

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: P596485

Luminaire Tested: **MSA-SA1A-827-U-SLL-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596485  
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-SA1A-827-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: 2167 lumens  
Efficiency: N/A  
Efficacy: 63.7 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

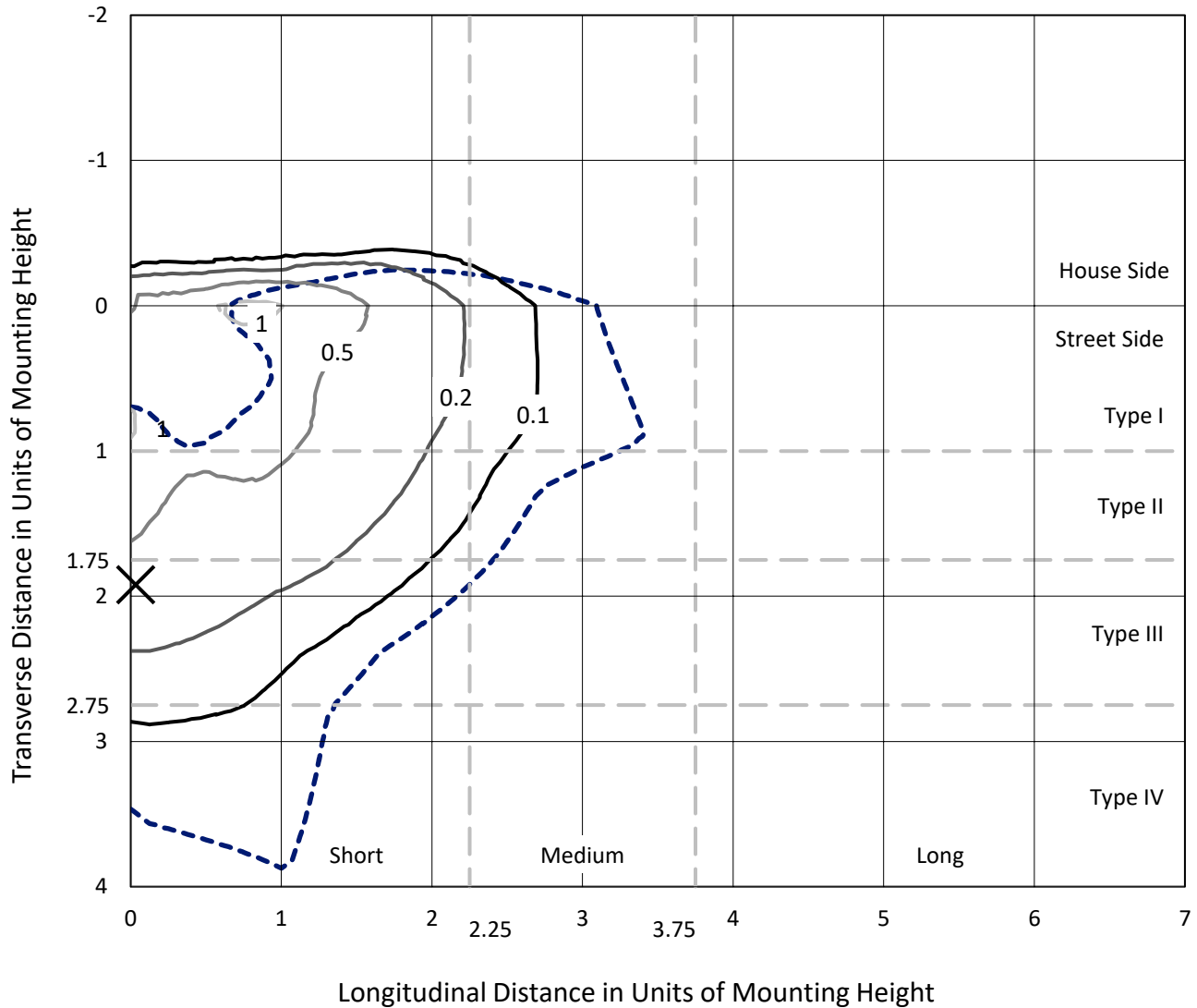
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

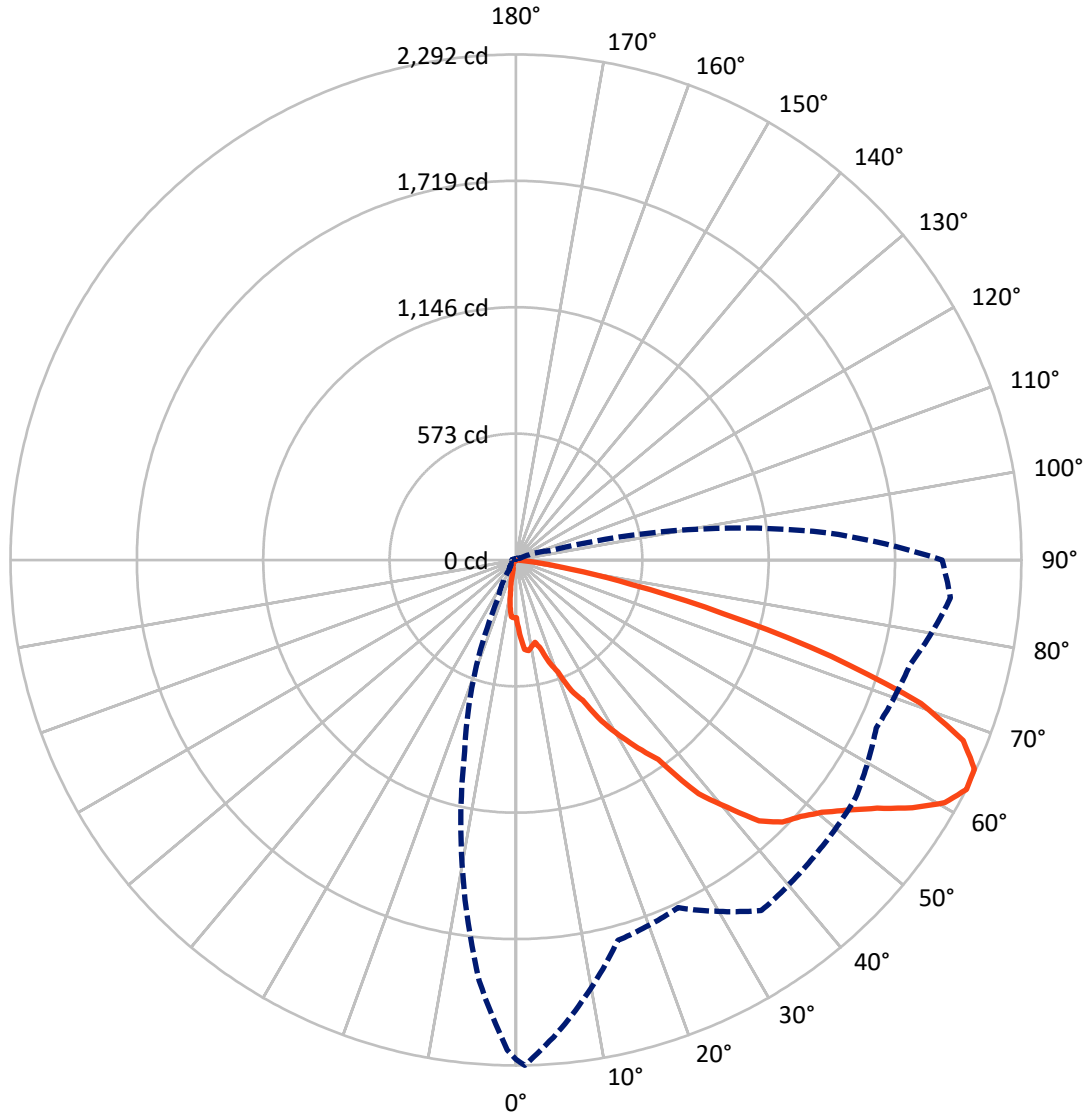
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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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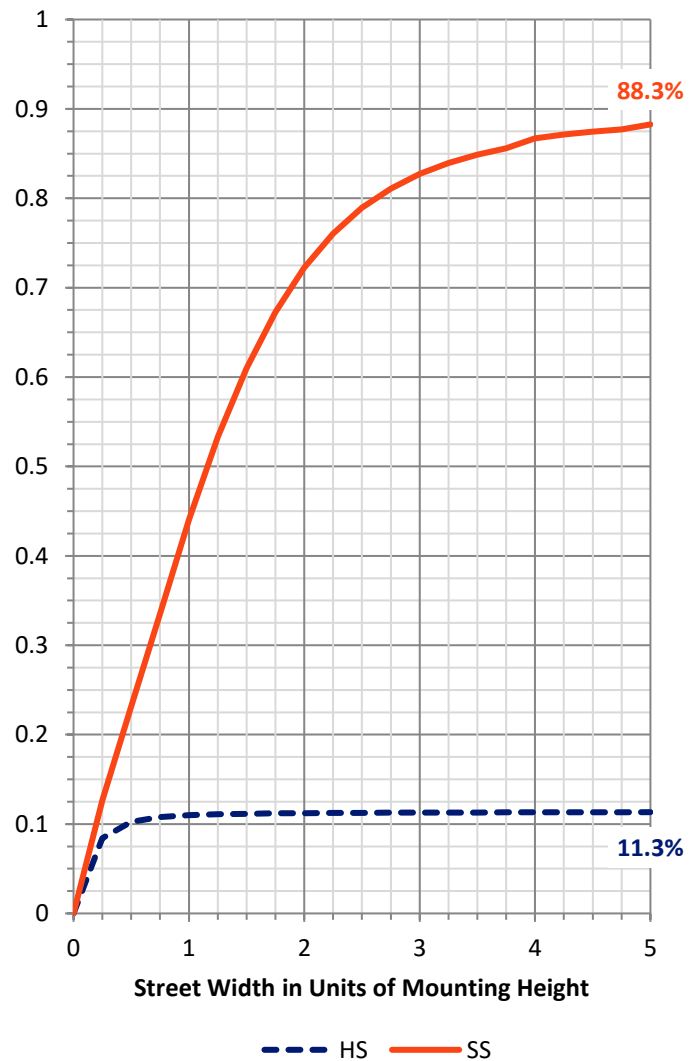
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	247.8	0.0	247.8
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	1919.2	0.0	1919.2
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	2167.0	0.0	2167.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.2	1.3
10°-20°	76.2	3.5
20°-30°	123.1	5.7
30°-40°	206.3	9.5
40°-50°	337.3	15.6
50°-60°	499.3	23.0
60°-70°	573.2	26.5
70°-80°	283.5	13.1
80°-90°	38.9	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°	2167.0	100.0
0°-180°	2167.0	100.0

**Coefficient of Utilization**



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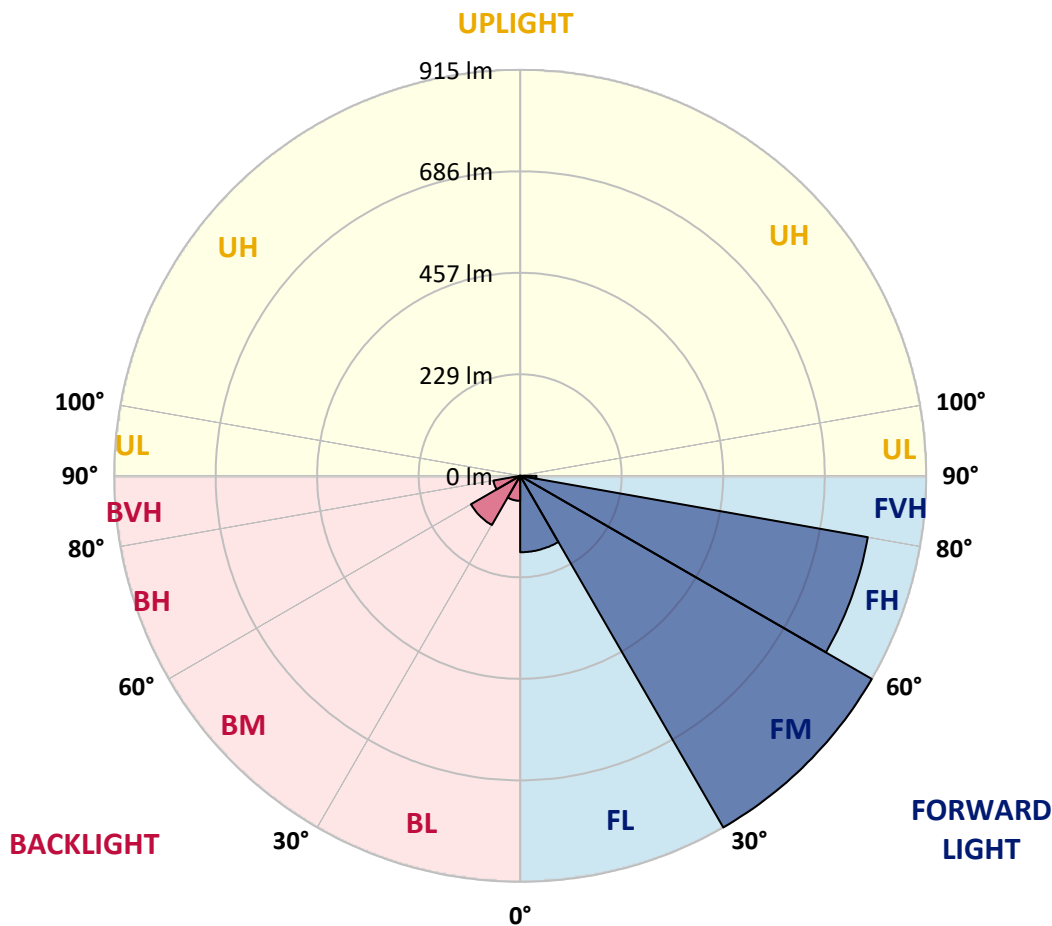
