

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: P596838

Luminaire Tested: **MSA-SA1A-835-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596838
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-835-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2854 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

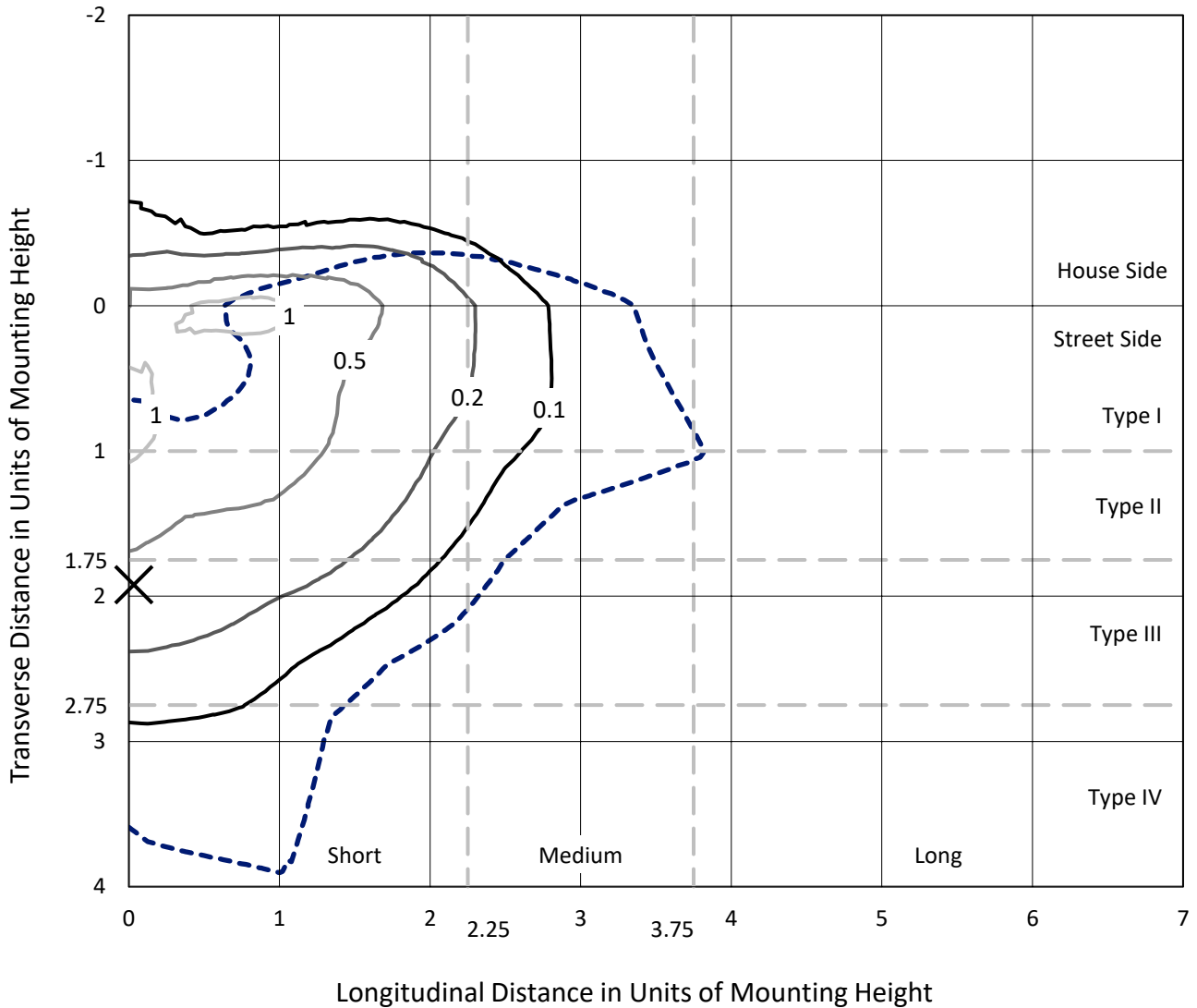
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

