

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: INVUE

Report Number: P596859

Luminaire Tested: **MSA-SA1B-835-U-SLL-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596859  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-835-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

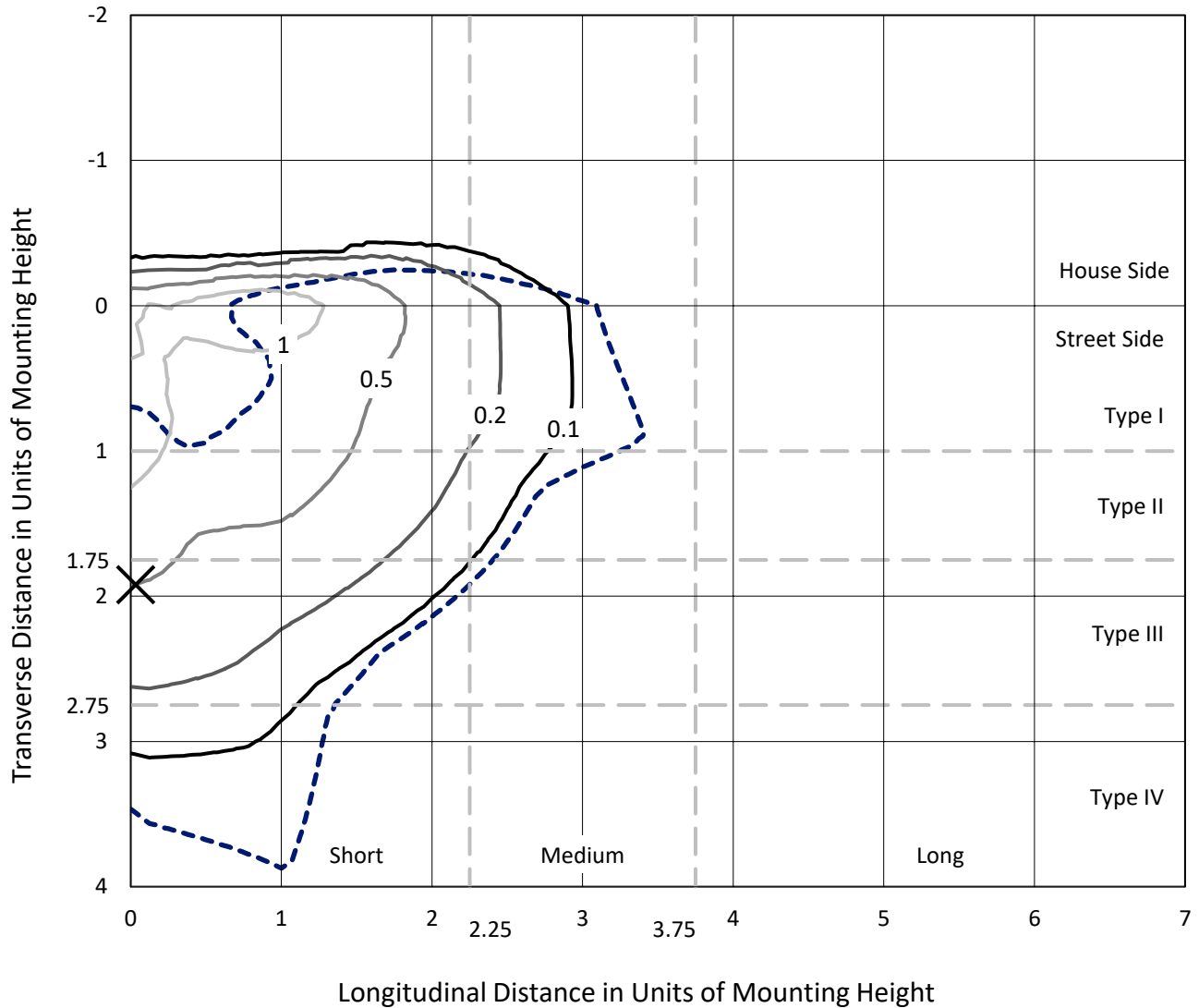
Lumens per Lamp: N/A  
Luminaire Lumens: 3046 lumens  
Efficiency: N/A  
Efficacy: 69.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

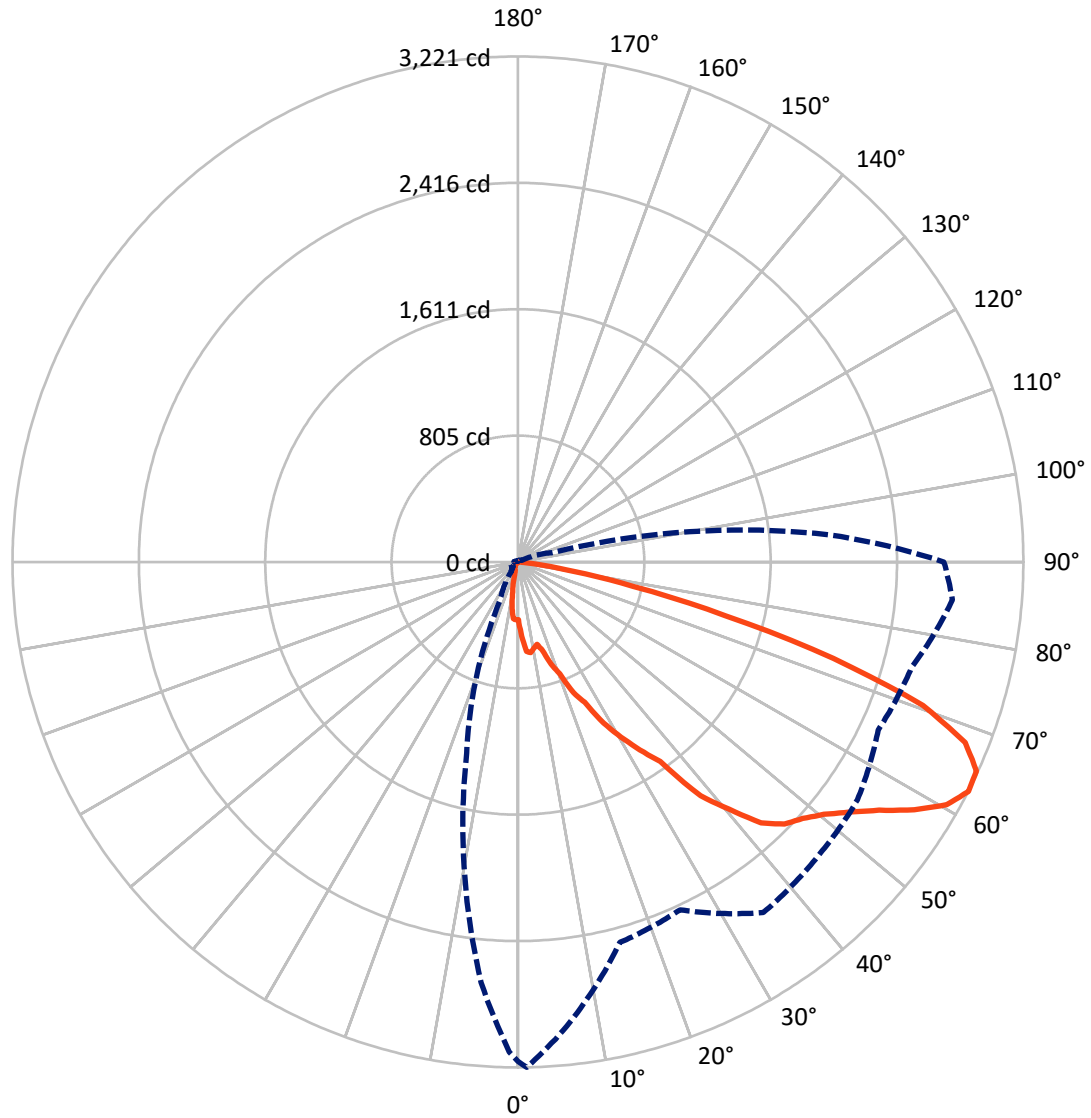
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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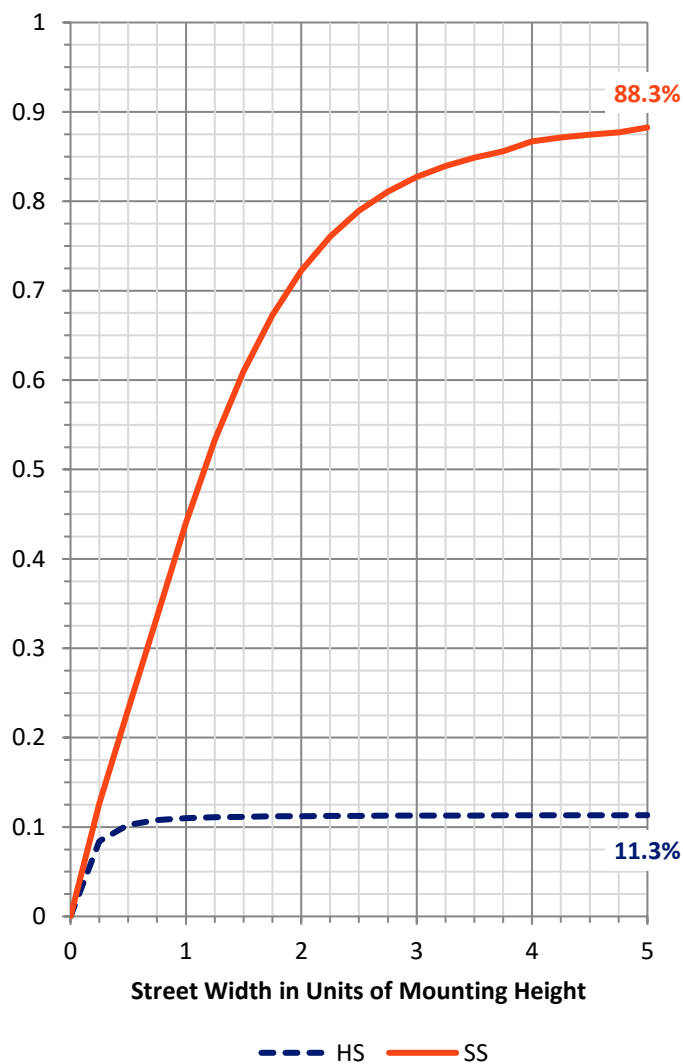
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	348.3	0.0	348.3
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	2697.7	0.0	2697.7
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	3046.0	0.0	3046.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.0	1.3
10°-20°	107.1	3.5
20°-30°	173.1	5.7
30°-40°	290.0	9.5
40°-50°	474.1	15.6
50°-60°	701.8	23.0
60°-70°	805.8	26.5
70°-80°	398.4	13.1
80°-90°	54.7	1.8
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°	3046.0	100.0
0°-180°	3046.0	100.0

**Coefficient of Utilization**



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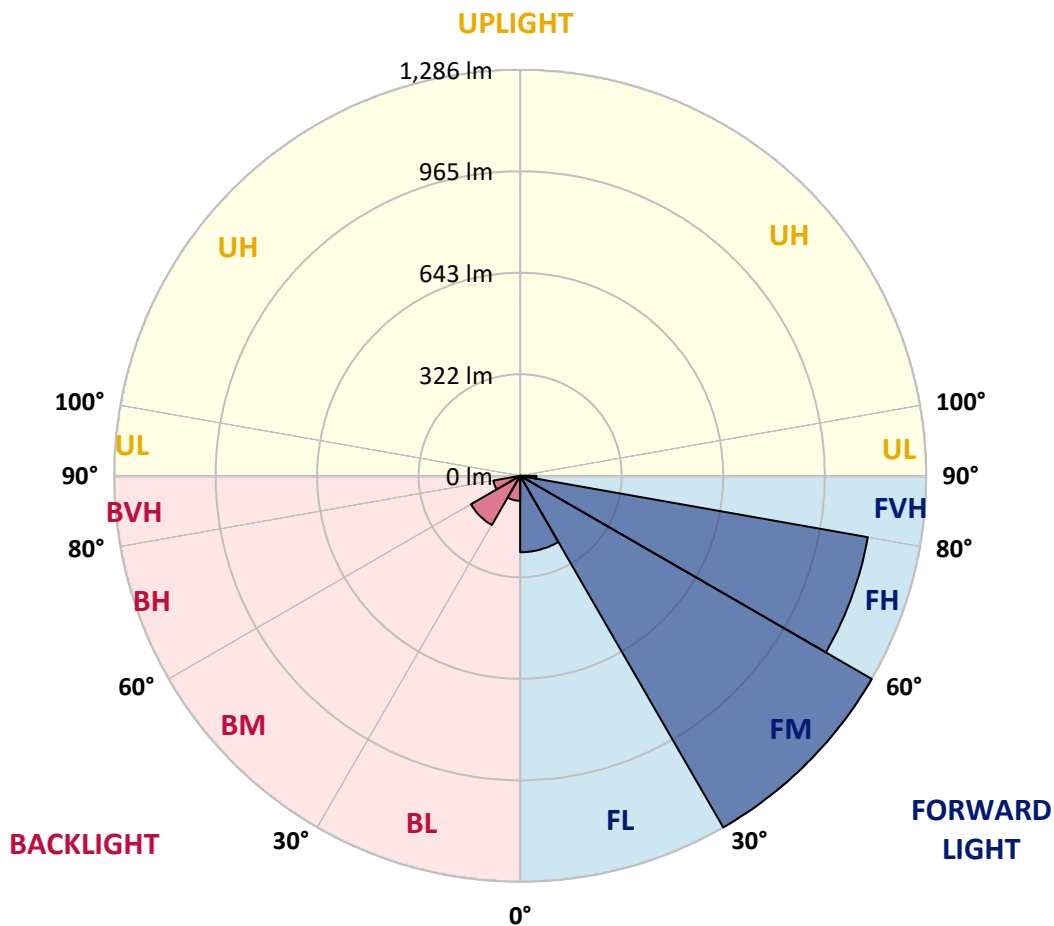
CATALOG NUMBER: MSA-SA1B-835-U-SLL-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	241.9	7.9			
