

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: P271638

Luminaire Tested: **IST-AF-450-LED-E1-T3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35938)
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-T3-7027
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III
Light Source: (16) 2700K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2731.1 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Cutoff
BUG Rating: B1 - U1 - G1

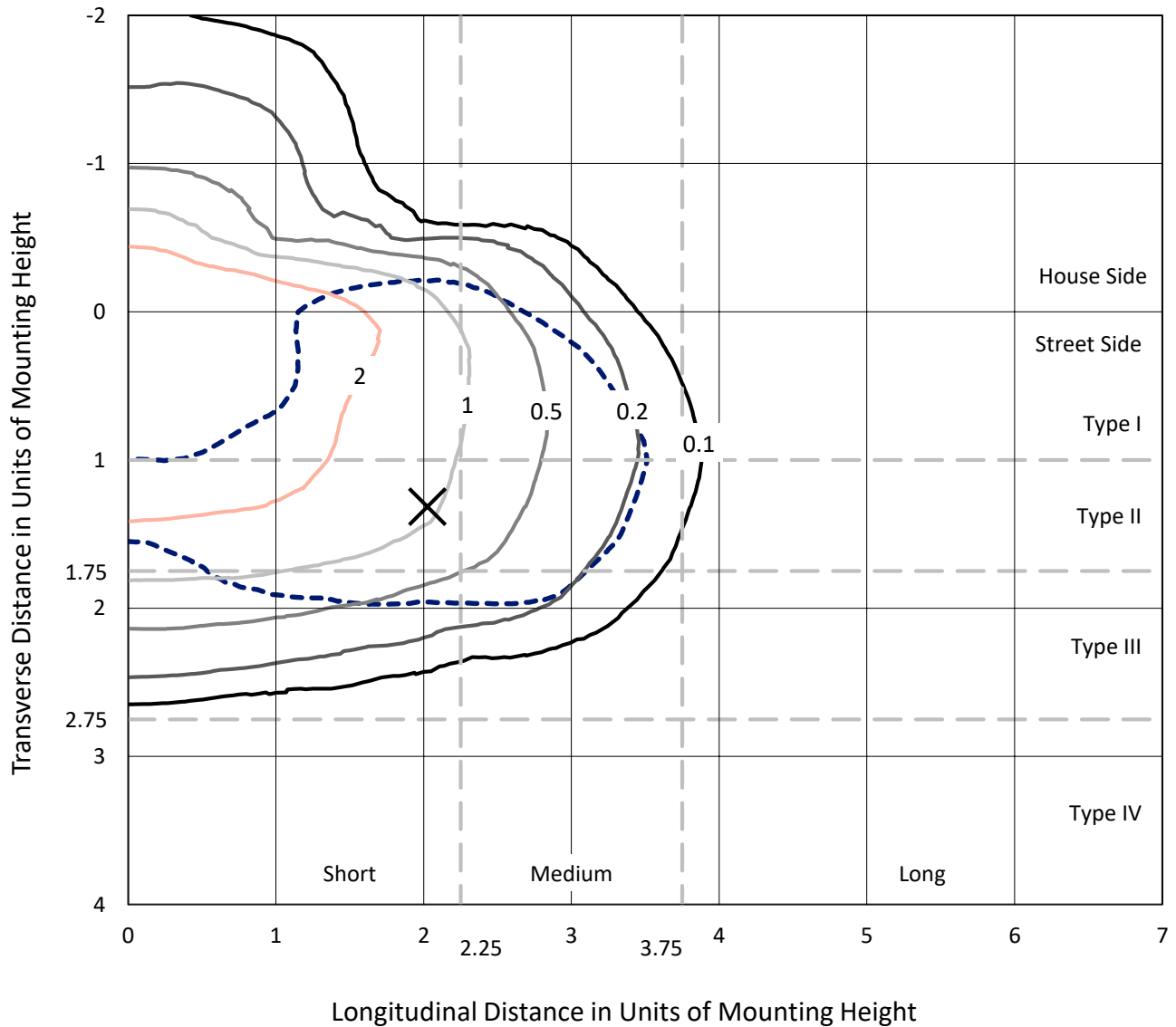
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: IST-AF-450-LED-E1-T3-7027

Iso-Footcandle Lines of Horizontal Illumination

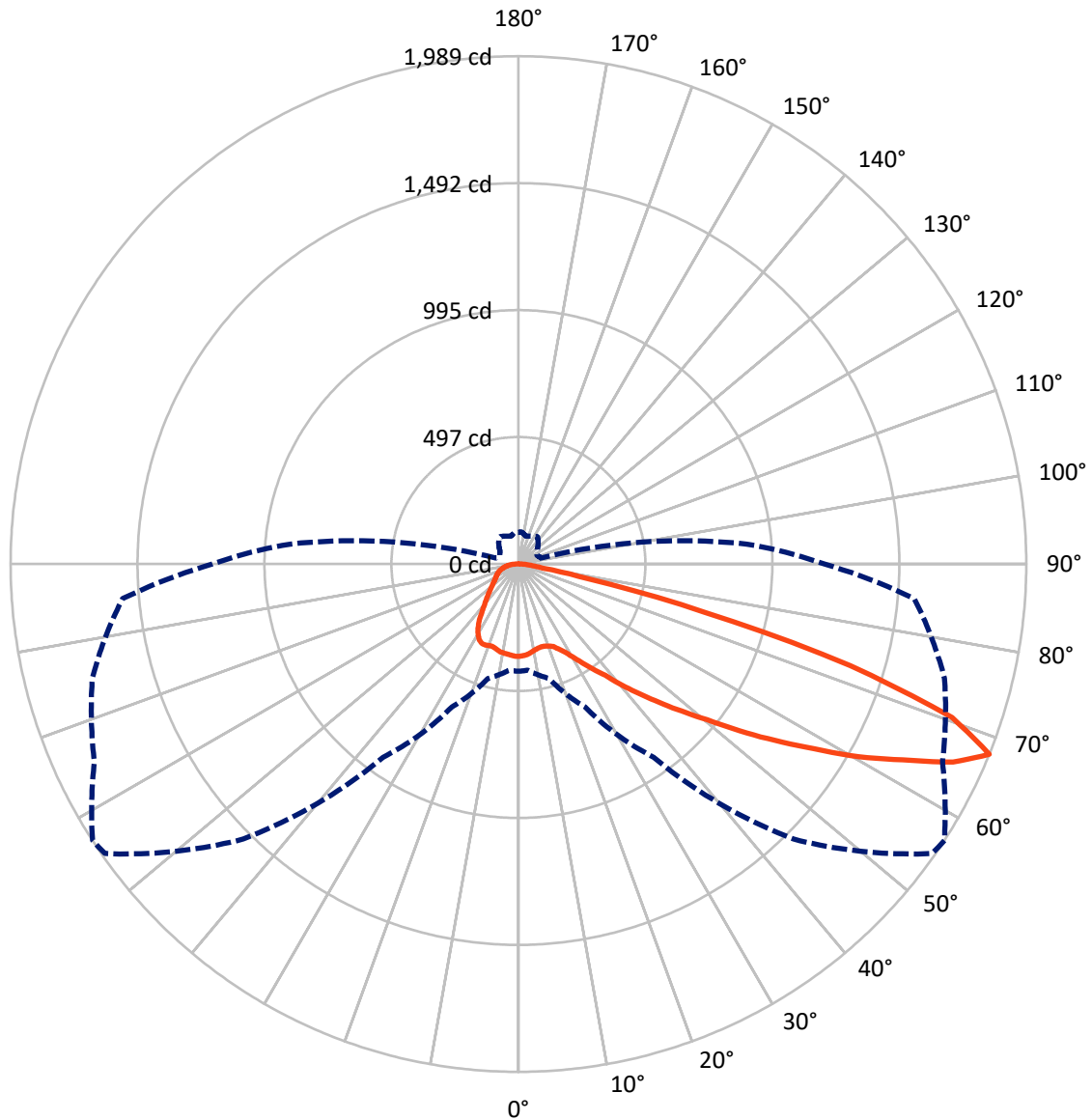
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type III - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	635.6	0.8	636.4
	% Fixture	23.3	0.0	23.3
Street Side	Lumens	2094.5	0.2	2094.8
	% Fixture	76.7	0.0	76.7
Total	Lumens	2730.1	1.0	2731.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.8	1.2
10°-20°	97.3	3.6
20°-30°	167.4	6.1
30°-40°	272.2	10.0
40°-50°	439.1	16.1
50°-60°	654.6	24.0
60°-70°	737.3	27.0
70°-80°	284.2	10.4
80°-90°	44.0	1.6
90°-100°	1.0	0.0
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°	2730.1	100.0
0°-180°	2731.1	100.0



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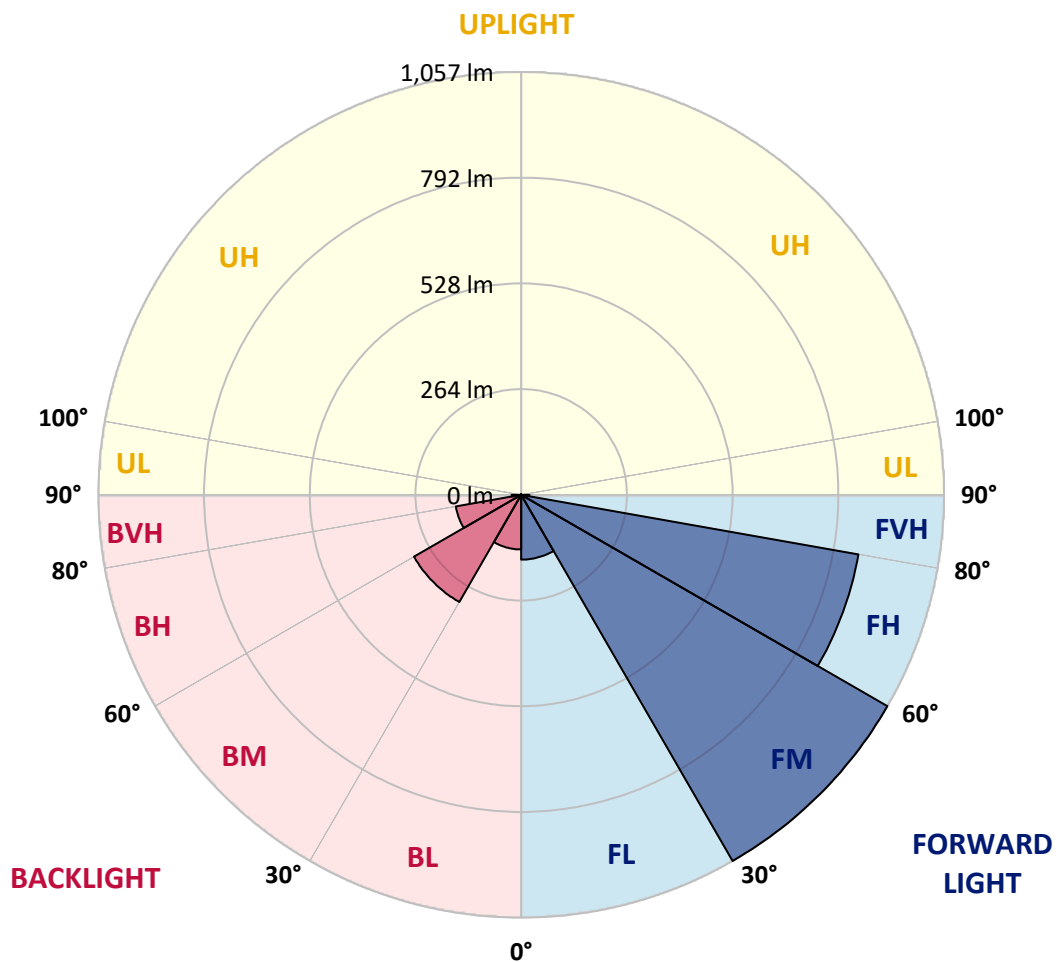
CATALOG NUMBER: IST-AF-450-LED-E1-T3-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	162.0	5.9			
FM	(30°-60°)	1056.6	38.7			