CATALOG NUMBER: MSA-SA1A-827-U-SLL-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	172.1	7.9			
FM (30°-60°)	914.9	42.2			
FH (60°-80°)	795.4	36.7			G1/1800
FVH (80°-90°)	36.8	1.7			G1/100
BL (0°-30°)	56.4	2.6	B0/110		
BM (30°-60°)	128.0	5.9	B0/220		
BH (60°-80°)	61.3	2.8	B0/110		G0/110
BVH (80°-90°)	2.2	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°	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0
2.5°	336.6	338.2	330.7	329.7	312.2	334.0	334.6	337.2	321.2	290.1	333.5
5°	402.8	407.3	401.5	427.3	434.7	450.6	421.3	447.5	436.4	439.5	445.8
7.5°	410.7	415.3	427.5	470.7	510.6	500.6	497.4	507.3	506.4	483.6	494.9
10°	394.3	398.1	418.5	497.2	514.6	559.5	570.5	547.8	538.5	488.5	466.7
12.5°	376.4	382.8	408.7	503.1	555.3	600.8	636.9	604.6	573.8	520.6	500.6
15°	410.7	414.3	455.0	515.4	561.1	592.5	622.1	611.4	606.7	568.4	500.6
17.5°	478.0	486.4	515.9	545.7	581.7	600.6	593.6	590.3	578.3	638.4	568.3
20°	525.9	541.6	580.3	593.1	564.5	582.1	577.8	574.8	565.4	677.3	646.1
22.5°	629.7	644.1	644.8	649.4	582.7	554.6	547.4	548.3	590.9	688.9	742.9
25°	700.3	705.2	744.3	711.7	632.6	563.0	535.7	547.9	609.3	772.4	833.9
27.5°	815.9	827.6	851.9	741.5	662.5	557.7	514.2	558.7	657.7	800.1	935.0
30°	910.1	921.3	960.5	782.4	688.4	584.0	523.5	580.3	687.8	857.0	1025.9
32.5°	986.5	1015.6	1060.0	845.5	687.4	614.2	570.8	573.1	724.9	930.7	1115.8
35°	1084.2	1111.3	1142.5	889.0	732.4	624.0	584.7	643.5	779.9	1007.8	1236.8