FM (30°-60°)	1286.0	42.2			
FH (60°-80°)	1118.1	36.7			G1/1800
FVH (80°-90°)	51.7	1.7			G1/100
BL (0°-30°)	79.2	2.6	B0/110		
BM (30°-60°)	179.9	5.9	B0/220		
BH (60°-80°)	86.1	2.8	B0/110		G0/110
BVH (80°-90°)	3.0	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9
2.5°	473.2	475.4	464.8	463.4	438.8	469.5	470.4	474.0	451.5	407.7	468.8
5°	566.2	572.5	564.3	600.6	611.0	633.4	592.2	629.0	613.4	617.8	626.6
7.5°	577.3	583.7	600.9	661.7	717.7	703.7	699.2	713.0	711.8	679.7	695.7
10°	554.2	559.6	588.2	698.8	723.3	786.5	801.9	770.0	757.0	686.7	655.9
12.5°	529.1	538.1	574.5	707.1	780.6	844.4	895.3	849.8	806.6	731.8	703.7
15°	577.3	582.3	639.6	724.5	788.7	832.8	874.5	859.4	852.8	799.0	703.7
17.5°	671.9	683.7	725.2	767.0	817.7	844.3	834.4	829.7	812.9	897.4	798.8
20°	739.3	761.3	815.6	833.7	793.4	818.2	812.2	808.0	794.8	952.1	908.1
22.5°	885.1	905.4	906.4	912.8	819.1	779.5	769.5	770.7	830.6	968.4	1044.2
25°	984.3	991.3	1046.1	1000.3	889.2	791.3	753.0	770.2	856.4	1085.7	1172.2
27.5°	1146.8	1163.3	1197.5	1042.3	931.2	783.9	722.8	785.3	924.5	1124.6	1314.3
30°	1279.3	1295.1	1350.1	1099.8	967.7	820.8	735.8	815.6	966.8	1204.6	1442.1
32.5°	1386.7	1427.5	1490.0	1188.5	966.3	863.4	802.3	805.6	1018.9	1308.2	1568.4
35°	1524.0	1562.0	1605.9	1249.6	1029.5	877.1	821.9	904.5	1096.3	1416.6	1738.5
37.5°	1833.5	1890.9	1804.1	1403.5	1103.1	1001.0	899.3	965.4	1177.4	1527.1	1972.3
