

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: P227806

Luminaire Tested: **ISS-AF-350-LED-E1-T4FT-8030-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227806
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-8030-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) 3000K CCT, 80 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3352.2 lumens
Efficiency: N/A
Efficacy: 91.1 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

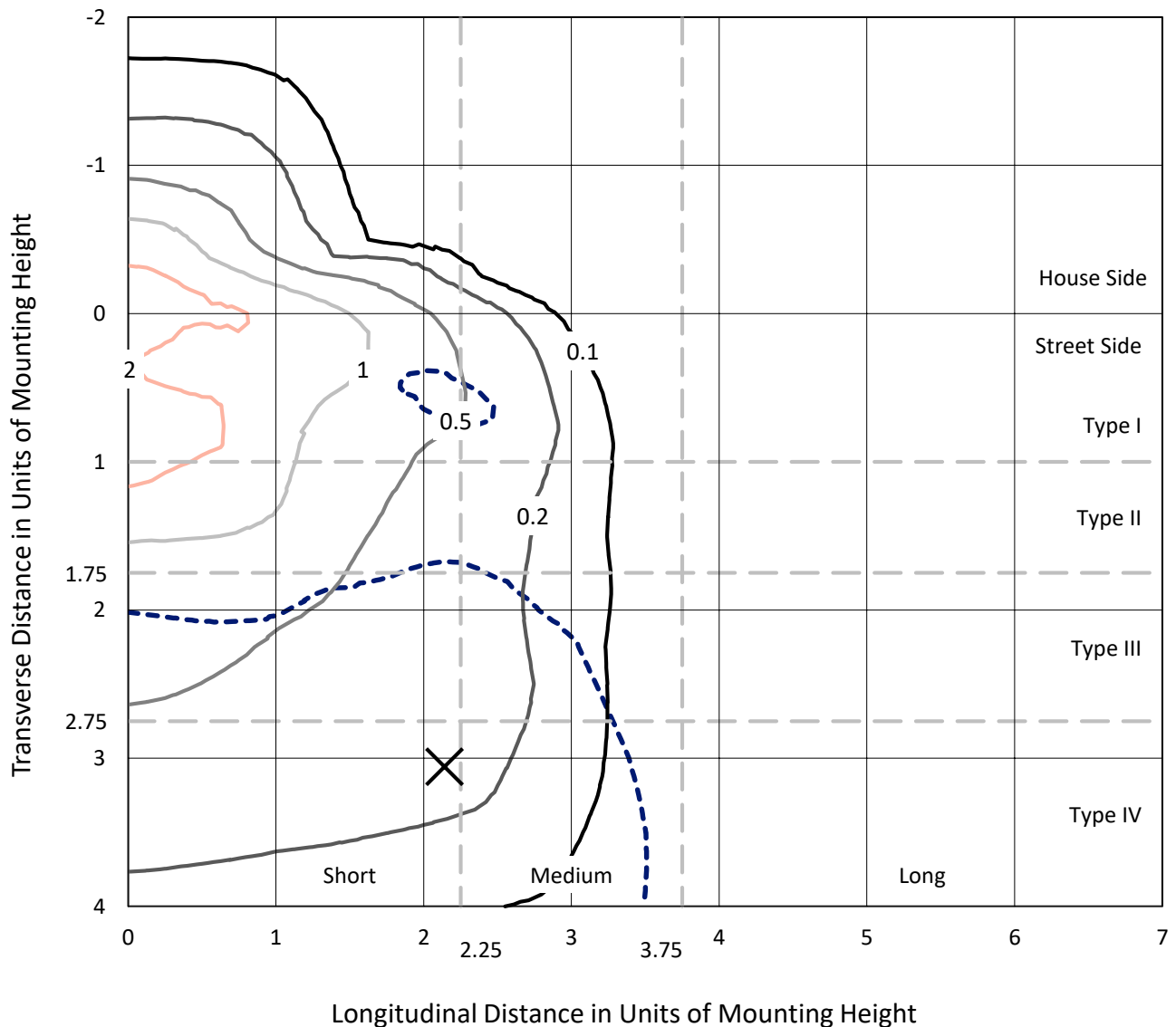
Input Watts (W): 36.79
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

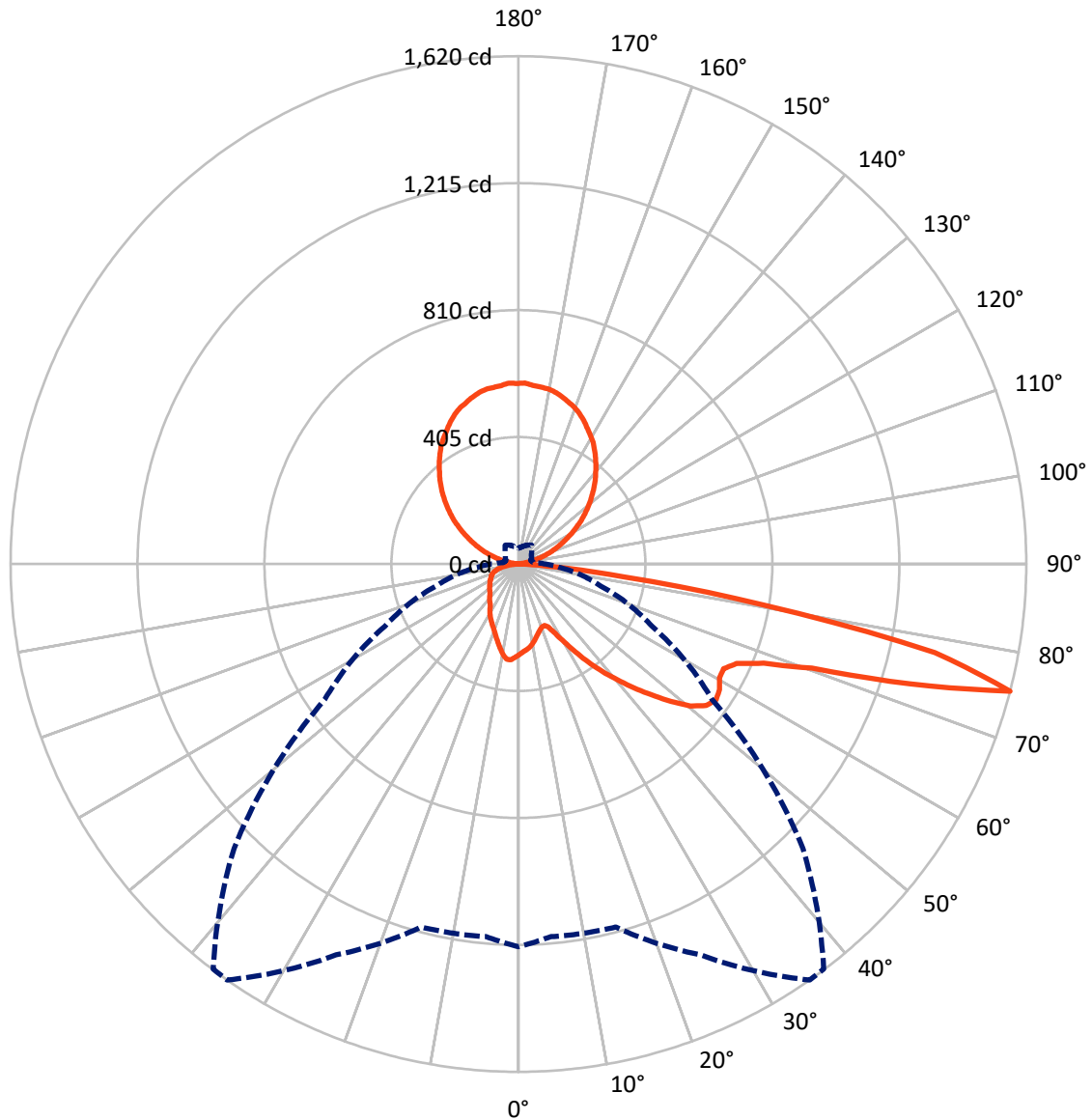
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.9 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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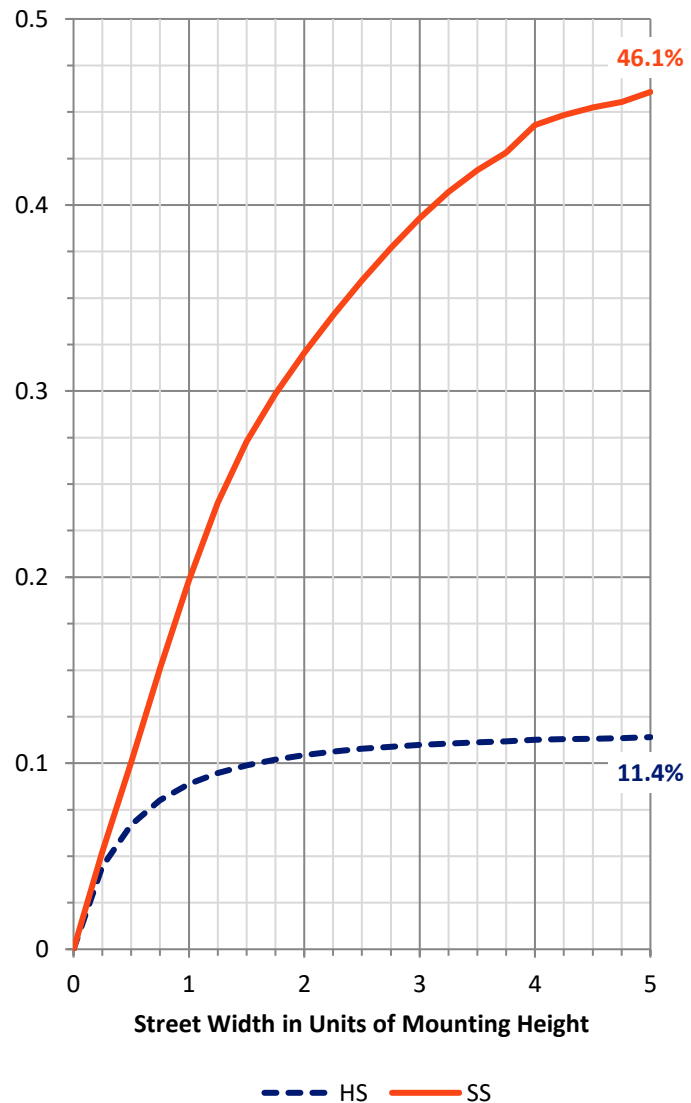
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	386.6	713.1	1099.6
	% Fixture	11.5	21.3	32.8
Street Side	Lumens	1539.4	713.1	2252.5
	% Fixture	45.9	21.3	67.2
Total	Lumens	1926.0	1426.2	3352.2
	% Fixture	57.5	42.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.2	0.8
10°-20°	71.7	2.1
20°-30°	113.4	3.4
30°-40°	183.0	5.5
40°-50°	270.8	8.1
50°-60°	348.2	10.4
60°-70°	431.1	12.9
70°-80°	434.4	13.0
80°-90°	46.4	1.4
90°-100°	4.7	0.1
100°-110°	69.0	2.1
110°-120°	153.0	4.6
120°-130°	223.9	6.7
130°-140°	265.6	7.9
140°-150°	269.3	8.0
150°-160°	231.1	6.9
160°-170°	155.1	4.6
170°-180°	54.3	1.6
0°-90°	1926.0	57.5
0°-180°	3352.2	100.0



