

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: P271640

Luminaire Tested: **IST-AF-450-LED-E1-T4W-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271640
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35944)
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-T4W-7027
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE
Light Source: (16) 2700K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2727.2 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Medium - Semi-Cutoff
BUG Rating: B1 - U1 - G1

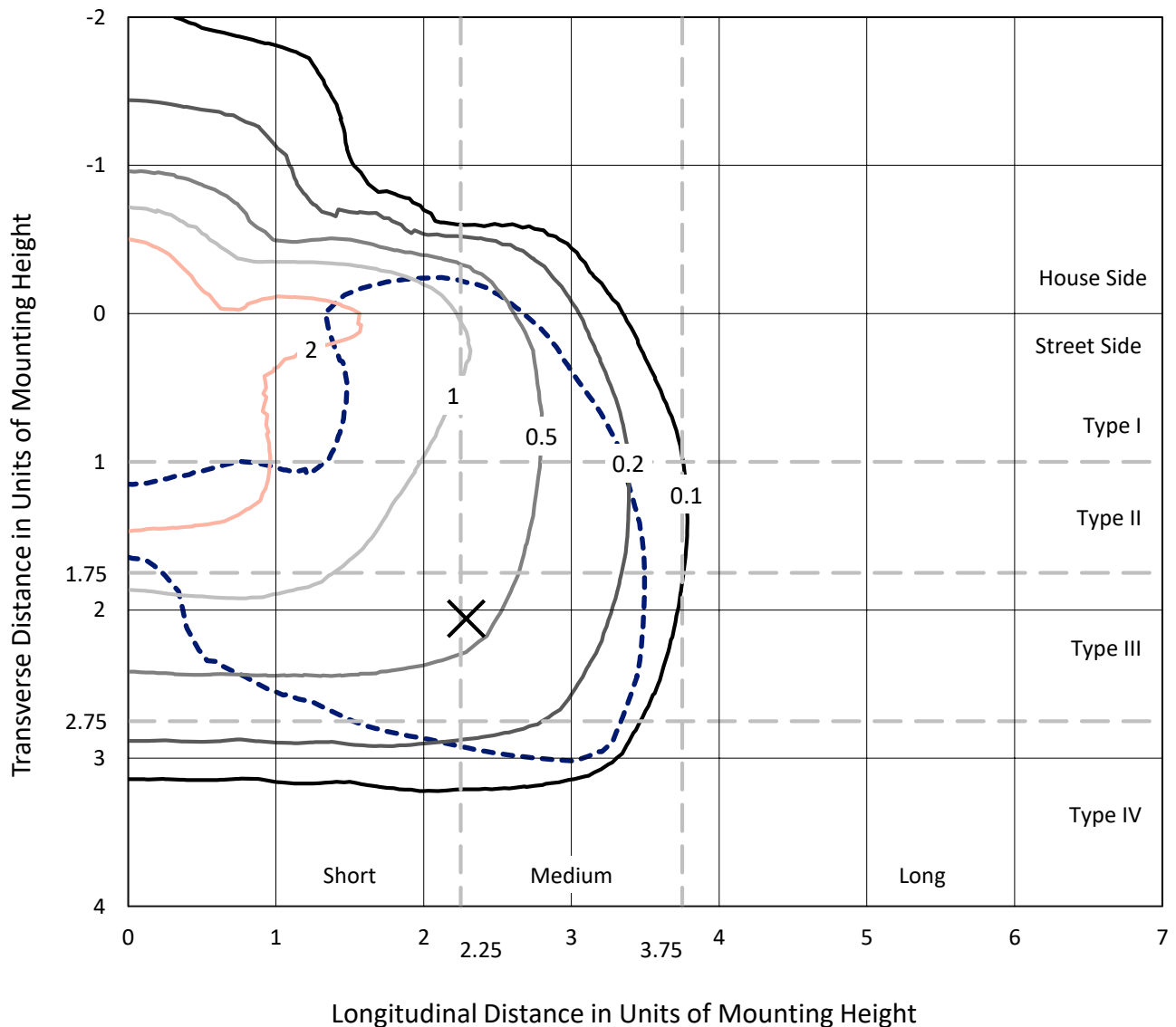
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P271640
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Iso-Footcandle Lines of Horizontal Illumination

