

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: P271502

Luminaire Tested: **ISS-AF-450-LED-E1-SL2-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P271502  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29761)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-AF-450-LED-E1-SL2-7027  
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II W/SPILL CONTROL  
Light Source: (16) 2700K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

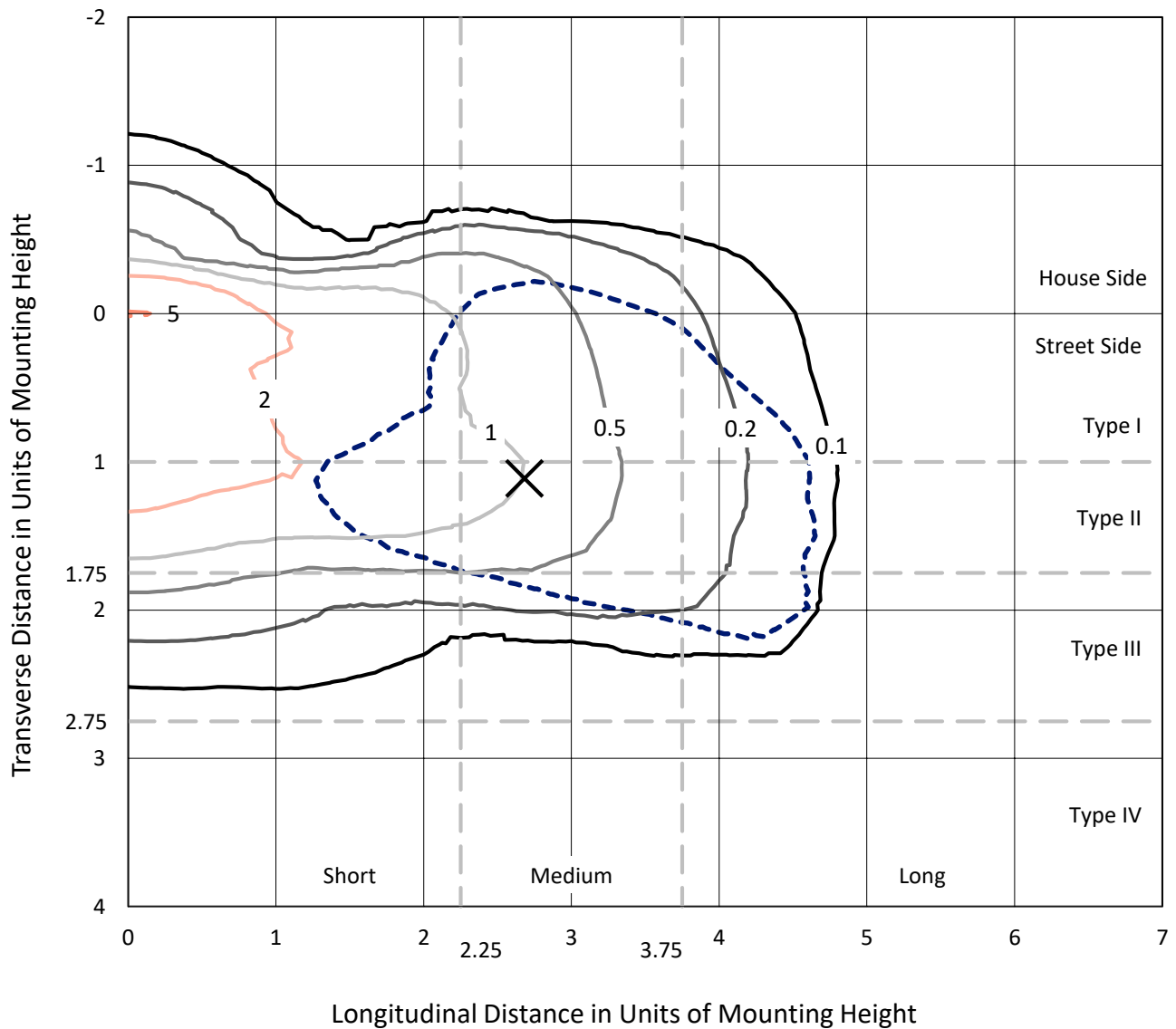
Lumens per Lamp: N/A  
Luminaire Lumens: 2461.5 lumens  
Efficiency: N/A  
Efficacy: 97.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 25.31  
Input Voltage (V): 120  
Input 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

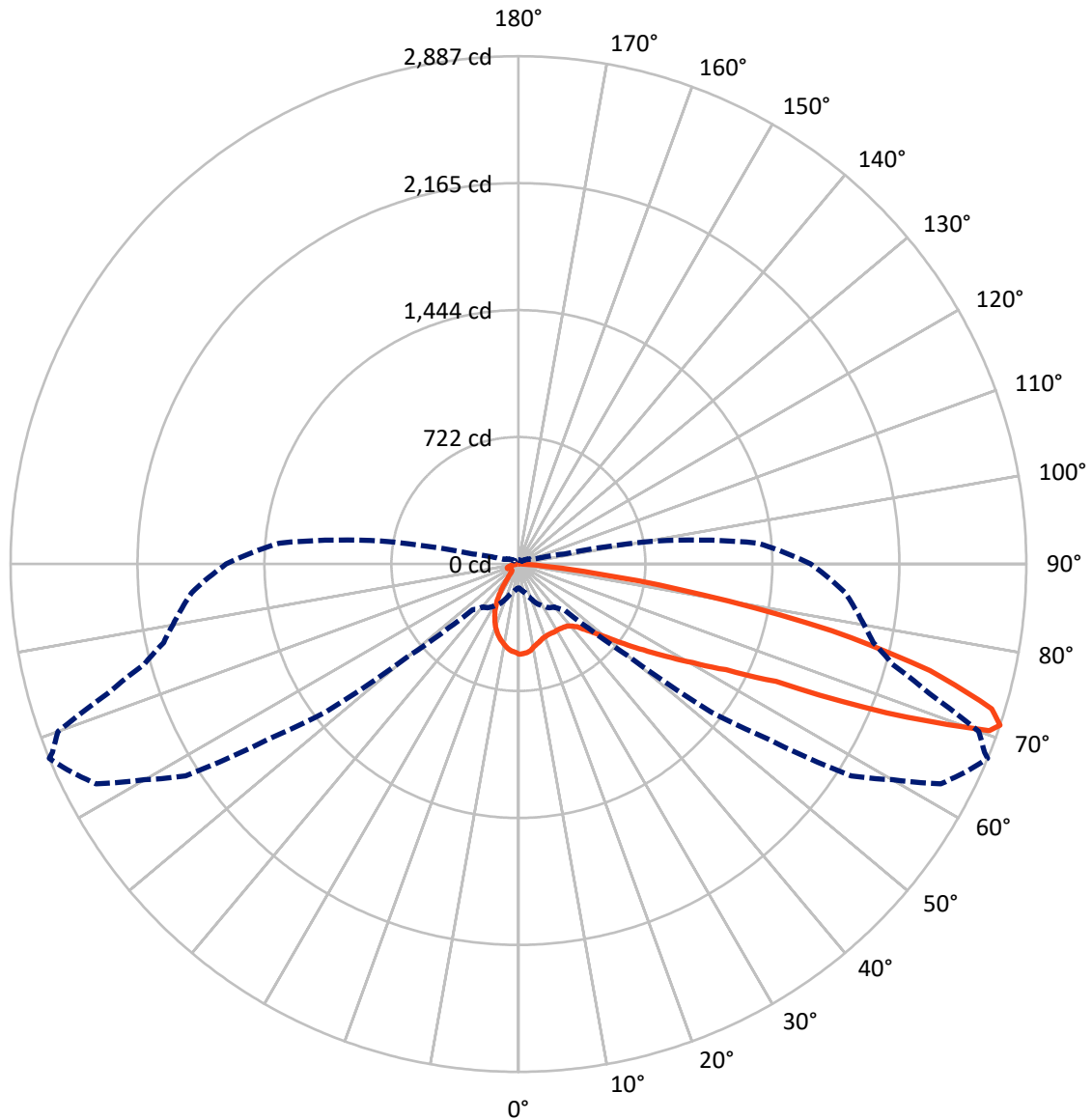
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.1 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	414.8	0.0	414.8
	% Fixture	16.9	0.0	16.9
<b>Street Side</b>	Lumens	2046.8	0.0	2046.8
	% Fixture	83.1	0.0	83.1
<b>Total</b>	Lumens	2461.5	0.0	2461.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.8	1.8
10°-20°	107.1	4.4
20°-30°	145.6	5.9
30°-40°	199.0	8.1
40°-50°	299.9	12.2
50°-60°	475.3	19.3
60°-70°	629.2	25.6
70°-80°	501.3	20.4
80°-90°	59.4	2.4
90°-100°	0.0	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°	2461.5	100.0
0°-180°	2461.5	100.0



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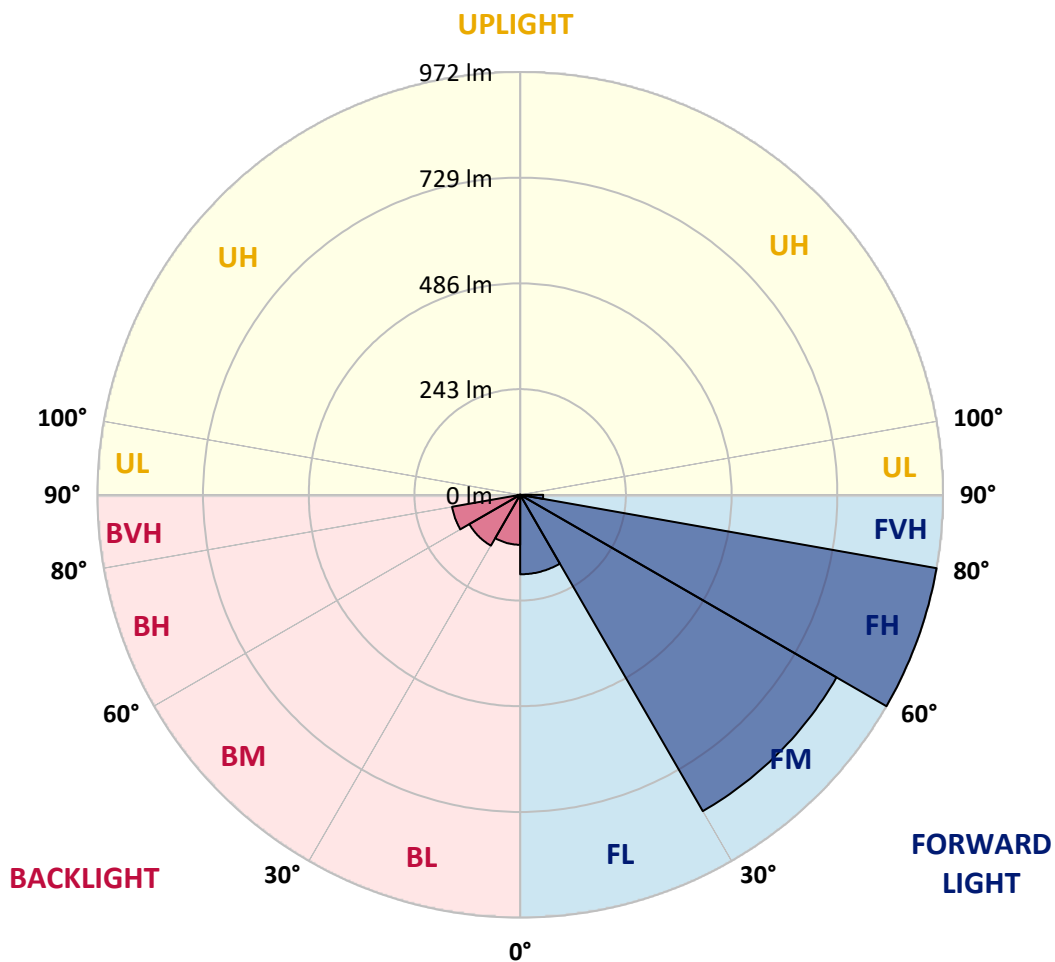
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	182.6	7.4			
FM (30°-60°)	839.4	34.1			
FH (60°-80°)	971.7	39.5			G1/1800
FVH (80°-90°)	53.0	2.2			G1/100
BL (0°-30°)	114.8	4.7	B1/500		