FH	(60°-80°)	855.7	31.3			G1/1800
FVH	(80°-90°)	20.2	0.7			G1/100
BL	(0°-30°)	136.6	5.0	B1/500		
BM	(30°-60°)	309.3	11.3	B1/1000		
BH	(60°-80°)	165.8	6.1	B1/500		G1/500
BVH	(80°-90°)	23.8	0.9			G1/100
UL	(90°-100°)	1.0	0.0		U1/10	
UH	(100°-180°)	0.8	0.0		U1/10	

BUG Rating: B1-U1-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	359.1	360.0	360.7	360.3	360.3	360.3	360.3	359.5	360.7	360.7	360.0
5°	353.2	353.7	354.0	354.8	355.5	356.4	356.8	356.8	357.2	356.8	356.0
7.5°	344.5	344.9	346.5	346.5	347.3	348.9	349.7	350.5	351.7	351.7	351.2
10°	341.7	341.7	341.7	340.5	341.4	341.7	343.0	343.0	346.0	347.6	348.5
12.5°	344.9	344.5	344.5	341.4	338.6	337.4	338.6	339.0	342.5	344.9	346.5
15°	352.0	352.0	351.2	346.5	341.0	336.7	336.2	336.2	339.0	342.5	345.3
17.5°	368.7	370.2	364.7	357.2	348.1	341.0	338.2	337.9	339.8	342.5	345.3
20°	400.3	399.8	391.6	378.2	362.4	350.5	343.7	343.0	342.5	344.1	347.3
22.5°	437.8	436.3	426.3	409.4	387.7	365.9	352.9	351.2	348.1	349.4	353.7
25°	478.2	478.5	466.4	444.2	416.9	390.9	371.0	369.5	362.7	361.9	366.7
27.5°	518.5	523.7	507.1	486.2	453.7	422.5	393.5	391.2	385.2	383.3	388.1
30°	577.5	575.5	555.0	527.7	495.2	456.1	428.4	424.0	412.1	414.9	420.0
32.5°	627.4	631.7	613.1	580.7	537.9	496.9	464.7	462.4	450.9	454.1	461.2
35°	688.2	698.5	674.0	634.0	592.9	550.6	512.2	505.9	496.9	503.1	508.7
37.5°	757.9	763.0	744.1	692.6	650.7	606.4	562.9	553.0	543.0	556.1	566.0
40°	824.4	832.5	808.1	764.5	715.9	673.5	626.2	624.2	601.2	615.5	641.2