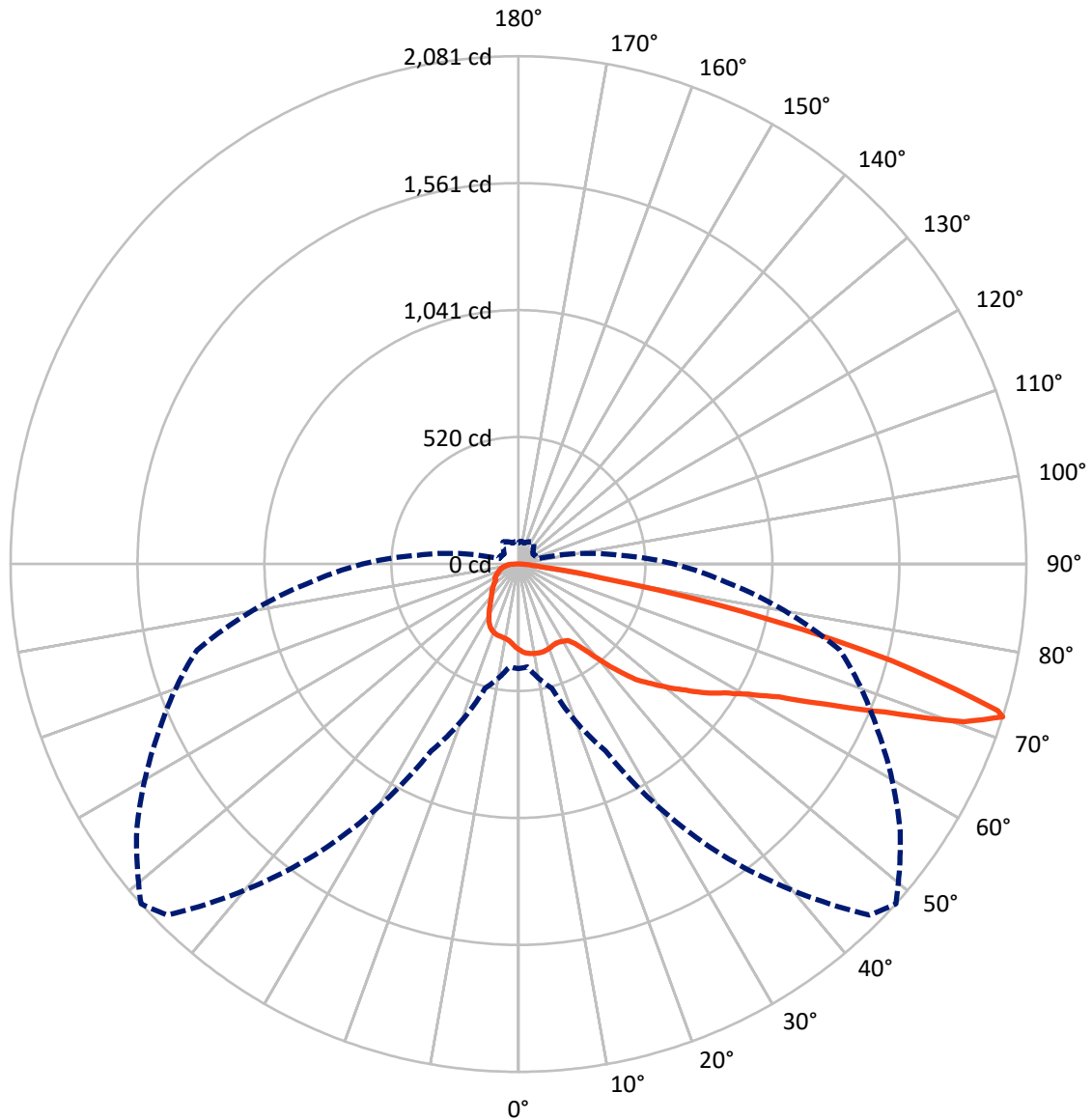
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Medium - Semi-Cutoff

REPORT NUMBER: P271640
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Luminous Intensity Polar Plot