BM (30°-60°)	134.8	5.5	B0/220		
BH (60°-80°)	158.8	6.5	B1/500		G1/500
BVH (80°-90°)	6.4	0.3			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9
2.5°	503.5	501.8	501.8	504.4	508.7	505.3	507.8	507.8	508.7	511.2	512.1
5°	466.6	463.2	466.6	470.0	479.4	477.7	480.3	482.9	488.0	488.9	495.8
7.5°	433.1	431.4	433.9	440.8	452.8	449.4	452.8	456.2	462.3	464.9	471.7
10°	407.3	404.7	408.1	413.3	425.3	424.4	426.2	430.5	437.4	439.1	447.6
12.5°	388.3	388.3	390.1	397.1	407.3	406.4	411.5	414.2	420.1	421.8	431.4
15°	378.9	376.3	379.7	385.8	396.2	396.2	399.6	402.1	410.7	411.5	420.1
17.5°	370.3	371.2	372.1	378.9	388.3	386.6	390.9	392.6	402.1	400.5	410.7
20°	370.3	372.1	371.2	375.5	382.4	378.9	384.0	384.9	395.3	392.6	403.9
22.5°	380.6	382.4	379.7	378.9	381.5	378.9	381.5	383.1	390.9	389.2	399.6
25°	398.7	402.1	398.7	392.6	390.1	383.1	384.9	387.5	393.5	389.2	398.7
27.5°	427.1	429.6	423.6	417.6	405.6	397.8	395.3	394.4	401.3	394.4	402.1
30°	459.8	463.2	458.0	446.7	429.6	416.7	411.5	409.0	413.3	403.0	410.7
32.5°	495.0	498.4	495.0	486.3	463.2	444.2	437.4	431.4	434.8	421.0	424.4
35°	531.0	534.4	537.8	532.8	502.6	481.1	470.0	464.9	464.0	446.7	447.6
37.5°	562.8	566.2	577.4	582.6	555.1	525.9	515.5	504.4	505.3	481.1	481.1
40°	601.4	605.7	620.4	632.4	614.4	579.0	567.1	555.1	555.1	523.3	524.1
42.5°	653.9	659.1	668.5	684.8	678.8	642.6	629.8	613.5	615.2	577.4	576.5
45°	727.8	731.2	731.2	741.6	742.4	708.0	699.4	683.1	686.6	638.4	641.0
47.5°	823.9	819.7	802.5	808.6	815.4	779.3	771.6	761.2	765.5	714.1	719.1
50°	913.4	909.9	874.7	876.4	901.3	864.3	861.8	848.9	855.0	803.4	811.1
52.5°	946.8	940.9	905.6	924.5	994.2	973.5	977.9	971.8	975.2	920.2	918.4