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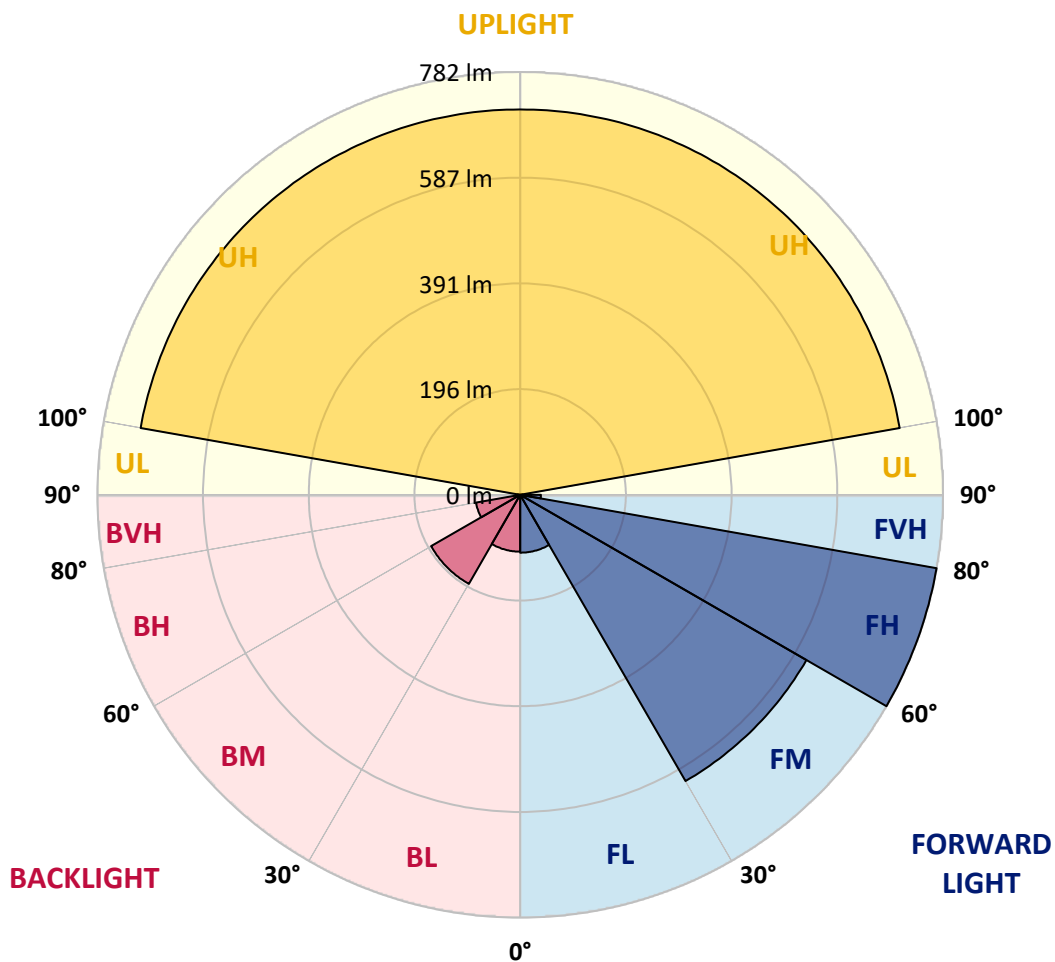
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	107.1	3.2			
FM (30°-60°)	611.6	18.2			
FH (60°-80°)	782.4	23.3			G1/1800
FVH (80°-90°)	38.4	1.1			G1/100
BL (0°-30°)	105.1	3.1	B0/110		
BM (30°-60°)	190.4	5.7	B0/220		
BH (60°-80°)	83.0	2.5	B0/110		G0/110
BVH (80°-90°)	8.0	0.2			G0/10
UL (90°-100°)	4.7	0.1		U1/10	
UH (100°-180°)	713.1	21.3		U4/1000	

BUG Rating: B0-U5-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
0°	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3
2.5°	281.0	280.3	279.7	279.7	281.0	281.0	281.6	282.3	282.9	284.8	287.4
5°	273.3	272.6	272.0	272.6	274.5	274.5	276.5	277.8	279.0	282.3	285.5
7.5°	263.0	263.0	262.3	264.9	266.8	266.2	268.8	270.0	273.3	276.5	281.6
10°	249.5	249.5	249.5	252.7	255.9	255.9	257.8	261.0	263.6	268.1	274.5
12.5°	237.9	237.3	237.3	239.8	243.7	244.3	247.5	252.0	255.3	261.0	268.1
15°	234.0	232.8	229.5	229.5	231.5	231.5	236.6	243.0	248.2	254.0	262.3
17.5°	234.7	232.8	224.4	221.8	221.8	222.5	227.6	234.7	241.1	248.2	259.1
20°	240.5	237.3	221.8	216.0	214.7	215.4	219.9	227.0	234.7	244.3	256.5
22.5°	265.5	260.4	231.5	218.6	212.8	212.8	215.4	223.1	232.8	245.6	261.0
25°	323.4	315.1	263.6	240.5	223.1	221.2	216.7	224.4	236.0	251.4	273.9
27.5°	382.6	374.2	303.5	278.4	251.4	245.6	228.9	230.8	243.7	264.3	293.2
30°	432.1	425.0	353.6	324.7	288.7	282.3	256.5	244.3	257.2	282.3	322.1
32.5°	435.9	432.7	407.6	378.1	334.3	325.3	291.3	272.0	278.4	306.7	353.6