37.5°	1304.4	1345.3	1283.5	998.5	784.8	712.1	639.8	686.8	837.6	1086.4	1403.2
40°	1438.7	1473.2	1413.5	1054.4	875.4	756.6	738.1	762.2	894.0	1127.1	1528.5
42.5°	1571.1	1616.6	1516.9	1138.7	961.5	882.1	831.4	850.8	975.7	1225.1	1669.5
45°	1666.9	1695.1	1539.3	1182.8	1079.8	1025.1	991.3	962.5	1089.5	1288.1	1760.5
47.5°	1715.1	1737.6	1583.3	1196.7	1150.2	1176.3	1250.2	1189.8	1190.3	1333.7	1809.6
50°	1781.8	1797.5	1608.0	1213.4	1226.6	1412.1	1449.4	1320.8	1305.4	1379.3	1817.6
52.5°	1875.5	1883.2	1656.0	1257.3	1341.1	1596.7	1610.1	1558.1	1420.6	1464.3	1835.4
55°	2000.1	1986.6	1741.5	1349.7	1460.5	1731.9	1749.9	1704.6	1565.4	1549.1	1890.5
57.5°	2134.5	2119.0	1868.3	1479.9	1590.0	1835.3	1846.0	1849.6	1661.6	1624.2	1984.1
60°	2230.8	2233.6	2028.0	1629.2	1670.5	1934.2	1912.7	1880.1	1758.7	1734.2	2029.6
62.5°	2264.5	2291.8	2152.4	1785.6	1739.9	1940.3	1907.0	1879.5	1802.2	1847.7	1977.4
65°	2237.0	2284.6	2181.3	1923.1	1781.9	1862.9	1828.2	1810.6	1800.8	1894.0	1861.8
67.5°	2127.5	2187.2	2098.5	1924.3	1629.3	1586.2	1627.2	1683.1	1650.8	1855.6	1699.9
70°	1882.4	1947.7	1906.5	1811.4	1357.2	1248.0	1293.1	1377.7	1354.9	1650.4	1461.7
72.5°	1412.3	1496.3	1504.4	1563.8	1077.4	939.2	945.8	943.4	982.8	1330.8	1140.6
75°	907.3	972.6	1060.9	1261.9	818.5	685.7	623.0	607.7	681.2	1039.9	816.6
77.5°	526.7	534.4	575.2	952.1	586.2	494.1	451.3	473.2	498.9	725.7	541.2
