

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: P226405

Luminaire Tested: **ISW-AF-450-LED-E1-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P226405  
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: ISW-AF-450-LED-E1-T3  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III  
Light Source: (16) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3215.7 lumens  
Efficiency: N/A  
Efficacy: 127.1 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

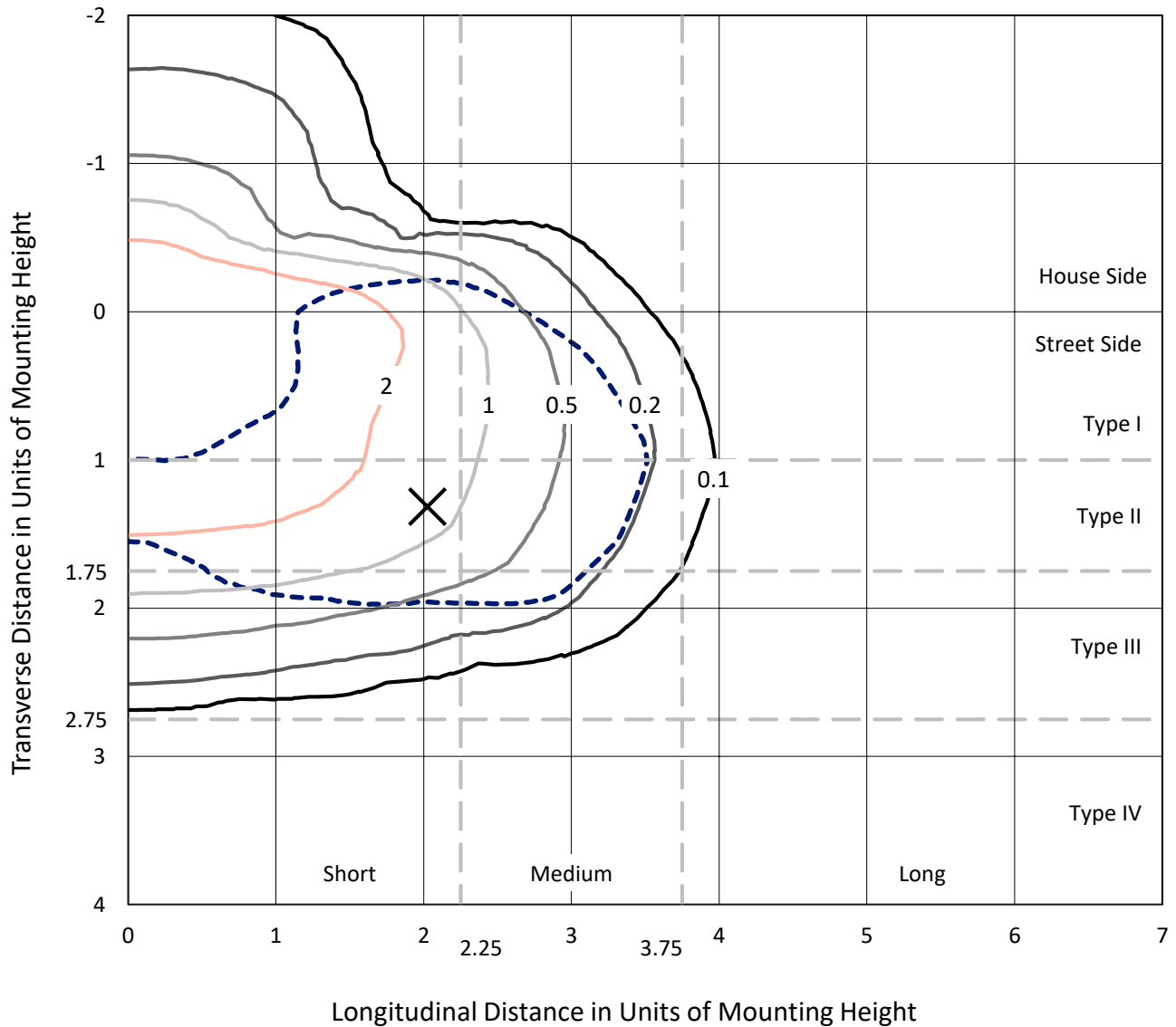
Input Watts (W): 25.31  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

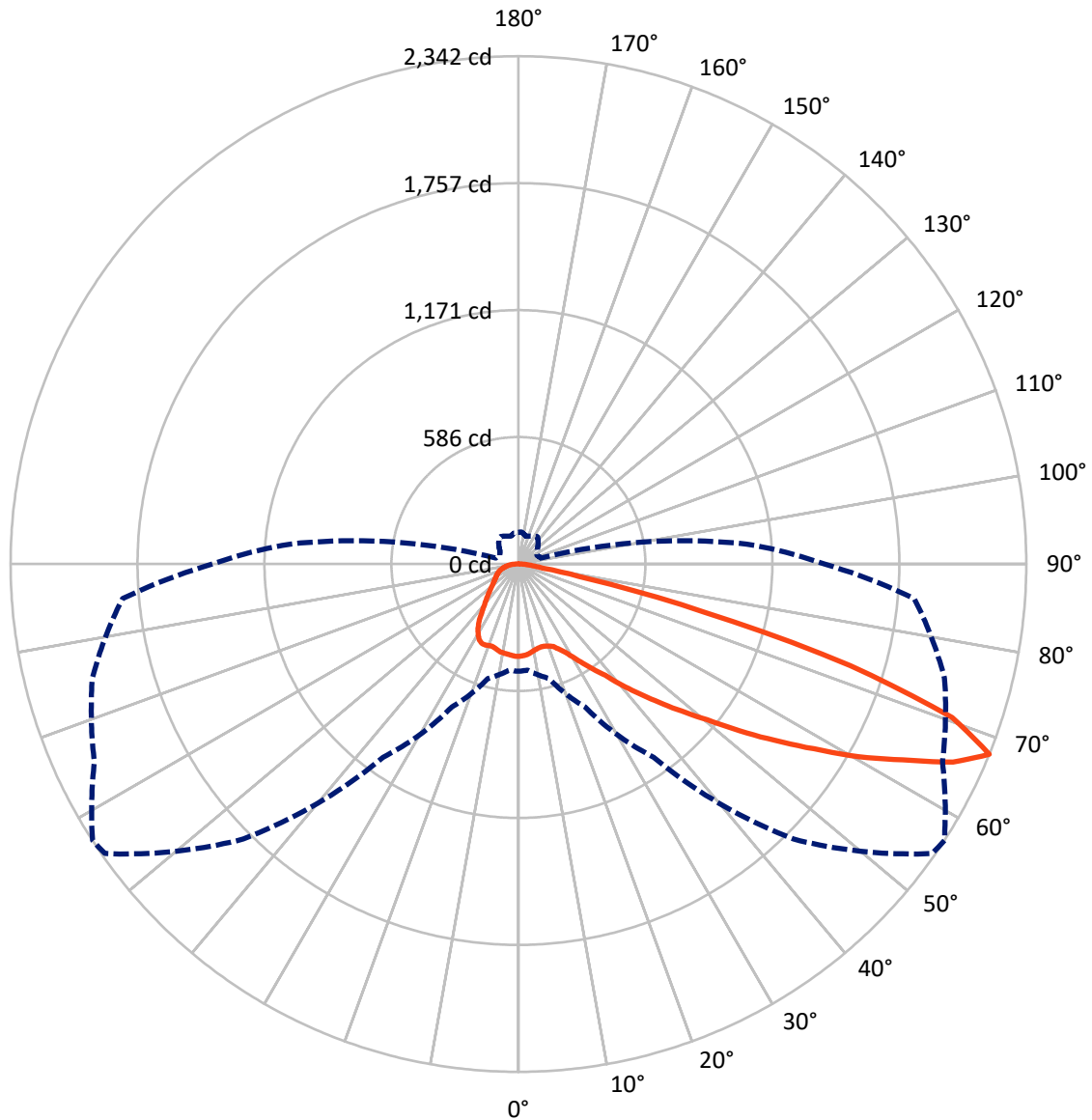
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 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
<b>House Side</b>	Lumens	748.3	0.9	749.3
	% Fixture	23.3	0.0	23.3
<b>Street Side</b>	Lumens	2466.2	0.3	2466.4
	% Fixture	76.7	0.0	76.7
<b>Total</b>	Lumens	3214.5	1.2	3215.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.8	1.2
10°-20°	114.6	3.6
20°-30°	197.1	6.1
30°-40°	320.5	10.0
40°-50°	517.0	16.1
50°-60°	770.8	24.0
60°-70°	868.1	27.0
70°-80°	334.7	10.4
80°-90°	51.9	1.6
90°-100°	1.2	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°	3214.5	100.0
0°-180°	3215.7	100.0



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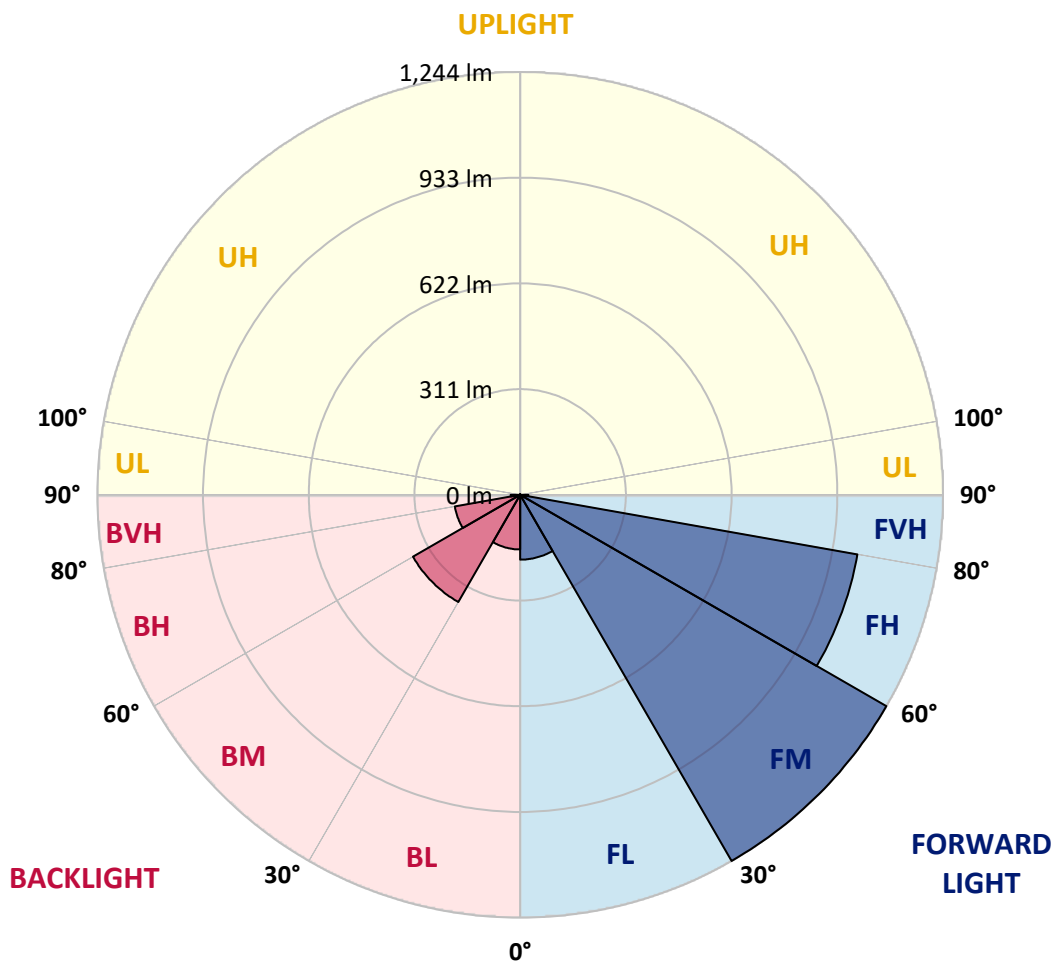
CATALOG NUMBER: ISW-AF-450-LED-E1-T3

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	190.7	5.9			
FM	(30°-60°)	1244.1	38.7			
