

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: P226669

Luminaire Tested: **ISW-AF-450-LED-E1-T4W-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P226669  
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: ISW-AF-450-LED-E1-T4W-7030  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV WIDE  
Light Source: (16) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2778.6 lumens  
Efficiency: N/A  
Efficacy: 109.8 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

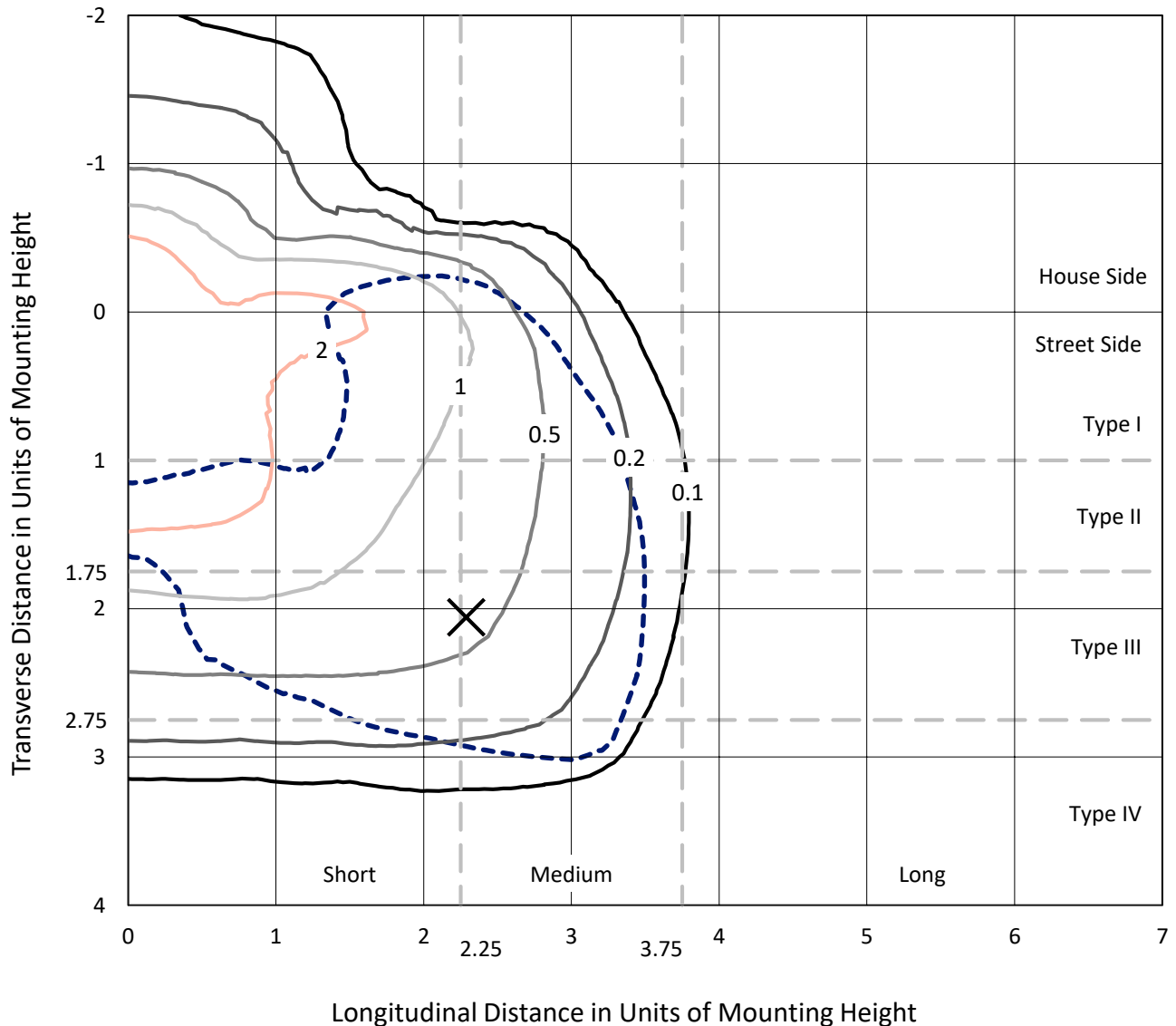


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

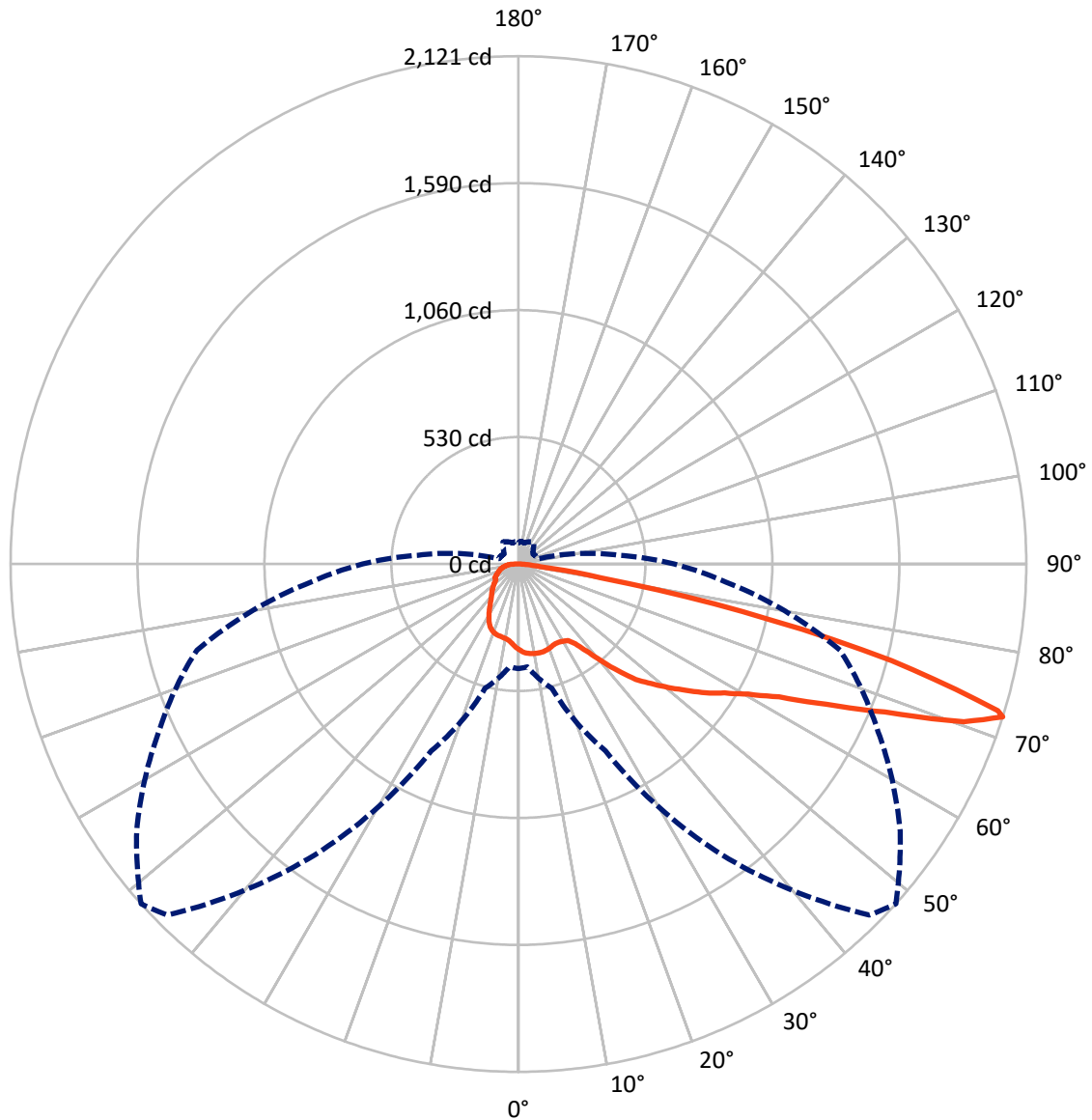


Based on 10 foot mounting height. Maximum calculated value = 4 fc  
 Type IV - Medium - Semi-Cutoff

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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
<b>House Side</b>	Lumens	603.5	1.2	604.7
	% Fixture	21.7	0.0	21.8
<b>Street Side</b>	Lumens	2173.5	0.4	2173.9
	% Fixture	78.2	0.0	78.2
<b>Total</b>	Lumens	2776.9	1.7	2778.6
	% Fixture	99.9	0.1	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.8	1.2
10°-20°	98.7	3.6
20°-30°	152.2	5.5
30°-40°	228.2	8.2
40°-50°	380.0	13.7
50°-60°	593.8	21.4
60°-70°	784.4	28.2
70°-80°	453.7	16.3
80°-90°	52.0	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°	2776.9	99.9
0°-180°	2778.6	100.0