55°	909.1	909.1	887.5	921.9	1063.8	1074.9	1110.1	1123.9	1138.5	1083.4	1071.5
57.5°	804.3	811.1	814.5	875.6	1052.5	1100.6	1167.7	1226.2	1300.8	1297.4	1315.5
60°	630.7	642.6	662.5	762.1	1004.5	1083.4	1170.3	1257.9	1361.0	1427.1	1525.1
62.5°	442.5	452.8	469.2	537.8	864.3	1000.2	1125.6	1260.5	1391.9	1495.9	1624.9
65°	300.8	311.0	345.4	383.1	521.6	719.1	910.8	1134.2	1334.4	1527.7	1701.3
67.5°	216.5	222.5	249.2	312.8	347.1	383.1	454.5	717.5	964.0	1353.3	1606.8
70°	162.4	168.4	192.5	262.9	305.1	314.5	331.7	378.1	440.8	760.4	1093.0
71°	135.7	144.4	173.6	247.4	303.3	311.0	318.8	346.3	366.9	537.8	811.1
72.5°	95.4	101.4	128.9	228.6	291.3	309.4	327.3	326.5	324.7	366.9	490.7
75°	61.1	61.1	61.1	128.9	311.0	299.9	306.7	343.7	324.7	308.5	323.1
77.5°	48.1	47.3	44.6	64.5	243.1	304.2	322.2	331.7	349.7	322.2	307.6
80°	36.1	35.2	35.2	40.3	112.6	196.8	272.4	302.5	315.3	342.8	312.8
82.5°	19.0	19.0	20.6	24.1	42.1	68.7	140.9	232.0	259.5	261.1	263.8
85°	6.0	5.2	6.8	11.2	18.1	22.4	39.5	93.6	139.1	168.4	177.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.4	6.0	7.7
90°	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):**

	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	68°	70°	72.5°	75°
0°	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9
2.5°	509.5	512.9	510.3	513.8	509.5	514.7	510.3	512.9	513.8	510.3	514.7
5°	491.6	501.8	498.4	506.0	502.6	509.5	506.0	512.9	512.9	510.3	516.3
7.5°	469.2	479.4	480.3	488.0	488.0	496.7	496.7	503.5	506.9	506.9	515.5
10°	446.7	456.2	458.0	466.6	468.3	478.5	478.5	488.0	495.0	497.5	507.8
12.5°	429.6	441.7	441.7	451.1	449.4	464.9	466.6	475.1	482.0	488.0	501.8