— Vertical Plane Through 48-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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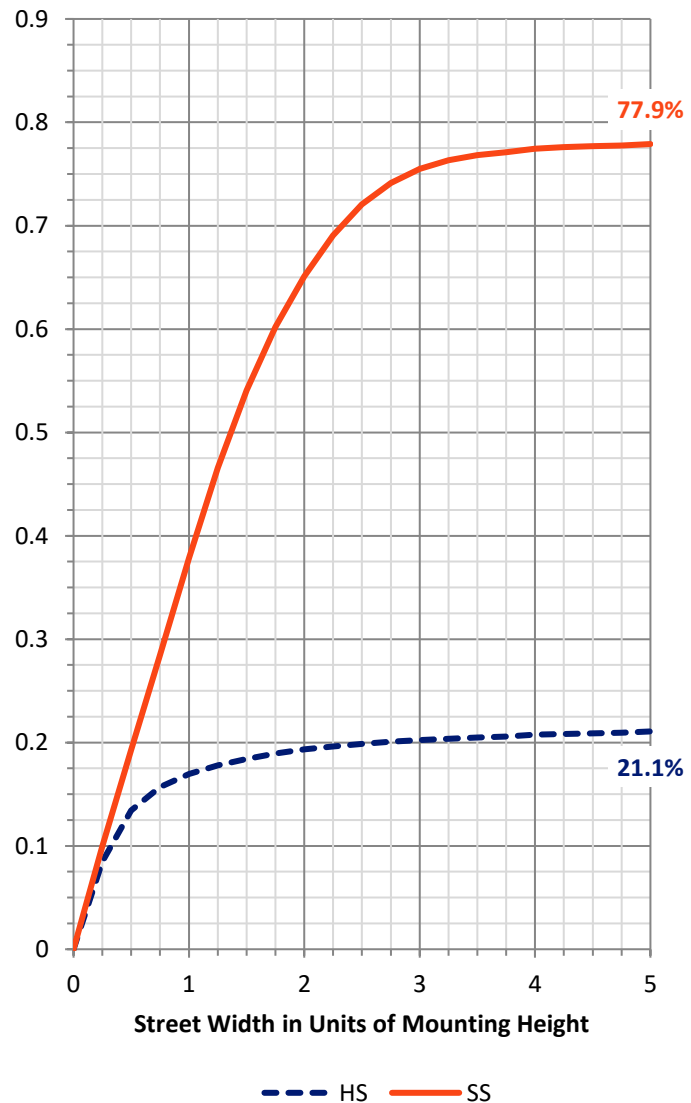
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	592.3	1.2	593.5
	% Fixture	21.7	0.0	21.8
Street Side	Lumens	2133.2	0.4	2133.6
	% Fixture	78.2	0.0	78.2
Total	Lumens	2725.5	1.7	2727.2
	% Fixture	99.9	0.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.2	1.2
10°-20°	96.9	3.6
20°-30°	149.4	5.5
30°-40°	224.0	8.2
40°-50°	373.0	13.7
50°-60°	582.8	21.4
60°-70°	769.9	28.2
70°-80°	445.3	16.3
80°-90°	51.1	1.9
90°-100°	1.7	0.1
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2725.5	99.9
0°-180°	2727.2	100.0