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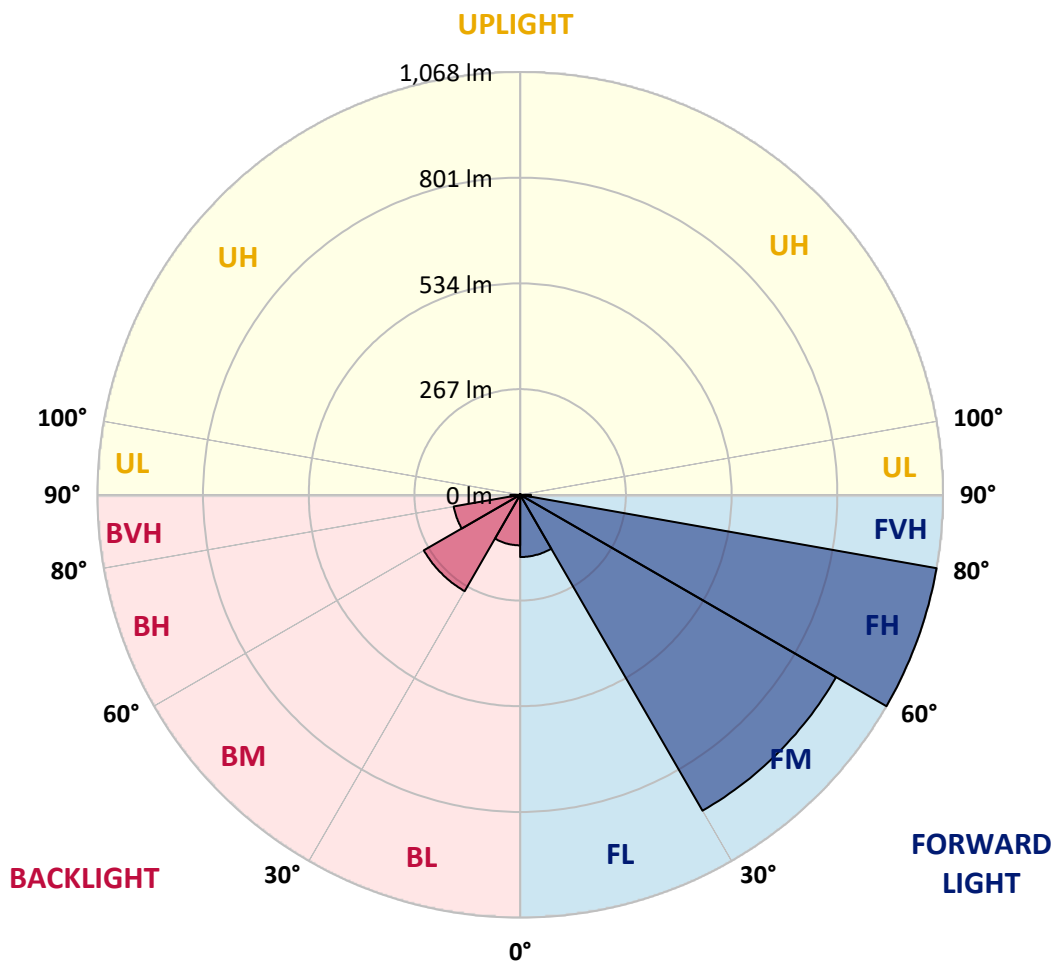
CATALOG NUMBER: ISW-AF-450-LED-E1-T4W-7030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	157.1	5.7			
FM	(30°-60°)	921.2	33.2			
FH	(60°-80°)	1067.9	38.4			G1/1800
FVH	(80°-90°)	27.3	1.0			G1/100
BL	(0°-30°)	127.7	4.6	B1/500		
BM	(30°-60°)	280.8	10.1	B1/1000		
BH	(60°-80°)	170.3	6.1	B1/500		G1/500
BVH	(80°-90°)	24.7	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°	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5
2.5°	376.4	376.0	376.0	372.8	371.6	369.5	367.9	365.5	363.1	360.3	356.7
5°	394.5	395.7	394.1	389.3	383.3	376.8	374.4	368.7	361.1	354.2	347.8
7.5°	411.9	412.3	407.8	399.8	390.5	380.4	377.2	369.5	361.1	351.8	342.5
10°	424.4	424.8	418.3	407.0	394.5	383.3	379.6	372.0	361.5	351.4	339.7
12.5°	431.6	432.0	422.3	410.7	395.7	384.5	381.2	373.2	362.3	349.4	336.5
15°	430.4	431.6	423.6	410.7	394.9	384.9	380.8	374.0	360.3	347.4	333.7
17.5°	422.3	424.0	417.5	403.4	390.9	382.8	378.4	371.6	358.3	344.6	329.7
20°	406.6	408.6	405.8	392.1	383.7	377.2	374.4	367.9	355.4	341.3	326.0
22.5°	388.9	390.9	390.1	378.8	374.8	371.6	368.7	363.9	353.0	338.9	324.4
25°	376.0	377.6	376.4	366.7	367.9	367.9	366.3	362.7	352.6	339.7	324.4
27.5°	397.4	397.4	386.9	367.1	365.1	368.7	367.9	365.9	357.9	343.8	327.6
30°	475.5	469.5	450.6	401.0	375.6	374.0	373.6	372.4	365.1	352.6	337.7
32.5°	563.0	556.9	534.4	472.3	419.5	384.9	381.2	381.6	379.6	367.9	353.0
35°	640.8	640.0	622.2	554.9	487.6	423.1	408.6	399.0	398.2	393.3	381.6
37.5°	703.6	703.6	705.2	628.7	561.4	484.0	459.4	428.8	428.8	426.0	418.7
40°	775.4	778.6	782.2	695.6	640.4	556.5	528.7	482.4	468.3	472.7	474.3
42.5°	869.7	873.7	871.3	778.2	712.5	643.2	608.9	552.9	518.3	525.5	542.4
45°	933.3	935.0	952.3	864.4	803.2	716.5	687.5	610.5	576.3	591.2	621.0
47.5°	1005.5	1009.5	1012.3	962.4	909.6	799.5	746.4	666.6	644.4	667.0	714.1
50°	1076.0	1070.8	1078.4	1076.4	1010.3	873.3	810.0	718.9	720.6	751.2	828.6