42.5°	922.8	933.1	893.9	843.3	799.4	748.4	703.4	692.6	667.7	687.8	731.0
45°	991.7	991.2	964.7	922.8	895.9	846.5	785.6	772.9	746.0	772.9	830.7
47.5°	1016.5	1022.5	1013.4	1008.3	998.7	962.7	873.0	861.1	835.9	875.8	929.2
50°	1053.4	1051.7	1051.7	1083.4	1110.8	1103.2	975.4	958.4	931.9	979.8	1056.5
52.5°	1062.9	1048.6	1070.8	1131.2	1217.9	1224.2	1094.5	1085.1	1053.4	1100.1	1194.6
55°	1036.4	1032.8	1067.9	1155.8	1292.2	1337.4	1232.6	1219.4	1183.9	1223.9	1343.7
57.5°	977.0	986.1	1042.7	1150.7	1343.7	1437.0	1384.0	1365.4	1314.4	1338.6	1491.6
60°	914.9	919.2	994.1	1132.4	1357.5	1506.3	1543.1	1532.4	1444.9	1459.2	1601.2
62.5°	846.0	835.9	913.4	1117.4	1342.1	1601.6	1697.3	1689.0	1585.8	1581.4	1679.1
65°	653.9	668.1	734.2	923.5	1236.4	1676.0	1881.2	1870.5	1742.8	1682.3	1670.8
67.5°	420.0	417.4	464.0	617.5	924.0	1523.3	1977.3	1989.3	1832.6	1727.8	1556.1
70°	150.6	155.0	172.5	280.5	506.7	1014.9	1743.3	1802.1	1766.6	1642.7	1266.5
72.5°	91.8	91.8	104.5	126.2	205.4	481.4	1242.4	1359.1	1441.8	1353.6	935.5
75°	72.0	71.5	76.0	87.0	110.7	157.8	660.5	750.7	924.7	935.0	532.4
77.5°	57.0	56.5	60.9	66.0	82.6	83.5	210.8	274.5	424.4	399.5	190.2
80°	45.8	45.5	48.7	50.2	60.5	57.7	84.6	98.1	148.7	130.5	82.3
82.5°	41.5	41.5	44.6	38.4	42.0	40.7	52.6	56.1	74.8	77.5	49.5
85°	26.9	27.7	42.0	37.2	27.3	25.0	33.7	35.7	46.7	51.0	24.2
87.5°	12.7	13.8	32.0	30.8	18.1	13.5	19.0	20.2	25.3	31.2	14.2
90°	2.3	2.3	4.0	4.3	2.3	2.3	3.1	2.8	2.8	4.0	4.0