80°	251.9	255.9	272.7	489.9	407.3	427.6	394.7	419.2	342.6	417.1	307.1
82.5°	79.9	80.8	83.6	240.7	252.9	283.3	181.5	243.4	211.8	252.2	204.5
85°	13.3	22.7	28.0	69.5	142.8	95.6	39.4	86.8	118.2	159.1	92.9
87.5°	0.0	0.0	0.0	1.2	11.6	5.4	0.9	4.9	18.2	35.4	4.2
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°	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0
2.5°	346.1	354.7	322.5	293.8	301.1	295.3	286.5	271.5	237.0	262.4	260.7
5°	445.4	429.6	386.1	365.9	341.2	303.5	299.0	270.1	257.3	259.4	257.6
7.5°	480.0	451.7	413.3	352.3	294.4	240.1	223.4	204.5	200.7	208.8	214.1
10°	452.8	422.8	389.2	313.4	268.8	229.6	188.4	162.0	147.7	146.0	147.4
12.5°	465.3	432.9	363.8	305.8	259.2	223.6	177.7	137.8	106.7	109.0	102.9
15°	473.9	436.8	357.7	289.7	239.3	191.8	136.5	96.6	71.1	63.7	59.3
17.5°	524.7	471.6	350.1	271.2	211.5	149.3	85.7	55.9	47.7	45.1	43.0
20°	589.9	514.4	350.0	251.7	170.5	93.4	53.5	40.5	38.5	40.0	38.4
22.5°	665.7	571.5	368.6	227.3	122.4	58.9	41.6	35.9	34.0	35.2	35.3
25°	742.0	657.1	383.8	204.2	85.2	45.2	37.0	33.1	30.9	32.0	31.4
27.5°	879.8	728.0	380.3	174.7	62.7	39.8	34.5	31.0	27.7	29.4	29.3
30°	970.0	853.0	393.8	133.4	49.8	34.8	32.1	28.3	24.7	26.7	26.5
32.5°	1077.8	906.8	408.4	102.4	41.4	33.0	28.9	25.2	23.1	24.3	24.1
35°	1198.9	1013.0	381.6	85.2	35.9	29.8	25.6	22.7	20.9	21.5	21.5
37.5°	1412.9	1101.7	365.5	69.4	33.5	26.9	24.0	20.5	19.4	19.4	20.0