35°	471.9	469.4	455.9	427.6	383.8	373.6	337.6	308.0	306.1	333.7	389.6
37.5°	507.3	504.1	495.1	475.8	435.3	426.9	398.6	351.1	337.6	365.2	425.0
40°	540.7	536.2	524.7	513.7	484.2	484.2	453.9	392.2	367.8	392.9	454.6
42.5°	602.5	588.3	557.4	549.1	540.7	540.7	496.4	420.5	392.2	423.1	482.9
45°	661.6	648.1	606.3	589.6	594.1	591.5	530.4	436.6	414.1	451.4	509.9
47.5°	708.5	696.3	653.9	642.3	655.2	644.9	558.7	449.4	441.7	481.6	532.4
50°	750.3	721.4	680.3	695.7	711.8	694.4	583.8	468.7	469.4	513.7	565.2
52.5°	693.1	689.9	698.9	734.9	750.3	731.1	606.3	493.2	498.9	554.9	602.5
55°	624.3	623.7	676.4	746.5	765.1	747.1	621.1	522.7	529.8	605.7	649.4
57.5°	610.8	604.4	640.4	722.0	756.1	743.3	628.8	550.4	559.4	670.0	695.7
60°	654.5	642.3	636.5	695.7	736.8	730.4	638.5	583.2	595.4	743.3	738.8
62.5°	749.7	733.0	691.8	697.6	734.9	729.8	661.6	621.7	635.9	816.6	763.2
65°	875.7	863.5	797.9	751.0	765.1	758.1	703.4	670.6	678.3	869.3	735.6
67.5°	1014.0	997.2	925.9	861.6	843.6	830.1	769.6	728.5	700.8	861.6	661.6
70°	1170.2	1152.2	1090.5	1024.2	993.4	978.6	885.4	778.6	692.5	776.7	522.1
72.5°	1362.4	1338.0	1303.9	1311.0	1305.9	1264.7	1069.9	795.3	631.4	578.0	311.8
75°	1221.0	1193.3	1199.1	1375.9	1620.3	1618.3	1283.4	754.2	470.6	272.6	135.0
77.5°	437.9	484.2	714.3	1030.7	1358.6	1356.7	993.4	471.9	201.9	116.4	81.7
80°	109.9	111.9	177.5	423.1	793.4	787.0	563.2	178.1	84.2	70.7	55.9
82.5°	35.4	37.9	64.9	146.0	339.5	331.8	174.9	58.5	52.7	45.7	34.1
85°	11.6	11.6	23.1	50.2	111.9	107.4	35.4	21.2	28.9	23.8	15.4
87.5°	0.0	0.0	0.6	1.3	2.6	1.3	0.0	1.3	3.9	4.5	3.2