40°	2022.3	2070.8	1986.9	1482.2	1230.5	1063.5	1037.5	1071.3	1256.7	1584.2	2148.5
42.5°	2208.4	2272.3	2132.2	1600.5	1351.5	1239.9	1168.7	1195.9	1371.4	1722.0	2346.7
45°	2343.1	2382.7	2163.6	1662.5	1517.7	1440.9	1393.5	1352.9	1531.5	1810.6	2474.7
47.5°	2410.8	2442.4	2225.6	1682.1	1616.7	1653.5	1757.3	1672.4	1673.1	1874.6	2543.6
50°	2504.5	2526.6	2260.3	1705.6	1724.1	1984.8	2037.3	1856.6	1834.9	1938.8	2554.9
52.5°	2636.3	2647.0	2327.7	1767.4	1885.0	2244.3	2263.3	2190.2	1996.8	2058.3	2579.9
55°	2811.4	2792.5	2447.9	1897.2	2052.9	2434.4	2459.7	2396.0	2200.4	2177.5	2657.3
57.5°	3000.3	2978.6	2626.2	2080.1	2235.0	2579.7	2594.8	2599.8	2335.6	2283.0	2788.8
60°	3135.6	3139.6	2850.6	2290.0	2348.1	2718.7	2688.5	2642.7	2472.1	2437.7	2852.9
62.5°	3183.0	3221.4	3025.4	2509.9	2445.7	2727.4	2680.5	2641.8	2533.2	2597.2	2779.5
65°	3144.3	3211.3	3066.0	2703.1	2504.7	2618.6	2569.8	2545.0	2531.3	2662.3	2617.0
67.5°	2990.5	3074.4	2949.7	2704.8	2290.2	2229.6	2287.2	2365.8	2320.4	2608.3	2389.4
70°	2646.0	2737.8	2679.8	2546.2	1907.8	1754.2	1817.7	1936.6	1904.5	2319.8	2054.6
72.5°	1985.2	2103.2	2114.7	2198.2	1514.5	1320.2	1329.4	1326.1	1381.5	1870.6	1603.3
75°	1275.3	1367.1	1491.2	1773.8	1150.5	963.9	875.7	854.2	957.4	1461.7	1147.9
77.5°	740.3	751.2	808.5	1338.3	824.0	694.5	634.4	665.1	701.2	1020.1	760.8
80°	354.1	359.6	383.3	688.6	572.5	601.1	554.7	589.3	481.5	586.3	431.7
82.5°	112.3	113.5	117.5	338.3	355.5	398.2	255.2	342.1	297.7	354.4	287.4