15°	419.3	430.5	430.5	439.9	438.2	453.6	456.2	464.9	475.1	478.5	497.5
17.5°	409.0	420.1	417.6	430.5	429.6	446.7	445.1	458.0	466.6	471.7	493.2
20°	400.5	413.3	411.5	424.4	421.0	439.9	439.9	452.8	461.4	465.7	490.7
22.5°	396.2	409.9	406.4	419.3	416.7	435.6	435.6	448.5	458.0	464.9	489.8
25°	396.2	408.1	404.7	419.3	414.9	435.6	434.8	447.6	457.1	463.2	490.7
27.5°	397.8	409.9	407.3	421.0	417.6	435.6	437.4	448.5	458.0	464.9	492.3
30°	403.9	414.9	409.0	421.8	419.3	436.5	435.6	447.6	457.1	465.7	492.3
32.5°	416.7	422.7	414.9	426.2	421.0	438.2	438.2	446.7	458.0	468.3	492.3
35°	434.8	439.1	427.1	434.8	425.3	442.5	441.7	451.1	459.8	468.3	494.1
37.5°	460.5	465.7	446.7	453.6	438.2	451.9	448.5	459.8	468.3	473.5	502.6
40°	499.2	501.0	476.0	481.1	459.8	471.7	463.2	478.5	482.9	486.3	515.5
42.5°	546.5	548.1	516.3	519.8	492.3	502.6	488.0	504.4	510.3	509.5	541.3
45°	604.9	605.7	569.6	572.2	540.5	549.0	531.0	544.7	549.0	546.5	579.0
47.5°	668.5	675.3	635.0	638.4	604.9	609.2	586.9	602.3	602.3	599.8	633.2
50°	752.7	763.0	715.7	720.9	682.3	685.7	659.9	676.2	674.4	667.6	705.3
52.5°	857.5	867.0	817.1	823.9	782.7	784.5	752.7	771.6	766.4	755.3	799.1
55°	985.5	986.4	940.0	946.0	904.8	902.2	862.6	885.9	878.1	862.6	903.1
57.5°	1191.0	1166.0	1089.6	1087.8	1043.1	1039.7	988.9	1017.3	1004.5	971.8	1025.1
60°	1521.7	1529.5	1334.4	1304.2	1221.0	1205.4	1138.5	1171.1	1155.7	1102.4	1154.8
62.5°	1708.1	1831.0	1819.0	1710.7	1495.9	1437.5	1324.1	1362.7	1322.3	1244.2	1293.1
65°	1846.5	2013.2	2109.4	2213.3	2117.1	1878.3	1610.2	1664.3	1565.6	1416.9	1464.1
67.5°	1898.0	2099.1	2301.9	2449.7	2550.2	2568.3	2258.1	2272.6	2029.5	1732.2	1738.2