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	3.0	4.0	5.0	9.0	13.0	7.0	5.0	4.0
100°	8.0	8.0	10.0	14.0	22.0	23.6	30.0	32.0	30.0	27.0	26.0
102.5°	28.0	28.0	32.0	38.0	45.0	46.0	50.0	51.0	50.0	48.0	49.0
105°	54.0	54.0	56.0	61.0	66.0	66.8	70.0	71.0	71.0	69.0	71.0
107.5°	78.0	77.0	80.0	84.0	88.0	88.6	91.0	93.0	92.0	91.0	92.0
110°	101.0	102.0	103.0	106.0	110.0	110.4	112.0	114.0	114.0	113.0	114.0



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CATALOG NUMBER: ISS-AF-350-LED-E1-T4FT-8030-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
112.5°	124.0	124.0	126.0	129.0	132.0	132.4	134.0	136.0	136.0	135.0	137.0
115°	146.0	147.0	149.0	151.0	154.0	154.4	156.0	158.0	158.0	158.0	160.0
117.5°	169.0	170.0	172.0	174.0	177.0	177.4	179.0	180.0	181.0	180.0	182.0
120°	193.0	195.0	196.0	198.0	201.0	201.2	202.0	204.0	204.0	204.0	206.0
122.5°	219.0	220.0	221.0	223.0	226.0	226.2	227.0	228.0	228.0	229.0	233.0
125°	244.0	246.0	247.0	248.0	251.0	251.2	252.0	253.0	254.0	254.0	257.0
127.5°	267.0	269.0	270.0	272.0	274.0	274.4	276.0	278.0	277.0	278.0	281.0
130°	290.0	292.0	293.0	294.0	298.0	298.2	299.0	301.0	301.0	302.0	305.0
132.5°	313.0	314.0	317.0	318.0	321.0	321.2	322.0	325.0	325.0	326.0	329.0
135°	336.0	337.0	339.0	341.0	345.0	345.0	345.0	348.0	348.0	349.0	351.0
137.5°	359.0	360.0	363.0	364.0	367.0	367.0	367.0	369.0	369.0	370.0	374.0
140°	382.0	383.0	385.0	386.0	388.0	388.2	389.0	390.0	390.0	392.0	396.0
142.5°	404.0	406.0	408.0	407.0	410.0	410.0	410.0	412.0	412.0	413.0	416.0