REPORT NUMBER: P271640

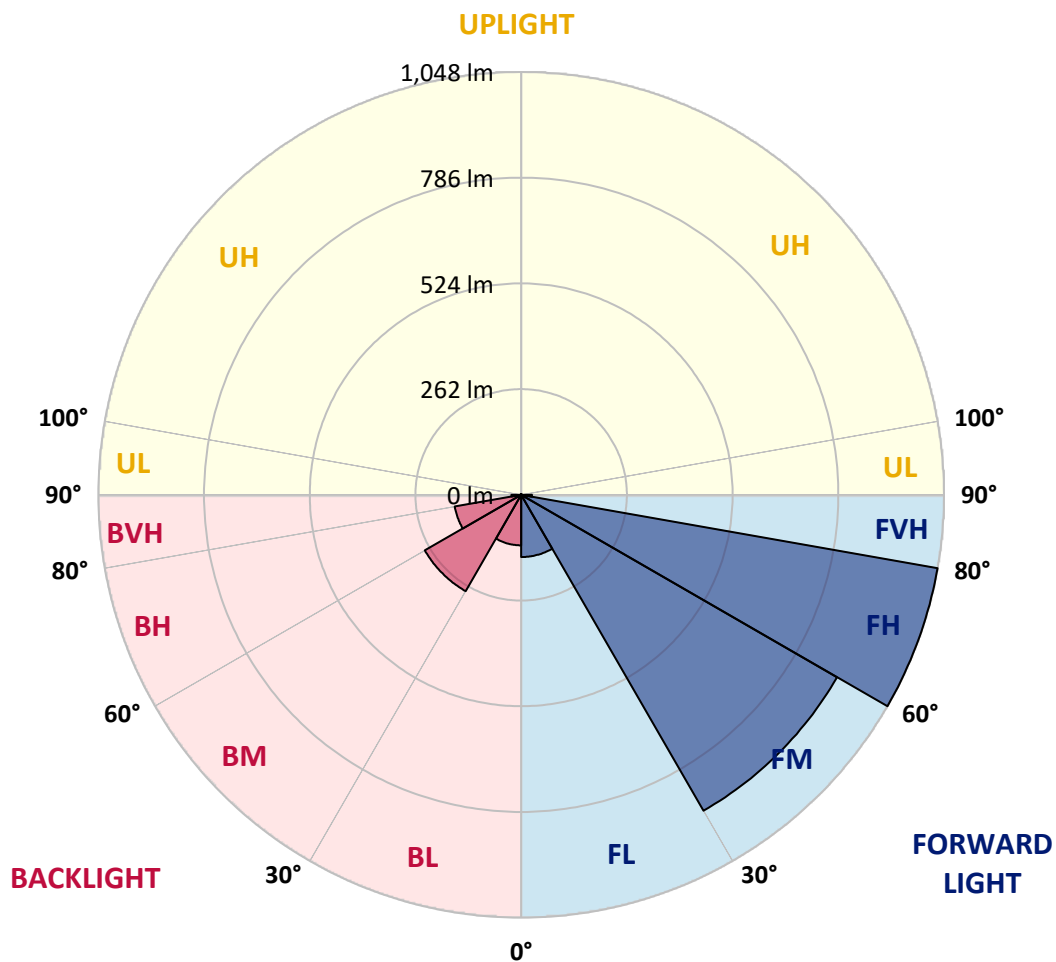
CATALOG NUMBER: IST-AF-450-LED-E1-T4W-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	154.2	5.7			
FM	(30°-60°)	904.1	33.2			
FH	(60°-80°)	1048.1	38.4			G1/1800
FVH	(80°-90°)	26.8	1.0			G1/100
BL	(0°-30°)	125.3	4.6	B1/500		
BM	(30°-60°)	275.6	10.1	B1/1000		
BH	(60°-80°)	167.1	6.1	B1/500		G1/500
BVH	(80°-90°)	24.3	0.9			G1/100
UL	(90°-100°)	1.7	0.1		U1/10	
UH	(100°-180°)	1.2	0.0		U1/10	