85°	18.7	31.9	39.4	97.7	200.7	134.3	55.4	122.0	166.1	223.6	130.5
87.5°	0.0	0.0	0.0	1.7	16.3	7.6	1.2	6.9	25.5	49.8	5.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9
2.5°	486.5	498.5	453.4	412.9	423.2	415.0	402.7	381.7	333.1	368.8	366.4
5°	626.1	603.9	542.8	514.3	479.6	426.6	420.2	379.6	361.7	364.7	362.1
7.5°	674.7	634.9	581.0	495.2	413.8	337.4	314.0	287.4	282.1	293.5	301.0
10°	636.5	594.3	547.1	440.5	377.9	322.7	264.9	227.7	207.6	205.2	207.2
12.5°	654.0	608.6	511.4	429.8	364.3	314.3	249.8	193.7	150.0	153.3	144.6
15°	666.2	613.9	502.8	407.2	336.4	269.6	191.8	135.7	100.0	89.6	83.3
17.5°	737.5	662.9	492.1	381.2	297.3	209.9	120.5	78.6	67.0	63.4	60.4
20°	829.2	723.1	491.9	353.7	239.7	131.2	75.2	56.9	54.2	56.2	54.0
22.5°	935.7	803.3	518.1	319.6	172.0	82.8	58.5	50.5	47.7	49.5	49.6
25°	1043.0	923.6	539.5	287.1	119.8	63.5	52.1	46.5	43.4	45.0	44.1
27.5°	1236.7	1023.2	534.6	245.6	88.2	55.9	48.4	43.6	38.9	41.3	41.1
30°	1363.4	1199.1	553.5	187.5	70.0	48.9	45.1	39.7	34.7	37.5	37.3
32.5°	1515.0	1274.6	574.0	143.9	58.1	46.3	40.6	35.4	32.5	34.2	33.8
35°	1685.2	1423.8	536.3	119.8	50.5	41.8	35.9	31.9	29.3	30.2	30.2
37.5°	1986.1	1548.6	513.8	97.5	47.0	37.8	33.7	28.8	27.3	27.3	28.1
40°	2156.9	1739.2	446.4	77.2	48.1	34.9	31.4	26.4	24.3	24.1	25.0
42.5°	2379.0	1849.1	404.3	62.5	43.6	34.0	28.8	24.0	21.5	21.3	22.2
45°	2510.8	1910.6	344.9	49.1	39.1	39.6	26.7	22.0	18.4	17.7	19.3