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
110°	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°	55°	57°	65°	75°	85°
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°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	361.2	360.3	360.7	361.2	361.6	362.7	363.2	363.2	363.2	362.7	363.5
5°	356.8	356.0	356.0	357.2	358.3	360.0	362.4	364.4	365.1	365.5	365.5
7.5°	352.0	351.2	351.7	353.7	355.5	356.8	359.1	360.3	363.5	363.5	364.4
10°	348.9	349.7	350.1	352.0	353.7	353.7	353.2	352.5	351.7	353.7	352.9
12.5°	346.8	348.1	347.6	350.1	350.9	347.6	343.0	336.7	335.9	336.7	337.4
15°	346.0	346.0	347.3	347.3	343.3	337.0	331.0	331.5	332.2	334.6	334.6
17.5°	346.0	346.5	347.3	344.5	337.4	331.8	330.7	329.5	325.2	324.0	322.9
20°	348.9	348.1	348.9	343.7	337.4	333.0	324.0	315.2	307.0	303.4	301.8
22.5°	355.5	354.4	354.0	348.9	341.0	326.4	308.5	295.0	280.8	276.0	274.5
25°	367.5	367.0	364.4	360.7	338.6	310.2	287.5	266.2	250.8	242.5	242.8
27.5°	388.4	388.4	386.8	371.0	326.4	290.0	259.5	237.7	221.9	214.0	212.8
30°	420.0	420.9	421.7	373.8	307.0	260.3	228.6	214.0	204.5	198.5	198.2
32.5°	459.2	463.5	458.5	370.6	280.5	224.3	204.5	199.3	194.7	190.7	190.2
35°	511.0	522.9	490.5	358.0	250.8	199.7	189.8	186.3	182.7	180.0	180.4
37.5°	580.7	592.2	511.0	336.7	212.8	185.9	181.5	176.0	170.5	164.6	163.7
40°	662.9	659.4	518.1	296.4	189.0	179.2	173.2	166.2	156.7	148.0	146.3
42.5°	745.2	721.5	512.2	246.4	173.6	173.2	165.0	155.9	146.3	138.9	138.9
45°	837.4	776.0	494.1	199.7	161.3	166.9	156.7	147.1	138.5	132.9	132.5