145°	425.0	426.0	428.0	428.0	431.0	431.2	432.0	434.0	433.0	434.0	437.0
147.5°	444.0	444.0	447.0	448.0	452.0	452.2	453.0	454.0	452.0	453.0	456.0
150°	461.0	462.0	464.0	465.0	469.0	469.2	470.0	471.0	469.0	469.0	473.0
152.5°	479.0	480.0	483.0	482.0	485.0	485.2	486.0	487.0	486.0	486.0	489.0
155°	499.0	500.0	502.0	501.0	503.0	503.0	503.0	504.0	503.0	504.0	507.0
157.5°	513.0	515.0	517.0	516.0	519.0	519.0	519.0	519.0	517.0	518.0	523.0
160°	525.0	527.0	529.0	529.0	532.0	532.0	532.0	532.0	530.0	530.0	533.0
162.5°	535.0	536.0	539.0	538.0	541.0	541.0	541.0	542.0	540.0	538.0	540.0
165°	546.0	547.0	549.0	548.0	552.0	552.0	552.0	553.0	550.0	548.0	550.0
167.5°	555.0	556.0	559.0	558.0	561.0	560.8	560.0	560.0	558.0	559.0	563.0
170°	562.0	563.0	566.0	565.0	567.0	566.8	566.0	565.0	564.0	566.0	571.0
172.5°	565.0	566.0	569.0	567.0	569.0	568.8	568.0	569.0	567.0	568.0	571.0
175°	567.0	569.0	570.0	569.0	572.0	572.0	572.0	573.0	570.0	568.0	571.0
177.5°	572.0	573.0	575.0	574.0	578.0	577.8	577.0	577.0	574.0	574.0	577.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3	289.3
2.5°	289.3	288.7	291.3	293.2	293.8	295.8	297.7	299.0	298.3	297.7	297.7
5°	288.7	289.3	293.8	297.7	300.9	304.1	306.7	308.0	307.3	307.3	307.3
7.5°	284.8	287.4	292.5	299.0	303.5	305.4	306.1	304.1	302.8	300.9	300.9
10°	278.4	282.3	290.6	297.7	299.6	297.0	293.2	289.3	284.2	281.0	281.0
12.5°	273.3	277.8	288.0	293.8	291.3	284.8	276.5	270.0	264.9	261.0	260.4
15°	268.8	274.5	285.5	286.8	281.0	270.0	259.1	252.0	246.3	243.7	243.7