BUG Rating: B1-U1-G1

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
0°	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9
2.5°	369.5	369.0	369.0	365.9	364.7	362.6	361.1	358.7	356.4	353.7	350.1
5°	387.2	388.3	386.8	382.0	376.2	369.8	367.5	361.8	354.4	347.6	341.4
7.5°	404.2	404.7	400.3	392.4	383.3	373.3	370.2	362.6	354.4	345.3	336.1
10°	416.5	416.9	410.5	399.5	387.2	376.2	372.5	365.1	354.8	344.9	333.5
12.5°	423.6	424.0	414.5	403.1	388.3	377.4	374.1	366.3	355.5	343.0	330.3
15°	422.5	423.6	415.7	403.1	387.6	377.7	373.8	367.0	353.7	341.0	327.5
17.5°	414.5	416.2	409.8	396.0	383.7	375.7	371.4	364.7	351.7	338.2	323.6
20°	399.0	401.0	398.3	384.8	376.6	370.2	367.5	361.1	348.8	335.0	320.0
22.5°	381.7	383.7	382.9	371.8	367.9	364.7	361.8	357.2	346.5	332.6	318.4
25°	369.0	370.6	369.5	360.0	361.1	361.1	359.5	356.0	346.0	333.5	318.4
27.5°	390.0	390.0	379.7	360.3	358.3	361.8	361.1	359.1	351.2	337.4	321.5
30°	466.7	460.8	442.2	393.5	368.7	367.0	366.7	365.5	358.3	346.0	331.5
32.5°	552.5	546.6	524.5	463.5	411.7	377.7	374.1	374.5	372.5	361.1	346.5
35°	628.9	628.2	610.7	544.6	478.5	415.3	401.0	391.6	390.9	386.0	374.5
37.5°	690.5	690.5	692.1	617.0	551.0	475.0	459.9	420.9	420.9	418.1	411.0
40°	761.0	764.2	767.7	682.7	628.5	546.2	519.0	473.5	459.7	464.0	465.5
42.5°	853.6	857.5	855.2	763.8	699.3	631.3	597.6	542.7	508.7	515.8	532.3
45°	916.0	917.7	934.7	848.4	788.4	703.2	674.8	599.2	565.7	580.2	609.5
47.5°	986.9	990.8	993.5	944.6	892.7	784.7	732.6	654.2	632.5	654.7	700.9
50°	1056.0	1050.9	1058.5	1056.5	991.5	857.2	795.0	705.6	707.2	737.3	813.2
52.5°	1116.2	1098.8	1116.2	1138.0	1119.0	931.5	859.0	766.2	789.1	825.9	945.7
55°	1162.5	1120.5	1149.8	1211.5	1207.2	997.2	932.4	846.8	885.2	935.5	1106.7
57.5°	1067.9	1073.0	1153.7	1261.0	1259.0	1063.6	996.4	947.7	994.7	1050.9	1297.3
60°	979.7	1002.7	1127.2	1268.9	1295.0	1136.0	1082.5	1062.4	1105.9	1174.4	1480.0
62.5°	933.1	954.8	1084.2	1254.2	1352.4	1243.2	1198.5	1183.1	1242.4	1319.1	1643.1
65°	947.7	961.2	1081.4	1276.4	1418.4	1405.4	1385.9	1360.2	1389.9	1461.9	1716.6
67.5°	906.6	928.7	1058.5	1315.6	1539.1	1603.1	1619.4	1591.7	1566.7	1556.9	1609.4
70°	674.8	696.2	832.2	1153.7	1637.9	1946.4	1936.6	1844.0	1676.2	1536.2	1257.4
72°	428.9	422.8	526.9	845.2	1456.0	2034.6	2081.4	1910.1	1626.4	1364.2	854.0
72.5°	311.7	339.8	437.0	751.5	1383.2	1986.4	2054.4	1888.7	1561.2	1288.7	751.2
75°	76.0	80.3	104.8	269.3	810.0	1494.7	1580.2	1459.2	1139.5	765.0	333.0
77.5°	51.5	53.4	69.2	95.0	238.1	852.4	937.8	805.7	509.9	260.3	148.3
80°	38.4	39.5	50.2	67.2	98.8	290.7	343.0	272.5	127.0	144.4	105.6
82.5°	26.9	27.7	38.0	49.5	65.7	68.0	90.5	100.1	82.3	94.5	61.7
85°	18.5	18.5	27.7	34.0	41.5	33.7	36.0	50.2	55.8	56.1	37.5
87.5°	9.9	11.0	16.2	21.8	21.8	15.5	17.0	25.7	31.2	33.7	22.5
90°	3.5	3.5	6.7	8.4	5.1	4.0	3.5	5.1	7.5	10.7	7.2