47.5°	2593.9	1992.0	311.2	39.1	34.0	39.4	26.0	19.1	15.4	14.6	16.0
50°	2636.1	2032.2	304.6	33.5	29.5	35.2	29.9	16.0	13.2	12.0	13.2
52.5°	2680.0	2097.7	307.1	30.9	26.0	28.3	28.3	13.7	11.6	10.2	11.1
55°	2768.7	2194.3	301.7	29.3	24.0	21.5	18.2	12.2	10.6	9.0	9.9
57.5°	2877.7	2263.8	301.7	27.9	22.2	18.4	14.6	11.3	9.7	7.8	8.5
60°	2857.1	2190.7	286.7	26.6	20.8	17.2	13.2	10.4	9.0	7.1	7.6
62.5°	2715.2	1992.0	232.2	24.5	19.6	16.3	12.0	9.9	8.5	6.2	6.8
65°	2548.6	1780.9	161.4	22.2	18.2	14.8	10.8	9.4	7.8	5.6	5.9
67.5°	2348.0	1529.4	89.6	20.0	16.8	12.8	9.9	9.2	7.5	5.0	5.4
70°	1999.8	1154.6	48.1	18.2	15.8	11.8	9.4	9.2	7.5	4.9	5.0
72.5°	1501.3	727.1	28.1	16.7	14.4	10.9	8.9	9.4	7.3	4.7	4.7
75°	1021.5	441.4	20.1	14.2	12.8	9.2	8.5	9.0	7.5	4.7	4.3
77.5°	694.5	310.2	16.5	12.8	11.6	8.2	8.7	9.0	7.5	3.8	3.0
80°	433.6	160.0	12.5	10.2	10.1	7.1	8.7	7.8	4.9	0.9	0.0
82.5°	303.2	59.5	7.3	7.8	7.8	5.0	6.8	5.6	2.8	0.0	0.0
85°	127.2	10.2	4.0	5.6	4.9	3.0	5.4	4.2	1.7	0.0	0.0
87.5°	2.3	0.0	1.6	3.3	3.5	1.7	2.8	1.7	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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**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9
2.5°	377.9	361.4	326.7	343.3	341.6	349.2	349.9	332.2	370.4	394.0	397.5
5°	362.4	351.3	349.4	339.9	337.4	351.5	343.9	343.3	361.7	388.6	388.8
7.5°	301.2	292.6	296.6	285.5	256.9	258.6	261.2	272.2	288.0	305.7	312.1
10°	206.7	228.8	212.6	211.2	208.3	199.1	191.8	197.5	218.0	234.3	240.4