FH	(60°-80°)	1007.5	31.3			G1/1800
FVH	(80°-90°)	23.8	0.7			G1/100
BL	(0°-30°)	160.8	5.0	B1/500		
BM	(30°-60°)	364.2	11.3	B1/1000		
BH	(60°-80°)	195.3	6.1	B1/500		G1/500
BVH	(80°-90°)	28.0	0.9			G1/100
UL	(90°-100°)	1.2	0.0		U1/10	
UH	(100°-180°)	0.9	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°	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2
2.5°	422.9	423.8	424.7	424.3	424.3	424.3	424.3	423.3	424.7	424.7	423.8
5°	415.9	416.3	416.9	417.8	418.7	419.6	420.1	420.1	420.5	420.1	419.2
7.5°	405.6	406.1	408.0	408.0	408.9	410.8	411.7	412.7	414.0	414.0	413.6
10°	402.4	402.4	402.4	401.0	401.9	402.4	403.8	403.8	407.5	409.4	410.3
12.5°	406.1	405.6	405.6	401.9	398.6	397.3	398.6	399.2	403.3	406.1	408.0
15°	414.5	414.5	413.6	408.0	401.5	396.3	395.9	395.9	399.2	403.3	406.6
17.5°	434.0	435.9	429.4	420.5	409.8	401.5	398.2	397.7	400.1	403.3	406.6
20°	471.3	470.9	461.0	445.2	426.6	412.7	404.7	403.8	403.3	405.2	408.9
22.5°	515.6	513.7	502.1	482.0	456.4	430.8	415.4	413.6	409.8	411.2	416.3
25°	563.0	563.5	549.1	523.0	490.9	460.1	436.9	435.0	427.1	426.2	431.7
27.5°	610.6	616.6	597.1	572.3	534.2	497.4	463.4	460.6	453.6	451.3	456.8
30°	680.0	677.6	653.5	621.2	583.1	536.9	504.4	499.3	485.3	488.6	494.6
32.5°	738.7	743.8	721.9	683.6	633.4	584.9	547.3	544.4	530.9	534.7	543.1
35°	810.4	822.5	793.6	746.5	698.2	648.2	603.1	595.7	584.9	592.4	598.9
37.5°	892.3	898.4	876.1	815.5	766.1	713.9	662.8	651.1	639.4	654.8	666.5