40°	1534.4	1237.3	317.6	55.0	34.2	24.8	22.4	18.8	17.3	17.2	17.8
42.5°	1692.5	1315.5	287.6	44.5	31.0	24.2	20.5	17.0	15.3	15.2	15.8
45°	1786.2	1359.2	245.4	34.9	27.8	28.2	19.0	15.7	13.1	12.6	13.7
47.5°	1845.4	1417.1	221.4	27.8	24.2	28.0	18.5	13.6	11.0	10.4	11.4
50°	1875.4	1445.8	216.7	23.8	21.0	25.1	21.2	11.4	9.4	8.5	9.4
52.5°	1906.6	1492.3	218.4	22.0	18.5	20.1	20.1	9.8	8.3	7.3	7.9
55°	1969.7	1561.1	214.6	20.9	17.0	15.3	13.0	8.6	7.5	6.4	7.0
57.5°	2047.3	1610.5	214.6	19.9	15.8	13.1	10.4	8.0	6.9	5.6	6.1
60°	2032.6	1558.5	204.0	18.9	14.8	12.2	9.4	7.4	6.4	5.1	5.4
62.5°	1931.7	1417.1	165.2	17.4	14.0	11.6	8.5	7.0	6.1	4.4	4.8
65°	1813.1	1267.0	114.8	15.8	13.0	10.5	7.7	6.7	5.6	4.0	4.2
67.5°	1670.4	1088.0	63.7	14.2	12.0	9.1	7.0	6.5	5.3	3.6	3.8
70°	1422.7	821.4	34.2	13.0	11.2	8.4	6.7	6.5	5.3	3.5	3.6
72.5°	1068.0	517.3	20.0	11.9	10.2	7.8	6.3	6.7	5.2	3.3	3.3
75°	726.7	314.0	14.3	10.1	9.1	6.5	6.1	6.4	5.3	3.3	3.1
77.5°	494.1	220.7	11.7	9.1	8.3	5.8	6.2	6.4	5.3	2.7	2.1
80°	308.5	113.9	8.9	7.3	7.2	5.1	6.2	5.6	3.5	0.6	0.0
82.5°	215.7	42.4	5.2	5.6	5.6	3.6	4.8	4.0	2.0	0.0	0.0
85°	90.5	7.3	2.8	4.0	3.5	2.1	3.8	3.0	1.2	0.0	0.0
87.5°	1.6	0.0	1.1	2.3	2.5	1.2	2.0	1.2	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°	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0
2.5°	268.8	257.1	232.4	244.3	243.0	248.5	248.9	236.4	263.5	280.3	282.8
5°	257.8	249.9	248.6	241.8	240.1	250.1	244.6	244.3	257.3	276.5	276.6