70°	1628.3	1924.7	2321.6	2509.0	2708.3	2806.2	2838.9	2823.5	2666.2	2245.1	2084.4
71°	1380.0	1739.1	2242.6	2451.4	2706.5	2801.1	2887.1	2857.8	2784.7	2448.8	2202.3
72.5°	934.9	1385.9	2011.5	2276.0	2616.3	2685.1	2814.0	2762.4	2746.9	2601.0	2312.1
75°	439.9	690.9	1308.7	1709.0	2214.2	2280.3	2415.4	2351.8	2311.2	2361.1	2199.6
77.5°	323.9	377.2	718.4	1062.0	1610.2	1703.8	1819.9	1741.6	1690.1	1739.9	1627.4
80°	294.7	296.4	372.1	560.3	960.6	1016.4	1060.3	996.7	918.4	915.0	811.1
82.5°	271.5	256.9	241.5	296.4	492.3	468.3	433.1	401.3	311.9	250.1	180.4
85°	172.7	189.0	171.8	162.4	195.9	161.5	128.0	122.9	86.8	58.4	54.2
87.5°	12.0	13.7	16.3	19.0	23.2	19.0	12.0	14.6	8.6	0.0	4.3
90°	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):**

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9
2.5°	508.7	512.9	514.7	513.8	512.1	510.3	504.4	508.7	502.6	506.9	501.8
5°	511.2	517.2	518.1	516.3	514.7	511.2	501.0	506.9	500.1	503.5	495.8
7.5°	510.3	519.8	520.7	519.0	515.5	509.5	499.2	503.5	492.3	495.0	484.5
10°	506.0	519.8	520.7	516.3	511.2	501.8	489.8	491.6	480.3	480.3	466.6
12.5°	501.8	518.1	522.5	516.3	507.8	495.0	481.1	479.4	466.6	465.7	450.2
15°	501.8	519.8	525.9	518.1	505.3	487.2	470.8	467.4	452.8	448.5	431.4
17.5°	501.0	519.8	528.5	518.1	502.6	479.4	458.9	455.4	436.5	429.6	409.9
20°	500.1	521.6	530.1	516.3	495.0	470.0	446.7	439.9	419.3	408.1	384.9
22.5°	499.2	525.0	531.9	514.7	489.8	458.0	433.9	421.8	397.8	383.1	355.7
25°	503.5	529.3	532.8	512.9	482.0	445.1	419.3	403.0	376.3	357.4	324.7
27.5°	505.3	533.5	534.4	509.5	472.6	431.4	403.9	381.5	351.5	328.2	291.3
30°	510.3	534.4	531.9	502.6	461.4	414.2	385.8	358.3	324.7	294.7	250.9
