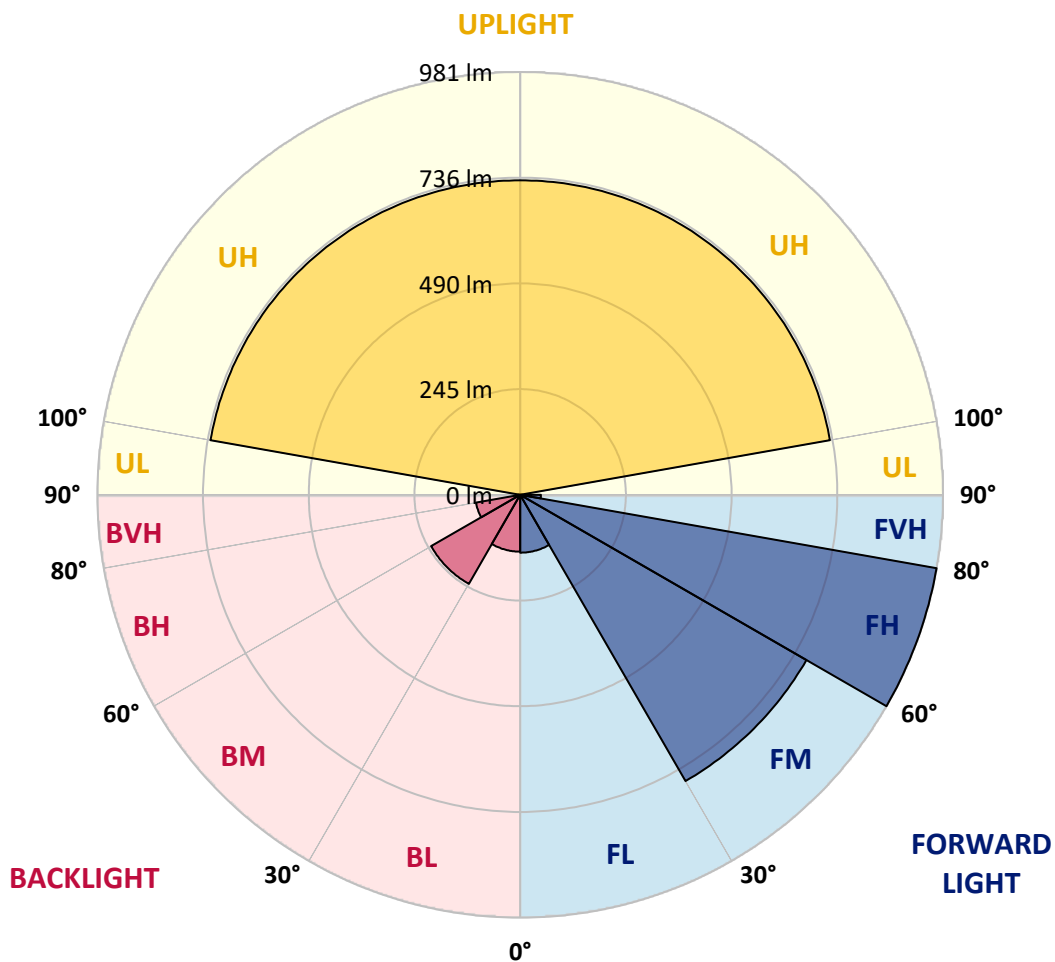
CATALOG NUMBER: ISS-AF-350-LED-E1-T4FT-ULG

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	134.2	3.5			
FM	(30°-60°)	766.6	19.8			
FH	(60°-80°)	980.7	25.3			G1/1800
FVH	(80°-90°)	48.1	1.2			G1/100
BL	(0°-30°)	131.8	3.4	B1/500		
BM	(30°-60°)	238.6	6.2	B1/1000		
BH	(60°-80°)	104.1	2.7	B0/110		G0/110
BVH	(80°-90°)	10.1	0.3			G1/100
UL	(90°-100°)	4.8	0.1		U1/10	
UH	(100°-180°)	729.4	18.8		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°	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6
2.5°	352.2	351.4	350.6	350.6	352.2	352.2	353.0	353.8	354.7	357.0	360.3
5°	342.5	341.7	340.9	341.7	344.1	344.1	346.6	348.2	349.7	353.8	357.8
7.5°	329.6	329.6	328.8	332.0	334.5	333.7	336.9	338.5	342.5	346.6	353.0
10°	312.7	312.7	312.7	316.7	320.8	320.8	323.2	327.2	330.4	336.0	344.1
12.5°	298.2	297.4	297.4	300.6	305.5	306.3	310.3	315.9	320.0	327.2	336.0
15°	293.4	291.7	287.8	287.8	290.1	290.1	296.6	304.6	311.1	318.3	328.8
17.5°	294.2	291.7	281.3	278.0	278.0	278.9	285.3	294.2	302.2	311.1	324.8
20°	301.5	297.4	278.0	270.8	269.1	270.0	275.6	284.5	294.2	306.3	321.6
22.5°	332.9	326.4	290.1	274.0	266.8	266.8	270.0	279.7	291.7	307.9	327.2
25°	405.4	394.9	330.4	301.5	279.7	277.2	271.6	281.3	295.7	315.1	343.3
27.5°	479.6	469.0	380.4	348.9	315.1	307.9	286.9	289.3	305.5	331.2	367.5
30°	541.6	532.8	443.2	407.0	361.8	353.8	321.6	306.3	322.3	353.8	403.8
32.5°	546.5	542.4	511.0	473.9	419.1	407.9	365.1	340.9	348.9	384.4	443.2
35°	591.6	588.3	571.4	535.9	481.1	468.2	423.1	386.1	383.6	418.3	488.4
37.5°	635.9	631.9	620.5	596.4	545.6	535.1	499.7	440.1	423.1	457.8	532.8
40°	677.8	672.2	657.7	643.9	606.8	606.8	569.0	491.6	460.9	492.4	569.8
42.5°	755.1	737.4	698.8	688.2	677.8	677.8	622.2	527.1	491.6	530.3	605.3
45°	829.3	812.4	760.0	739.1	744.7	741.4	664.9	547.2	519.0	565.8	639.1
47.5°	888.1	872.8	819.6	805.2	821.2	808.3	700.3	563.3	553.7	603.6	667.3