12.5°	147.5	151.0	160.9	157.3	162.3	154.5	151.5	169.4	189.4	206.0	218.0
15°	86.3	92.2	98.1	110.6	115.6	114.0	123.1	138.0	154.1	161.8	176.5
17.5°	60.8	61.3	62.5	76.0	84.9	88.4	93.7	105.0	111.6	115.1	121.2
20°	53.1	51.6	49.5	57.1	65.4	69.8	68.2	77.1	82.4	85.9	90.3
22.5°	48.1	45.5	44.3	46.9	53.3	57.1	57.8	63.0	71.2	73.6	75.0
25°	43.4	41.7	40.8	42.2	45.7	49.3	50.0	56.8	64.0	65.1	67.9
27.5°	40.3	37.0	37.3	38.4	39.9	44.4	45.8	49.6	60.2	61.4	62.3
30°	37.0	33.5	34.5	35.6	34.9	40.4	42.5	46.9	57.1	59.0	60.1
32.5°	33.7	31.1	30.9	31.9	33.2	36.1	40.6	45.7	55.0	57.6	60.2
35°	30.0	27.9	28.3	28.5	30.0	33.8	37.1	39.7	46.2	47.6	48.4
37.5°	27.4	25.7	25.3	27.1	28.6	31.6	32.8	34.0	42.5	45.7	45.8
40°	24.3	23.3	23.3	24.5	27.9	27.6	29.2	33.0	41.1	44.4	44.8
42.5°	22.0	20.7	21.0	22.2	24.6	22.9	26.0	31.6	40.6	43.9	43.7
45°	18.6	18.2	18.9	20.0	21.0	19.4	24.3	30.2	38.9	43.2	42.0
47.5°	15.4	15.4	16.3	17.4	16.8	17.4	22.0	28.3	37.8	41.8	41.0
50°	12.7	12.8	13.7	15.4	13.9	15.3	19.8	26.4	36.1	40.4	39.7
52.5°	10.8	10.9	11.5	12.7	12.0	13.9	18.2	24.5	34.4	38.0	37.7
55°	9.4	9.7	9.7	10.4	10.8	13.0	16.5	22.6	31.8	35.8	35.1
57.5°	8.3	8.7	8.5	9.0	9.4	11.5	14.8	20.5	29.2	32.5	31.4
60°	7.5	7.8	7.6	8.3	8.2	9.9	12.8	18.2	26.4	29.0	28.1
62.5°	6.6	6.9	6.9	7.3	7.5	8.3	11.1	16.1	23.6	25.7	25.0
65°	5.9	6.2	6.4	6.2	6.6	7.1	9.4	14.6	20.5	22.6	21.5
67.5°	5.4	5.7	6.1	5.4	5.7	5.9	8.0	13.0	18.1	19.8	18.9