32.5°	512.1	537.1	530.1	495.0	450.2	397.1	365.3	333.5	292.9	257.7	204.5
35°	515.5	538.7	528.5	490.7	438.2	378.9	343.7	307.6	261.1	216.5	155.6
37.5°	520.7	546.5	532.8	488.9	432.2	363.5	319.7	281.0	223.4	170.9	103.1
40°	533.5	561.9	540.5	491.6	428.0	350.6	296.4	253.5	180.4	126.3	71.3
42.5°	559.4	588.6	560.3	504.4	430.5	339.4	272.4	224.3	136.6	90.2	59.3
45°	598.0	623.0	592.9	525.9	440.8	333.5	250.1	194.1	97.9	72.1	54.2
47.5°	654.8	678.8	641.0	560.3	458.9	330.8	226.8	162.4	75.5	65.3	52.4
50°	729.4	757.8	710.6	614.4	492.3	333.5	201.8	132.3	66.1	63.6	51.6
52.5°	821.4	848.9	801.6	694.3	547.3	348.0	175.3	115.2	62.7	62.7	50.8
55°	925.3	964.0	917.7	805.2	632.4	379.7	159.0	109.1	62.7	63.6	49.9
57.5°	1048.2	1080.9	1039.7	911.6	734.6	432.2	160.7	115.2	62.7	63.6	49.0
60°	1168.5	1208.8	1161.7	1047.4	851.5	511.2	195.9	146.1	65.3	66.1	49.0
62.5°	1294.0	1324.9	1286.2	1166.0	983.8	609.2	266.3	211.4	75.5	78.2	52.4
65°	1431.4	1482.1	1441.8	1343.0	1171.1	765.5	400.5	317.0	111.7	91.1	57.6
67.5°	1669.5	1690.1	1670.4	1580.1	1390.3	894.4	476.9	322.2	111.7	88.6	64.5
70°	1991.7	1945.3	1856.8	1688.4	1413.4	802.5	342.0	196.8	95.4	84.2	67.9
71°	2066.4	1995.1	1864.5	1661.8	1365.3	724.3	265.4	155.6	89.3	82.5	67.9
72.5°	2111.9	2005.5	1807.7	1583.5	1270.8	570.5	175.3	122.0	81.7	78.2	65.3
75°	2052.6	1856.0	1596.5	1370.5	1040.6	296.4	110.0	92.7	69.6	67.9	56.8
77.5°	1630.0	1457.2	1177.9	995.8	669.3	131.4	79.1	70.4	55.0	53.3	43.7
80°	760.4	610.1	357.4	306.7	210.6	77.3	54.2	48.1	39.5	37.8	30.9
82.5°	138.2	103.9	80.8	78.2	70.4	45.5	31.8	29.3	25.0	24.1	19.8
85°	47.3	45.5	34.3	34.3	35.2	24.1	18.1	17.2	12.8	12.8	8.6