40°	970.6	980.4	951.4	900.3	843.0	793.1	737.2	734.9	707.9	724.7	754.9
42.5°	1086.6	1098.6	1052.5	993.0	941.2	881.2	828.1	815.5	786.1	809.9	860.7
45°	1167.6	1167.1	1135.9	1086.6	1054.9	996.7	925.0	910.0	878.4	910.0	978.0
47.5°	1197.0	1203.9	1193.2	1187.1	1176.0	1133.5	1027.9	1013.8	984.1	1031.1	1093.9
50°	1240.2	1238.4	1238.4	1275.6	1307.7	1298.9	1148.5	1128.4	1097.2	1153.6	1243.9
52.5°	1251.4	1234.6	1260.7	1332.0	1434.0	1441.4	1288.7	1277.5	1240.2	1295.2	1406.5
55°	1220.2	1216.0	1257.5	1360.8	1521.5	1574.6	1451.2	1435.8	1393.9	1440.9	1582.1
57.5°	1150.3	1161.0	1227.6	1354.8	1582.1	1692.0	1629.6	1607.7	1547.6	1576.1	1756.3
60°	1077.3	1082.4	1170.4	1333.4	1598.4	1773.5	1816.8	1804.2	1701.3	1718.0	1885.3
62.5°	996.1	984.1	1075.3	1315.7	1580.3	1885.7	1998.4	1988.6	1867.1	1862.0	1977.1
65°	769.9	786.6	864.4	1087.5	1455.9	1973.3	2215.0	2202.4	2052.0	1980.7	1967.2
67.5°	494.6	491.3	546.3	727.0	1087.9	1793.5	2328.1	2342.1	2157.7	2034.3	1832.2
70°	177.5	182.6	203.1	330.2	596.6	1195.0	2052.4	2121.8	2080.0	1934.2	1491.3
72.5°	108.0	108.0	123.0	148.5	241.7	566.8	1462.8	1600.2	1697.6	1593.8	1101.4
75°	84.8	84.3	89.4	102.5	130.4	185.9	777.7	883.9	1088.8	1101.0	626.9
77.5°	67.1	66.6	71.7	77.7	97.4	98.3	248.3	323.3	499.7	470.4	224.0
80°	54.0	53.6	57.3	59.1	71.3	68.0	99.6	115.5	175.1	153.6	96.9
82.5°	48.9	48.9	52.6	45.2	49.4	48.0	62.0	66.1	88.0	91.2	58.2
85°	31.7	32.6	49.4	43.8	32.1	29.4	39.6	41.9	54.9	60.0	28.4
87.5°	14.9	16.3	37.7	36.3	21.4	15.9	22.4	23.7	29.8	36.8	16.8