70°	5.2	5.4	5.4	4.7	4.5	4.7	6.9	11.1	15.8	17.5	16.3
72.5°	4.9	5.0	4.9	3.8	3.3	3.6	5.9	9.4	13.4	14.8	13.7
75°	4.5	4.7	4.5	3.1	2.1	2.6	4.9	8.2	11.5	12.2	11.6
77.5°	3.8	4.2	4.2	2.3	0.7	1.6	3.6	6.6	9.5	9.5	9.7
80°	0.3	1.0	1.7	1.2	0.0	0.2	1.2	3.5	6.1	5.9	6.4
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.1	1.6	1.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	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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**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9
2.5°	389.3	383.9	390.7	411.4	403.0	404.6	399.1	433.2	472.0	473.2
5°	389.2	384.3	394.4	393.5	417.3	443.1	468.1	508.6	565.9	566.2
7.5°	309.1	338.0	345.4	343.2	373.7	409.3	447.8	525.2	572.3	577.3
10°	278.8	291.3	306.5	312.1	324.8	358.6	402.2	489.8	542.6	554.2
12.5°	241.6	281.5	301.8	341.3	348.5	353.4	422.1	498.3	530.4	529.1
15°	200.1	234.8	267.0	315.0	334.8	385.9	440.0	539.8	558.9	577.3
17.5°	141.6	167.8	217.1	267.7	328.1	383.6	489.3	613.9	650.0	671.9
20°	94.8	107.4	152.1	218.9	295.4	350.6	509.4	680.9	720.3	739.3
22.5°	76.9	83.0	106.1	160.4	252.4	349.1	517.6	754.0	859.9	885.1
25°	67.7	71.9	84.2	118.7	209.5	342.1	562.7	836.3	964.0	984.3
27.5°	59.2	65.4	74.6	97.9	179.7	337.3	585.6	974.5	1126.9	1146.8
30°	56.6	64.2	73.1	89.2	158.8	318.5	622.1	1099.1	1243.7	1279.3
32.5°	61.1	63.7	68.0	81.8	142.7	298.7	686.1	1248.0	1340.4	1386.7