17.5°	265.5	273.3	282.9	279.0	267.5	253.3	243.0	237.3	232.8	230.2	229.5
20°	266.2	275.8	280.3	269.4	252.7	237.9	228.3	225.0	221.8	220.5	220.5
22.5°	273.3	282.3	279.7	261.0	239.2	222.5	216.0	215.4	214.1	212.8	212.2
25°	288.7	295.1	281.6	252.7	225.0	208.3	205.1	207.0	206.4	205.1	205.1
27.5°	309.9	311.2	284.8	244.3	209.6	194.8	194.8	198.0	196.7	194.8	196.1
30°	335.6	328.6	286.1	230.8	191.6	182.0	183.9	185.8	184.5	182.0	182.0
32.5°	363.3	346.6	286.1	213.5	174.2	170.4	171.0	171.7	169.1	165.9	165.9
35°	390.3	363.9	282.9	192.9	160.7	158.8	158.2	160.7	158.8	154.3	154.3
37.5°	416.0	377.4	274.5	171.7	150.5	149.8	151.7	150.5	147.9	141.5	140.2
40°	434.0	386.4	257.8	154.3	142.1	146.0	144.7	137.6	133.7	129.2	129.2
42.5°	450.1	390.9	237.3	140.8	136.3	141.5	136.3	127.3	122.2	121.5	122.2
45°	464.9	394.8	217.3	129.9	129.2	136.3	129.9	120.2	114.4	114.4	115.1
47.5°	479.0	398.6	197.4	119.6	120.9	128.6	124.7	115.1	109.3	105.4	105.4
50°	501.5	407.6	168.5	108.7	111.2	122.2	120.9	109.9	103.5	97.7	96.4
52.5°	528.5	423.1	137.0	97.1	104.2	116.4	116.4	105.4	98.4	90.7	89.4
55°	564.5	439.8	109.9	88.7	97.1	109.9	111.9	103.5	93.2	86.2	84.9
57.5°	600.5	445.6	88.7	80.4	88.1	103.5	108.7	99.7	87.4	82.3	81.7
60°	625.6	426.9	74.6	73.3	81.7	95.8	104.2	95.2	83.6	78.4	78.4
62.5°	621.7	370.3	66.9	68.8	76.5	90.0	100.3	91.3	81.0	77.8	77.2
65°	567.1	279.7	60.4	64.9	72.0	84.2	96.4	89.4	79.7	76.5	75.2
67.5°	477.7	185.8	55.9	61.1	67.5	79.7	93.2	86.8	75.9	73.9	72.7
70°	345.9	108.7	51.4	57.2	63.0	74.6	88.7	81.7	71.4	70.1	66.9