52.5°	1137.3	1119.5	1137.3	1159.4	1140.1	949.1	875.3	780.6	804.0	841.5	963.6
55°	1184.4	1141.7	1171.5	1234.4	1230.0	1016.0	949.9	862.8	901.9	953.1	1127.6
57.5°	1088.1	1093.3	1175.5	1284.8	1282.7	1083.7	1015.2	965.6	1013.5	1070.8	1321.8
60°	998.2	1021.6	1148.5	1292.8	1319.4	1157.4	1103.0	1082.5	1126.8	1196.5	1508.0
62.5°	950.7	972.8	1104.6	1277.9	1377.9	1266.6	1221.1	1205.4	1265.8	1344.0	1674.1
65°	965.6	979.3	1101.8	1300.5	1445.2	1431.9	1412.1	1385.9	1416.1	1489.5	1749.0
67.5°	923.7	946.2	1078.4	1340.4	1568.1	1633.4	1649.9	1621.7	1596.3	1586.2	1639.8
70°	687.5	709.3	847.9	1175.5	1668.8	1983.2	1973.1	1878.8	1707.9	1565.2	1281.1
72°	436.9	430.8	536.8	861.2	1483.4	2073.0	2120.6	1946.1	1657.1	1389.9	870.1
72.5°	317.6	346.2	445.3	765.7	1409.3	2023.9	2093.2	1924.3	1590.6	1313.0	765.3
75°	77.4	81.8	106.8	274.4	825.3	1522.9	1610.0	1486.7	1161.0	779.4	339.3
77.5°	52.4	54.4	70.5	96.7	242.6	868.5	955.5	820.9	519.5	265.2	151.1
80°	39.1	40.3	51.2	68.5	100.7	296.2	349.4	277.7	129.4	147.1	107.6
82.5°	27.4	28.2	38.7	50.4	66.9	69.3	92.3	102.0	83.8	96.3	62.9
85°	18.9	18.9	28.2	34.7	42.3	34.3	36.7	51.2	56.8	57.2	38.3
87.5°	10.1	11.3	16.5	22.2	22.2	15.7	17.3	26.2	31.8	34.3	23.0
90°	3.6	3.6	6.9	8.5	5.2	4.0	3.6	5.2	7.7	10.9	7.3
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°	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5	357.5
2.5°	355.8	353.4	350.2	348.6	347.8	346.2	344.6	343.8	343.8	342.1	342.5
5°	344.6	340.9	336.5	333.3	332.9	332.9	333.7	333.7	334.1	332.9	334.5
7.5°	338.9	334.9	328.4	324.8	322.0	321.6	323.2	326.4	328.0	326.8	328.4
10°	334.9	330.5	323.2	318.8	316.8	316.0	317.2	320.4	325.6	325.6	327.2
12.5°	330.9	325.2	318.0	314.7	313.1	313.5	315.1	317.6	323.2	325.2	326.0
15°	326.8	320.4	314.3	309.9	309.9	311.1	313.1	316.0	321.2	324.8	325.6
17.5°	322.8	316.4	311.1	307.5	307.5	309.1	311.1	314.7	318.4	323.6	323.6
20°	319.2	313.9	307.1	303.9	303.5	304.7	307.1	310.7	313.5	318.8	319.2
22.5°	317.2	310.7	304.3	299.4	297.4	296.6	299.0	302.7	305.5	310.7	311.5