35°	48.4	53.1	60.8	75.0	135.9	297.7	722.4	1343.8	1495.4	1524.0
37.5°	47.4	51.7	61.6	73.1	144.1	305.7	776.2	1540.1	1774.8	1833.5
40°	46.0	51.6	60.9	72.2	144.1	313.5	810.6	1697.2	1962.8	2022.3
42.5°	45.5	52.6	60.8	75.9	139.6	317.8	862.5	1854.0	2161.4	2208.4
45°	45.1	53.6	61.3	80.2	138.5	332.1	891.8	1930.2	2289.1	2343.1
47.5°	44.3	53.6	68.4	77.6	132.8	330.7	929.8	2043.2	2365.3	2410.8
50°	43.6	54.0	77.4	72.7	133.7	322.2	981.4	2149.2	2472.1	2504.5
52.5°	42.0	55.2	76.0	66.0	131.0	321.3	1058.3	2300.1	2612.5	2636.3
55°	38.5	53.6	68.7	57.6	121.9	311.4	1160.2	2496.2	2807.2	2811.4
57.5°	35.4	49.8	57.5	52.9	102.1	312.6	1248.0	2676.7	2980.8	3000.3
60°	32.3	51.7	44.6	49.3	84.5	290.4	1290.5	2745.8	3107.2	3135.6
62.5°	29.3	47.7	38.0	45.3	75.3	269.7	1261.0	2690.3	3123.3	3183.0
65°	26.0	33.2	32.1	40.6	76.2	240.7	1162.4	2527.6	3062.1	3144.3
67.5°	22.4	26.0	28.3	35.1	81.6	215.9	993.4	2266.6	2897.3	2990.5
70°	19.6	23.4	24.6	30.7	84.9	199.6	783.9	1904.3	2559.9	2646.0
72.5°	16.3	21.7	22.0	26.9	81.8	183.5	558.6	1367.1	1943.9	1985.2
75°	14.1	18.1	20.0	22.6	68.7	137.0	307.8	846.2	1229.1	1275.3
77.5°	12.7	13.7	15.1	15.6	29.2	71.3	105.9	521.8	688.2	740.3
80°	9.7	10.8	10.4	10.8	16.0	24.6	40.3	244.6	325.1	354.1
82.5°	3.1	5.2	5.7	4.9	10.4	12.2	11.6	84.5	105.7	112.3
85°	0.7	1.9	0.9	0.0	3.5	6.2	0.9	12.8	25.3	18.7
87.5°	0.0	0.0	0.0	0.0	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

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