87.5°	0.9	4.3	4.3	6.0	5.2	4.3	1.8	2.5	0.9	2.5	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



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**CANDELA DISTRIBUTION (continued):**

	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°
0°	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9	512.9
2.5°	506.0	499.2	505.3	499.2	502.6	495.8	500.1	497.5	497.5	495.0	493.2
5°	498.4	489.8	494.1	487.2	490.7	480.3	482.9	478.5	470.0	464.9	458.0
7.5°	487.2	474.2	477.7	467.4	470.0	456.2	458.9	451.1	434.8	424.4	414.2
10°	467.4	455.4	456.2	443.3	442.5	428.7	426.2	415.8	391.8	374.6	360.8
12.5°	447.6	433.9	432.2	416.7	414.2	397.8	394.4	378.1	342.8	309.4	287.9
15°	427.1	409.9	404.7	388.3	378.9	365.3	355.7	331.7	281.0	237.2	208.8
17.5°	403.9	381.5	373.8	354.9	341.1	320.4	306.7	274.2	208.8	161.5	141.8
20°	373.8	349.7	336.0	311.9	293.8	269.0	251.7	209.7	139.1	115.2	112.6
22.5°	340.3	311.9	294.7	264.6	242.4	215.6	188.1	141.8	98.8	93.6	97.1
25°	305.1	269.9	247.4	210.6	180.4	149.5	123.8	94.5	80.8	79.9	85.1
27.5°	262.9	222.5	190.7	147.0	119.5	95.4	84.2	74.8	68.7	69.6	74.8
30°	216.5	164.1	130.6	92.0	79.9	69.6	67.9	64.5	61.8	63.6	67.0
32.5°	161.5	104.8	84.2	66.1	65.3	59.3	61.1	59.3	58.4	59.3	61.8
35°	109.1	69.6	66.1	56.8	58.4	54.2	56.8	55.9	55.0	55.0	56.8
37.5°	75.5	57.6	59.3	52.4	55.0	51.6	54.2	53.3	52.4	51.6	52.4
40°	62.7	52.4	55.0	49.9	52.4	49.0	51.6	50.8	49.9	48.1	48.1
42.5°	57.6	49.9	52.4	47.3	50.8	46.4	49.9	48.1	46.4	44.6	45.5
45°	55.9	48.1	50.8	45.5	49.0	44.6	47.3	46.4	43.0	42.1	43.0
47.5°	54.2	47.3	49.9	44.6	47.3	43.0	45.5	43.7	40.3	39.5	40.3
50°	53.3	45.5	48.1	43.0	45.5	42.1	43.7	42.1	38.6	37.8	37.8