7.5°	214.2	208.2	211.0	203.1	182.8	184.0	185.8	193.6	204.9	217.5	222.0
10°	147.1	162.8	151.3	150.3	148.2	141.6	136.5	140.5	155.1	166.7	171.0
12.5°	105.0	107.4	114.5	111.9	115.5	109.9	107.8	120.5	134.7	146.6	155.1
15°	61.4	65.6	69.8	78.7	82.2	81.1	87.6	98.2	109.7	115.1	125.6
17.5°	43.2	43.6	44.5	54.1	60.4	62.9	66.7	74.7	79.4	81.9	86.2
20°	37.8	36.7	35.2	40.6	46.6	49.6	48.5	54.8	58.7	61.1	64.2
22.5°	34.2	32.4	31.5	33.3	37.9	40.6	41.1	44.8	50.6	52.4	53.3
25°	30.9	29.6	29.0	30.0	32.5	35.1	35.6	40.4	45.6	46.3	48.3
27.5°	28.6	26.3	26.5	27.3	28.4	31.6	32.6	35.3	42.8	43.7	44.3
30°	26.3	23.8	24.6	25.3	24.8	28.8	30.3	33.3	40.6	42.0	42.7
32.5°	24.0	22.1	22.0	22.7	23.6	25.7	28.9	32.5	39.1	41.0	42.8
35°	21.4	19.9	20.1	20.3	21.4	24.1	26.4	28.3	32.8	33.8	34.5
37.5°	19.5	18.3	18.0	19.3	20.4	22.5	23.3	24.2	30.3	32.5	32.6
40°	17.3	16.5	16.5	17.4	19.9	19.6	20.7	23.5	29.3	31.6	31.9
42.5°	15.7	14.7	14.9	15.8	17.5	16.3	18.5	22.5	28.9	31.2	31.1
45°	13.2	13.0	13.5	14.2	14.9	13.8	17.3	21.5	27.7	30.7	29.9
47.5°	11.0	11.0	11.6	12.3	12.0	12.3	15.7	20.1	26.9	29.8	29.1
50°	9.0	9.1	9.8	11.0	9.9	10.9	14.1	18.8	25.7	28.8	28.3
52.5°	7.7	7.8	8.2	9.0	8.5	9.9	13.0	17.4	24.5	27.0	26.8
55°	6.7	6.9	6.9	7.4	7.7	9.3	11.7	16.1	22.6	25.4	24.9
57.5°	5.9	6.2	6.1	6.4	6.7	8.2	10.5	14.6	20.7	23.1	22.4
60°	5.3	5.6	5.4	5.9	5.8	7.0	9.1	13.0	18.8	20.6	20.0
62.5°	4.7	4.9	4.9	5.2	5.3	5.9	7.9	11.5	16.8	18.3	17.8