72.5°	187.1	68.2	46.3	52.1	57.2	68.2	81.7	75.2	65.6	60.4	58.5
75°	85.5	49.5	41.1	46.3	50.2	59.8	73.3	66.2	58.5	52.1	50.8
77.5°	57.2	37.3	34.7	39.9	41.8	50.2	64.9	52.7	45.7	41.1	39.9
80°	39.2	27.6	28.3	32.8	32.1	39.9	48.9	42.4	36.0	37.3	34.1
82.5°	25.1	19.3	21.9	23.1	22.5	30.2	37.9	32.1	27.0	22.5	19.3
85°	10.9	10.3	12.9	13.5	13.5	16.7	19.9	16.1	12.2	9.0	9.0
87.5°	0.6	1.3	1.3	1.9	1.3	0.6	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°	4.0	4.0	5.0	7.0	13.0	9.0	4.0	3.0	2.0	2.0	2.0
100°	25.0	26.0	27.0	30.0	32.0	30.0	22.0	14.0	10.0	8.0	8.0
102.5°	48.0	49.0	48.0	50.0	51.0	50.0	45.0	38.0	32.0	28.0	28.0
105°	69.0	71.0	69.0	71.0	71.0	70.0	66.0	61.0	56.0	54.0	54.0
107.5°	91.0	92.0	91.0	92.0	93.0	91.0	88.0	84.0	80.0	77.0	78.0
110°	113.0	114.0	113.0	114.0	114.0	112.0	110.0	106.0	103.0	102.0	101.0



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CATALOG NUMBER: ISS-AF-350-LED-E1-T4FT-8030-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	135.0	137.0	135.0	136.0	136.0	134.0	132.0	129.0	126.0	124.0	124.0
115°	159.0	160.0	158.0	158.0	158.0	156.0	154.0	151.0	149.0	147.0	146.0
117.5°	180.0	182.0	180.0	181.0	180.0	179.0	177.0	174.0	172.0	170.0	169.0
120°	204.0	206.0	204.0	204.0	204.0	202.0	201.0	198.0	196.0	195.0	193.0
122.5°	232.0	233.0	229.0	228.0	228.0	227.0	226.0	223.0	221.0	220.0	219.0
125°	256.0	257.0	254.0	254.0	253.0	252.0	251.0	248.0	247.0	246.0	244.0
127.5°	278.0	281.0	278.0	277.0	278.0	276.0	274.0	272.0	270.0	269.0	267.0