50°	940.5	904.3	852.6	872.1	892.1	870.4	731.8	587.5	588.3	643.9	708.4
52.5°	868.8	864.8	876.1	921.2	940.5	916.4	760.0	618.2	625.4	695.5	755.1
55°	782.6	781.7	847.8	935.7	959.0	936.5	778.6	655.2	664.1	759.2	814.0
57.5°	765.7	757.6	802.7	905.1	947.8	931.7	788.2	689.9	701.1	839.7	872.1
60°	820.4	805.2	797.9	872.1	923.6	915.5	800.3	731.0	746.2	931.7	926.0
62.5°	939.7	918.7	867.2	874.4	921.2	914.7	829.3	779.3	797.1	1023.6	956.7
65°	1097.6	1082.4	1000.1	941.3	959.0	950.2	881.7	840.6	850.3	1089.6	922.0
67.5°	1270.9	1250.0	1160.5	1079.9	1057.4	1040.4	964.7	913.1	878.5	1079.9	829.3
70°	1466.8	1444.2	1366.9	1283.8	1245.1	1226.6	1109.8	976.0	868.0	973.5	654.4
72.5°	1707.7	1677.1	1634.5	1643.3	1636.8	1585.3	1341.1	997.0	791.5	724.6	390.9
75°	1530.4	1495.8	1503.0	1724.7	2031.0	2028.5	1608.6	945.3	589.9	341.7	169.2
77.5°	548.8	606.8	895.4	1291.9	1702.9	1700.6	1245.1	591.6	253.1	145.9	102.4
80°	137.8	140.2	222.4	530.3	994.5	986.4	706.0	223.2	105.6	88.7	70.1
82.5°	44.3	47.6	81.4	182.9	425.5	415.8	219.2	73.3	66.1	57.2	42.8
85°	14.5	14.5	29.1	62.9	140.2	134.6	44.3	26.6	36.3	29.9	19.3
87.5°	0.0	0.0	0.8	1.6	3.3	1.6	0.0	1.6	4.8	5.6	4.0
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°	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°	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6	362.6
2.5°	362.6	361.8	365.1	367.5	368.3	370.7	373.2	374.7	374.0	373.2	373.2
5°	361.8	362.6	368.3	373.2	377.2	381.3	384.4	386.1	385.2	385.2	385.2
7.5°	357.0	360.3	366.7	374.7	380.4	382.8	383.6	381.3	379.6	377.2	377.2
10°	348.9	353.8	364.3	373.2	375.5	372.4	367.5	362.6	356.2	352.2	352.2
12.5°	342.5	348.2	361.1	368.3	365.1	357.0	346.6	338.5	332.0	327.2	326.4
15°	336.9	344.1	357.8	359.5	352.2	338.5	324.8	315.9	308.6	305.5	305.5
17.5°	332.9	342.5	354.7	349.7	335.2	317.5	304.6	297.4	291.7	288.5	287.8
20°	333.7	345.8	351.4	337.7	316.7	298.2	286.1	282.0	278.0	276.4	276.4
22.5°	342.5	353.8	350.6	327.2	299.8	278.9	270.8	270.0	268.4	266.8	266.0