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	48°	55°	65°	75°	85°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9	350.9
2.5°	349.2	346.8	343.7	342.2	341.4	339.8	338.2	337.4	337.4	335.8	336.1
5°	338.2	334.6	330.3	327.2	326.7	326.7	327.5	327.5	327.9	326.7	328.3
7.5°	332.6	328.7	322.3	318.8	316.0	315.7	317.2	320.3	322.0	320.8	322.3
10°	328.7	324.4	317.2	312.9	310.9	310.2	311.4	314.5	319.5	319.5	321.1
12.5°	324.7	319.2	312.1	308.8	307.3	307.7	309.3	311.7	317.2	319.2	320.0
15°	320.8	314.5	308.5	304.2	304.2	305.3	307.3	310.2	315.2	318.8	319.5
17.5°	316.8	310.5	305.3	301.8	301.8	303.4	305.3	308.8	312.5	317.6	317.6
20°	313.3	308.1	301.4	298.2	297.9	299.0	301.4	305.0	307.7	312.9	313.3
22.5°	311.4	305.0	298.7	293.8	291.9	291.1	293.5	297.1	299.9	305.0	305.7
25°	310.5	303.4	295.5	286.8	281.6	280.0	281.2	285.6	288.0	291.9	293.0
27.5°	313.3	306.5	294.3	278.5	267.8	263.5	264.6	267.3	268.1	272.5	274.5
30°	322.7	314.9	296.6	269.7	250.4	242.5	242.5	242.8	244.1	247.7	248.0
32.5°	338.2	330.7	303.8	260.7	232.6	221.5	218.7	216.7	216.7	216.3	216.7
35°	366.7	360.3	316.0	250.4	213.2	201.0	194.2	190.6	187.0	185.5	185.1
37.5°	407.8	402.2	333.5	238.5	196.2	184.0	175.6	168.5	164.5	164.1	166.2
40°	469.2	463.5	352.9	225.0	180.0	170.9	162.1	154.7	150.3	150.6	152.7
42.5°	544.6	527.7	373.8	206.9	166.9	162.1	152.7	146.3	142.0	139.7	139.2
45°	632.9	604.4	393.5	189.8	152.7	154.7	145.5	138.4	132.9	126.6	125.9
47.5°	742.8	681.2	411.0	172.8	137.2	146.7	138.0	131.3	123.0	115.5	114.4
50°	857.5	769.3	426.0	154.7	123.3	138.0	130.5	121.5	110.0	103.2	103.2
52.5°	990.0	875.3	445.4	134.5	112.7	128.5	121.0	109.1	99.7	98.8	98.8
55°	1137.5	986.5	458.9	118.7	104.5	118.3	114.7	111.1	108.0	108.8	109.1
57.5°	1291.9	1102.4	447.0	107.5	97.6	115.9	126.2	121.5	111.5	111.1	110.7
60°	1424.7	1192.5	381.3	100.5	92.5	119.8	135.3	121.5	111.5	116.7	117.0
62.5°	1511.8	1235.3	254.0	91.4	85.0	113.2	132.1	117.9	111.9	126.6	127.8
65°	1499.9	1187.4	146.0	85.0	80.3	104.0	127.8	113.5	104.5	112.7	110.3
67.5°	1323.0	995.1	105.6	82.3	76.7	97.6	119.8	107.2	97.3	107.5	103.2
70°	950.9	677.5	91.0	79.9	74.4	90.2	114.4	103.2	93.3	100.5	93.7
72°	638.0	412.1	83.5	78.0	72.0	85.4	110.3	100.1	89.8	93.7	86.2
72.5°	543.0	325.2	81.5	77.2	71.1	84.2	109.1	99.4	89.0	93.0	85.9
75°	202.8	127.4	72.3	71.1	65.7	78.3	104.5	95.7	85.0	83.8	80.7
77.5°	104.5	80.7	61.7	62.9	58.9	71.5	99.4	90.2	78.3	74.0	72.3
80°	76.0	58.5	49.9	53.4	50.2	64.5	92.2	81.8	71.1	66.5	64.5
82.5°	47.9	36.4	38.0	42.3	42.7	57.0	83.8	73.6	63.3	59.3	56.1
85°	23.0	21.8	26.9	31.2	34.5	48.3	76.7	65.3	55.3	47.5	47.9
87.5°	12.3	16.6	16.2	21.0	26.5	39.5	68.0	53.4	44.3	35.7	36.0
90°	2.8	4.3	4.7	8.4	10.7	17.0	43.8	30.5	29.6	12.7	11.0
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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 CATALOG NUMBER: IST-AF-450-LED-E1-T4W-7027

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)