90°	2.8	2.8	4.7	5.1	2.8	2.8	3.7	3.3	3.3	4.7	4.7
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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**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°	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2
2.5°	425.2	424.3	424.7	425.2	425.6	427.1	427.5	427.5	427.5	427.1	428.0
5°	420.1	419.2	419.2	420.5	422.0	423.8	426.6	428.9	429.8	430.4	430.4
7.5°	414.5	413.6	414.0	416.3	418.7	420.1	422.9	424.3	428.0	428.0	428.9
10°	410.8	411.7	412.1	414.5	416.3	416.3	415.9	415.0	414.0	416.3	415.4
12.5°	408.5	409.8	409.4	412.1	413.1	409.4	403.8	396.3	395.4	396.3	397.3
15°	407.5	407.5	408.9	408.9	404.3	396.8	389.8	390.3	391.2	394.0	394.0
17.5°	407.5	408.0	408.9	405.6	397.3	390.8	389.3	387.9	382.8	381.5	380.0
20°	410.8	409.8	410.8	404.7	397.3	392.1	381.5	371.2	361.4	357.2	355.4
22.5°	418.7	417.3	416.9	410.8	401.5	384.2	363.2	347.4	330.6	325.1	323.3
25°	432.7	432.2	428.9	424.7	398.6	365.1	338.6	313.4	295.2	285.5	285.9
27.5°	457.4	457.4	455.5	436.9	384.2	341.4	305.6	279.9	261.3	252.0	250.5
30°	494.6	495.5	496.4	440.1	361.4	306.5	269.2	252.0	240.8	233.7	233.3
32.5°	540.7	545.8	539.8	436.4	330.2	264.0	240.8	234.8	229.1	224.4	224.0
35°	601.7	615.7	577.5	421.5	295.2	235.2	223.5	219.3	215.1	212.0	212.4
37.5°	683.6	697.2	601.7	396.3	250.5	218.9	213.8	207.2	200.7	193.7	192.8
40°	780.5	776.3	610.1	348.8	222.6	210.9	204.0	195.6	184.4	174.2	172.4