25°	361.8	369.9	353.0	316.7	282.0	261.2	257.1	259.5	258.7	257.1	257.1
27.5°	388.4	390.1	357.0	306.3	262.7	244.2	244.2	248.3	246.6	244.2	245.8
30°	420.7	411.8	358.6	289.3	240.2	228.1	230.5	232.9	231.3	228.1	228.1
32.5°	455.3	434.4	358.6	267.6	218.4	213.6	214.4	215.2	212.0	208.0	208.0
35°	489.2	456.1	354.7	241.8	201.5	199.1	198.2	201.5	199.1	193.4	193.4
37.5°	521.4	473.1	344.1	215.2	188.6	187.8	190.2	188.6	185.4	177.3	175.7
40°	544.0	484.4	323.2	193.4	178.1	182.9	181.4	172.5	167.7	162.0	162.0
42.5°	564.2	490.0	297.4	176.5	170.8	177.3	170.8	159.6	153.1	152.3	153.1
45°	582.7	494.8	272.4	162.8	162.0	170.8	162.8	150.7	143.4	143.4	144.2
47.5°	600.4	499.7	247.5	149.9	151.5	161.2	156.3	144.2	137.0	132.2	132.2
50°	628.6	511.0	211.1	136.2	139.4	153.1	151.5	137.8	129.7	122.5	120.9
52.5°	662.5	530.3	171.7	121.7	130.5	145.9	145.9	132.2	123.3	113.6	112.0
55°	707.6	551.3	137.8	111.2	121.7	137.8	140.2	129.7	116.8	108.0	106.4
57.5°	752.7	558.5	111.2	100.8	110.4	129.7	136.2	124.9	109.6	103.1	102.4
60°	784.2	535.1	93.5	91.9	102.4	120.1	130.5	119.3	104.8	98.3	98.3
62.5°	779.3	464.2	83.8	86.2	96.0	112.8	125.7	114.5	101.6	97.5	96.7
65°	710.8	350.6	75.8	81.4	90.2	105.6	120.9	112.0	99.9	96.0	94.3
67.5°	598.8	232.9	70.1	76.5	84.6	99.9	116.8	108.8	95.1	92.7	91.0
70°	433.6	136.2	64.4	71.7	79.0	93.5	111.2	102.4	89.5	87.9	83.8
72.5°	234.6	85.4	58.0	65.3	71.7	85.4	102.4	94.3	82.2	75.8	73.3
75°	107.2	62.1	51.6	58.0	62.9	75.0	91.9	83.0	73.3	65.3	63.6
77.5°	71.7	46.7	43.5	49.9	52.4	62.9	81.4	66.1	57.2	51.6	49.9
80°	49.2	34.7	35.5	41.1	40.3	49.9	61.3	53.2	45.1	46.7	42.8
82.5°	31.4	24.1	27.4	29.1	28.2	37.8	47.6	40.3	33.9	28.2	24.1
85°	13.7	12.9	16.2	16.9	16.9	21.0	25.0	20.2	15.3	11.3	11.3
87.5°	0.8	1.6	1.6	2.5	1.6	0.8	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



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CATALOG NUMBER: ISS-AF-350-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

(END OF REPORT)