25°	316.4	309.1	301.0	292.2	286.9	285.3	286.5	291.0	293.4	297.4	298.6
27.5°	319.2	312.3	299.8	283.7	272.8	268.4	269.6	272.4	273.2	277.7	279.7
30°	328.8	320.8	302.2	274.8	255.1	247.0	247.0	247.4	248.7	252.3	252.7
32.5°	344.6	336.9	309.5	265.6	237.0	225.7	222.9	220.8	220.8	220.4	220.8
35°	373.6	367.1	322.0	255.1	217.2	204.7	197.9	194.2	190.6	189.0	188.6
37.5°	415.5	409.8	339.7	243.0	199.9	187.4	178.9	171.7	167.6	167.2	169.3
40°	478.0	472.3	359.5	229.3	183.4	174.1	165.2	157.6	153.1	153.5	155.6
42.5°	554.9	537.6	380.8	210.8	170.1	165.2	155.6	149.1	144.7	142.3	141.9
45°	644.8	615.8	401.0	193.4	155.6	157.6	148.3	141.0	135.4	129.0	128.2
47.5°	756.8	694.0	418.7	176.1	139.8	149.5	140.6	133.8	125.3	117.7	116.5
50°	873.7	783.8	434.0	157.6	125.7	140.6	133.0	123.7	112.0	105.2	105.2
52.5°	1008.7	891.8	453.8	137.0	114.9	131.0	123.3	111.2	101.6	100.7	100.7
55°	1159.0	1005.1	467.5	120.9	106.4	120.5	116.9	113.2	110.0	110.8	111.2
57.5°	1316.2	1123.2	455.4	109.6	99.5	118.1	128.6	123.7	113.6	113.2	112.8
60°	1451.6	1215.0	388.5	102.4	94.3	122.1	137.8	123.7	113.6	118.9	119.3
62.5°	1540.3	1258.6	258.7	93.1	86.6	115.3	134.6	120.1	114.0	129.0	130.2
65°	1528.2	1209.8	148.7	86.6	81.8	106.0	130.2	115.7	106.4	114.9	112.4
67.5°	1348.0	1013.9	107.6	83.8	78.2	99.5	122.1	109.2	99.1	109.6	105.2
70°	968.8	690.3	92.7	81.4	75.8	91.9	116.5	105.2	95.1	102.4	95.5
72°	650.0	419.9	85.0	79.4	73.3	87.0	112.4	102.0	91.5	95.5	87.9
72.5°	553.3	331.3	83.0	78.6	72.5	85.8	111.2	101.2	90.7	94.7	87.5
75°	206.7	129.8	73.7	72.5	66.9	79.8	106.4	97.5	86.6	85.4	82.2
77.5°	106.4	82.2	62.9	64.1	60.0	72.9	101.2	91.9	79.8	75.4	73.7
80°	77.4	59.6	50.8	54.4	51.2	65.7	93.9	83.4	72.5	67.7	65.7
82.5°	48.8	37.1	38.7	43.1	43.5	58.0	85.4	75.0	64.5	60.4	57.2
85°	23.4	22.2	27.4	31.8	35.1	49.2	78.2	66.5	56.4	48.4	48.8
87.5°	12.5	16.9	16.5	21.4	27.0	40.3	69.3	54.4	45.1	36.3	36.7
90°	2.8	4.4	4.8	8.5	10.9	17.3	44.7	31.0	30.2	12.9	11.3
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):**

	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)