52.5°	52.4	44.6	47.3	41.2	43.7	38.6	41.2	39.5	36.1	35.2	35.2
55°	52.4	43.7	45.5	39.5	42.1	36.9	38.6	36.9	35.2	33.5	33.5
57.5°	51.6	42.1	44.6	37.8	39.5	35.2	36.9	35.2	32.7	31.8	31.8
60°	51.6	41.2	43.7	36.9	38.6	33.5	35.2	33.5	30.9	30.0	30.0
62.5°	54.2	43.0	44.6	37.8	38.6	33.5	34.3	31.8	29.3	29.3	28.4
65°	59.3	48.1	48.1	39.5	39.5	33.5	34.3	30.9	27.5	27.5	27.5
67.5°	64.5	53.3	52.4	42.1	41.2	33.5	33.5	29.3	25.8	25.8	25.8
70°	67.9	55.9	54.2	43.0	41.2	32.7	31.8	27.5	24.1	24.1	24.1
71°	67.0	55.9	53.3	42.1	39.5	30.9	30.9	26.6	23.2	23.2	22.4
72.5°	63.6	52.4	49.9	39.5	37.8	29.3	29.3	25.0	21.5	21.5	20.6
75°	54.2	44.6	42.1	33.5	31.8	25.8	25.0	20.6	19.0	18.1	18.1
77.5°	42.1	35.2	32.7	26.6	25.8	20.6	19.8	17.2	15.5	15.5	14.6
80°	30.0	25.0	23.2	18.1	16.3	13.7	14.6	12.8	12.0	12.0	11.2
82.5°	18.1	12.8	12.8	10.3	11.2	8.6	9.4	9.4	8.6	6.8	6.8
85°	9.4	6.0	7.7	4.3	6.0	2.5	4.3	3.4	3.4	2.5	2.5
87.5°	1.8	0.0	0.9	0.0	0.9	0.0	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

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	175°	180°
0°	512.9	512.9
2.5°	488.0	488.9
5°	454.5	456.2
7.5°	406.4	409.0
10°	348.8	350.6
12.5°	274.9	274.9
15°	192.5	194.1
17.5°	134.8	135.7
20°	113.5	114.3
22.5°	101.4	102.2
25°	90.2	91.1
27.5°	78.2	79.1
30°	70.4	71.3
32.5°	63.6	64.5
35°	57.6	57.6
37.5°	53.3	53.3
40°	49.0	49.0
42.5°	46.4	46.4
45°	43.7	43.7
47.5°	41.2	41.2
50°	38.6	39.5
52.5°	36.1	36.1
55°	33.5	33.5
57.5°	30.9	31.8
60°	29.3	29.3
62.5°	27.5	27.5
65°	26.6	26.6
67.5°	25.0	25.0
70°	23.2	23.2
71°	22.4	22.4
72.5°	20.6	20.6
75°	18.1	17.2
77.5°	14.6	14.6
80°	11.2	10.3
82.5°	6.8	6.0
85°	2.5	1.8
87.5°	0.0	0.0
90°	0.0	0.0

(END OF REPORT)