65°	4.2	4.4	4.6	4.4	4.7	5.1	6.7	10.4	14.6	16.1	15.3
67.5°	3.8	4.1	4.3	3.8	4.1	4.2	5.7	9.3	12.8	14.1	13.5
70°	3.7	3.8	3.8	3.3	3.2	3.3	4.9	7.9	11.2	12.5	11.6
72.5°	3.5	3.6	3.5	2.7	2.3	2.6	4.2	6.7	9.5	10.5	9.8
75°	3.2	3.3	3.2	2.2	1.5	1.9	3.5	5.8	8.2	8.6	8.3
77.5°	2.7	3.0	3.0	1.6	0.5	1.1	2.6	4.7	6.8	6.8	6.9
80°	0.2	0.7	1.2	0.9	0.0	0.1	0.9	2.5	4.3	4.2	4.6
82.5°	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.5	1.1	1.2
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°	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0	261.0
2.5°	277.0	273.2	278.0	292.7	286.7	287.8	283.9	308.2	335.8	336.6
5°	276.9	273.4	280.6	279.9	296.9	315.3	333.0	361.8	402.6	402.8
7.5°	219.9	240.4	245.7	244.1	265.9	291.2	318.6	373.7	407.1	410.7
10°	198.3	207.2	218.1	222.0	231.0	255.1	286.1	348.5	386.0	394.3
12.5°	171.9	200.3	214.7	242.8	248.0	251.4	300.3	354.5	377.4	376.4
15°	142.4	167.1	189.9	224.1	238.2	274.5	313.0	384.0	397.6	410.7
17.5°	100.8	119.4	154.5	190.4	233.4	272.9	348.1	436.8	462.5	478.0
20°	67.4	76.4	108.2	155.7	210.2	249.4	362.4	484.4	512.5	525.9
22.5°	54.7	59.0	75.5	114.1	179.5	248.3	368.2	536.4	611.8	629.7
25°	48.2	51.1	59.9	84.5	149.0	243.4	400.3	595.0	685.8	700.3
27.5°	42.1	46.6	53.1	69.6	127.8	239.9	416.6	693.3	801.7	815.9
30°	40.3	45.7	52.0	63.5	113.0	226.6	442.6	781.9	884.8	910.1
32.5°	43.5	45.3	48.4	58.2	101.5	212.5	488.1	887.9	953.6	986.5