130°	303.0	305.0	302.0	301.0	301.0	299.0	298.0	294.0	293.0	292.0	290.0
132.5°	327.0	329.0	326.0	325.0	325.0	322.0	321.0	318.0	317.0	314.0	313.0
135°	350.0	351.0	349.0	348.0	348.0	345.0	345.0	341.0	339.0	337.0	336.0
137.5°	372.0	374.0	370.0	369.0	369.0	367.0	367.0	364.0	363.0	360.0	359.0
140°	394.0	396.0	392.0	390.0	390.0	389.0	388.0	386.0	385.0	383.0	382.0
142.5°	415.0	416.0	413.0	412.0	412.0	410.0	410.0	407.0	408.0	406.0	404.0
145°	435.0	437.0	434.0	433.0	434.0	432.0	431.0	428.0	428.0	426.0	425.0
147.5°	453.0	456.0	453.0	452.0	454.0	453.0	452.0	448.0	447.0	444.0	444.0
150°	470.0	473.0	469.0	469.0	471.0	470.0	469.0	465.0	464.0	462.0	461.0
152.5°	486.0	489.0	486.0	486.0	487.0	486.0	485.0	482.0	483.0	480.0	479.0
155°	505.0	507.0	504.0	503.0	504.0	503.0	503.0	501.0	502.0	500.0	499.0
157.5°	520.0	523.0	518.0	517.0	519.0	519.0	519.0	516.0	517.0	515.0	513.0
160°	531.0	533.0	530.0	530.0	532.0	532.0	532.0	529.0	529.0	527.0	525.0
162.5°	537.0	540.0	538.0	540.0	542.0	541.0	541.0	538.0	539.0	536.0	535.0
165°	548.0	550.0	548.0	550.0	553.0	552.0	552.0	548.0	549.0	547.0	546.0
167.5°	561.0	563.0	559.0	558.0	560.0	560.0	561.0	558.0	559.0	556.0	555.0
170°	569.0	571.0	566.0	564.0	565.0	566.0	567.0	565.0	566.0	563.0	562.0
172.5°	568.0	571.0	568.0	567.0	569.0	568.0	569.0	567.0	569.0	566.0	565.0
175°	568.0	571.0	568.0	570.0	573.0	572.0	572.0	569.0	570.0	569.0	567.0
177.5°	574.0	577.0	574.0	574.0	577.0	577.0	578.0	574.0	575.0	573.0	572.0
180°	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0	576.0

(END OF REPORT)