42.5°	877.4	849.5	603.1	290.1	204.5	204.0	194.3	183.5	172.4	163.5	163.5
45°	985.9	913.8	581.6	235.2	190.1	196.5	184.4	173.3	163.0	156.5	156.0
47.5°	1088.4	973.8	546.3	196.1	175.5	186.8	177.0	166.7	156.9	151.4	150.0
50°	1208.5	1042.3	519.2	169.5	161.6	177.0	172.8	163.5	154.2	147.6	146.7
52.5°	1330.1	1108.9	498.8	151.4	149.0	169.5	170.9	165.3	155.6	143.0	142.1
55°	1457.3	1192.2	457.8	137.0	137.9	164.0	173.3	169.1	162.0	141.6	140.7
57.5°	1563.9	1269.1	386.1	127.2	129.0	159.8	174.2	166.2	158.4	142.5	141.1
60°	1647.3	1321.8	283.2	119.3	121.1	155.1	170.0	156.5	146.3	142.5	140.1
62.5°	1672.9	1323.6	188.1	109.9	115.1	147.2	162.5	151.4	139.2	141.1	140.1
65°	1608.6	1253.7	134.6	101.1	109.9	137.9	159.3	146.3	136.0	143.4	142.5
67.5°	1410.6	1056.3	108.0	94.1	102.9	128.1	153.2	141.6	133.2	148.5	145.8
70°	1099.2	757.7	91.8	87.1	95.4	118.8	144.8	136.5	129.5	144.3	140.7
72.5°	724.7	446.2	81.0	80.6	86.6	110.9	135.5	131.8	123.4	130.8	125.3
75°	378.2	206.7	70.3	73.1	76.8	103.8	127.2	123.4	114.1	116.9	115.1
77.5°	148.5	96.9	61.0	64.2	68.4	93.6	116.4	112.7	104.8	102.5	102.0
80°	81.5	65.2	50.7	54.9	57.8	84.3	105.3	101.1	92.7	91.2	89.9
82.5°	51.7	42.4	41.9	44.7	48.4	75.0	94.5	88.0	81.0	95.4	77.3
85°	24.2	25.2	29.8	33.6	37.7	63.8	82.4	75.5	68.4	66.6	59.1
87.5°	13.5	16.8	19.5	22.8	26.1	44.7	65.2	58.7	51.2	43.8	45.2
90°	3.3	3.3	5.6	5.1	5.6	6.5	32.1	28.8	25.6	12.1	7.9
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):**

	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)