35°	34.5	37.8	43.2	53.3	96.7	211.8	513.9	956.0	1063.8	1084.2
37.5°	33.7	36.8	43.8	52.0	102.5	217.5	552.2	1095.7	1262.6	1304.4
40°	32.7	36.7	43.3	51.4	102.5	223.0	576.7	1207.4	1396.4	1438.7
42.5°	32.4	37.4	43.2	54.0	99.3	226.1	613.6	1319.0	1537.7	1571.1
45°	32.1	38.2	43.6	57.1	98.5	236.2	634.5	1373.2	1628.5	1666.9
47.5°	31.5	38.2	48.7	55.2	94.5	235.2	661.5	1453.6	1682.7	1715.1
50°	31.0	38.4	55.1	51.7	95.1	229.2	698.2	1529.0	1758.7	1781.8
52.5°	29.9	39.3	54.1	46.9	93.2	228.6	752.9	1636.3	1858.6	1875.5
55°	27.4	38.2	48.9	41.0	86.7	221.5	825.4	1775.9	1997.1	2000.1
57.5°	25.2	35.4	40.9	37.7	72.6	222.4	887.9	1904.3	2120.6	2134.5
60°	23.0	36.8	31.7	35.1	60.1	206.6	918.1	1953.4	2210.5	2230.8
62.5°	20.9	34.0	27.0	32.2	53.6	191.9	897.1	1913.9	2222.0	2264.5
65°	18.5	23.6	22.8	28.9	54.2	171.3	827.0	1798.2	2178.4	2237.0
67.5°	15.9	18.5	20.1	24.9	58.0	153.6	706.7	1612.5	2061.2	2127.5
70°	14.0	16.7	17.5	21.9	60.4	142.0	557.7	1354.8	1821.2	1882.4
72.5°	11.6	15.4	15.7	19.1	58.2	130.5	397.4	972.6	1382.9	1412.3
75°	10.0	12.8	14.2	16.1	48.9	97.4	218.9	602.0	874.4	907.3
77.5°	9.0	9.8	10.7	11.1	20.7	50.8	75.3	371.2	489.6	526.7
80°	6.9	7.7	7.4	7.7	11.4	17.5	28.6	174.0	231.3	251.9
82.5°	2.2	3.7	4.1	3.5	7.4	8.6	8.3	60.1	75.2	79.9
85°	0.5	1.4	0.6	0.0	2.5	4.4	0.6	9.1	18.0	13.3
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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