47.5°	924.4	827.1	464.0	166.5	149.1	158.6	150.3	141.7	133.3	128.5	127.4
50°	1026.4	885.2	441.1	144.0	137.2	150.3	146.7	138.9	131.0	125.4	124.5
52.5°	1129.7	941.9	423.6	128.5	126.6	144.0	145.2	140.5	132.1	121.5	120.6
55°	1237.7	1012.6	388.9	116.3	117.0	139.2	147.1	143.5	137.6	120.2	119.5
57.5°	1328.2	1077.9	327.9	108.0	109.5	135.6	148.0	141.2	134.5	121.0	119.8
60°	1399.1	1122.5	240.5	101.3	102.9	131.7	144.4	132.9	124.1	121.0	119.0
62.5°	1420.8	1124.2	159.8	93.3	97.6	125.0	138.1	128.5	118.3	119.8	119.0
65°	1366.2	1064.9	114.4	85.9	93.3	117.0	135.3	124.1	115.5	121.8	121.0
67.5°	1198.1	897.0	91.8	79.9	87.5	108.8	130.2	120.2	113.2	126.2	123.8
70°	933.5	643.5	78.0	74.0	81.0	100.9	123.0	115.9	110.0	122.6	119.5
72.5°	615.5	378.9	68.8	68.5	73.6	94.1	115.2	112.0	104.8	111.1	106.4
75°	321.1	175.6	59.7	62.2	65.3	88.2	108.0	104.8	96.8	99.4	97.6
77.5°	126.2	82.3	51.8	54.5	58.1	79.5	98.9	95.7	89.0	87.0	86.7
80°	69.2	55.3	43.1	46.7	49.0	71.5	89.4	85.9	78.7	77.5	76.4
82.5°	43.8	36.0	35.7	38.0	41.1	63.7	80.3	74.8	68.8	81.0	65.7
85°	20.6	21.4	25.3	28.5	32.0	54.2	70.0	64.0	58.1	56.5	50.2
87.5°	11.5	14.2	16.6	19.3	22.2	38.0	55.3	49.9	43.5	37.2	38.4
90°	2.8	2.8	4.7	4.3	4.7	5.5	27.3	24.5	21.8	10.3	6.7
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
110°	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-T3-7027

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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)