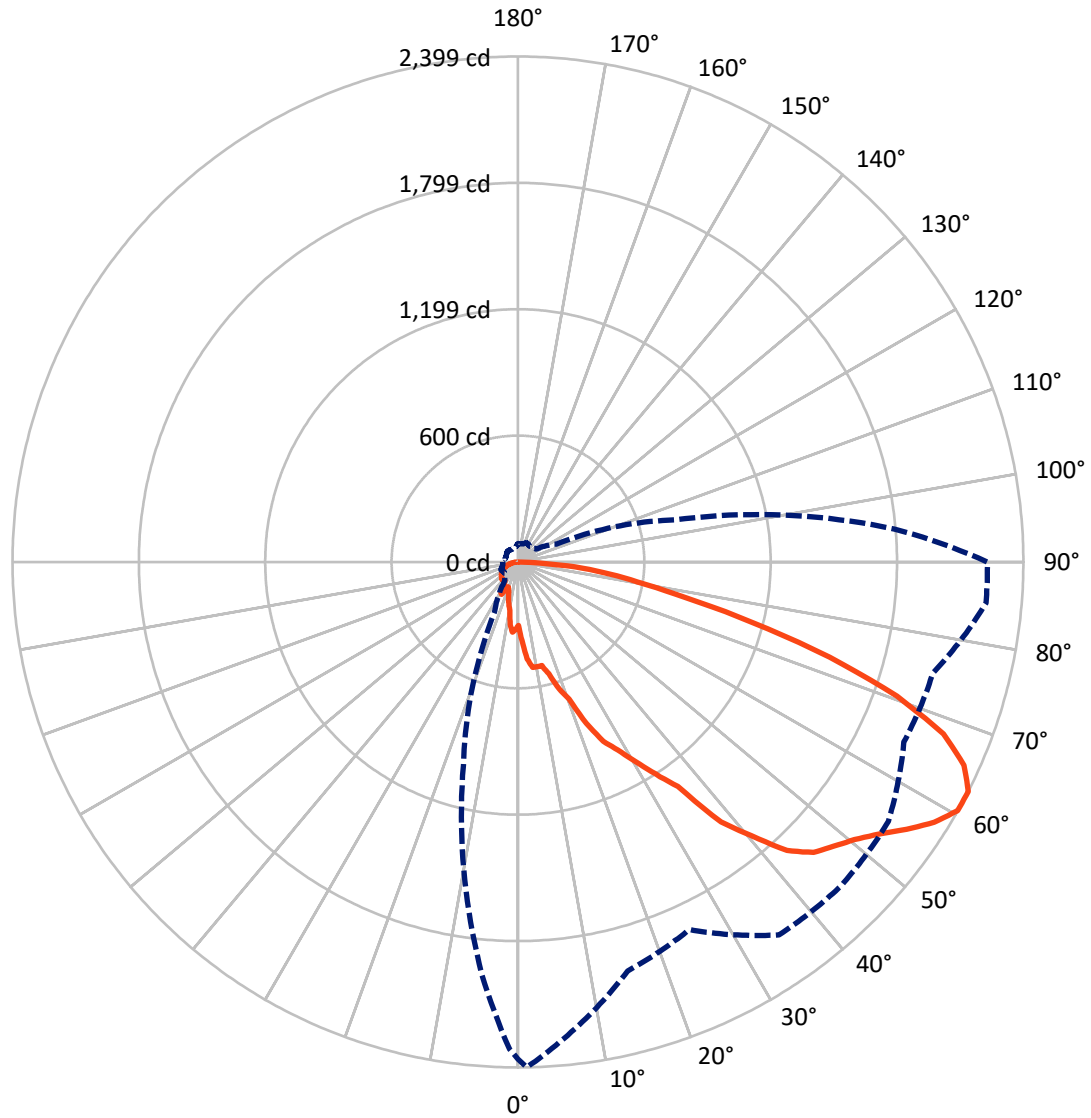
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 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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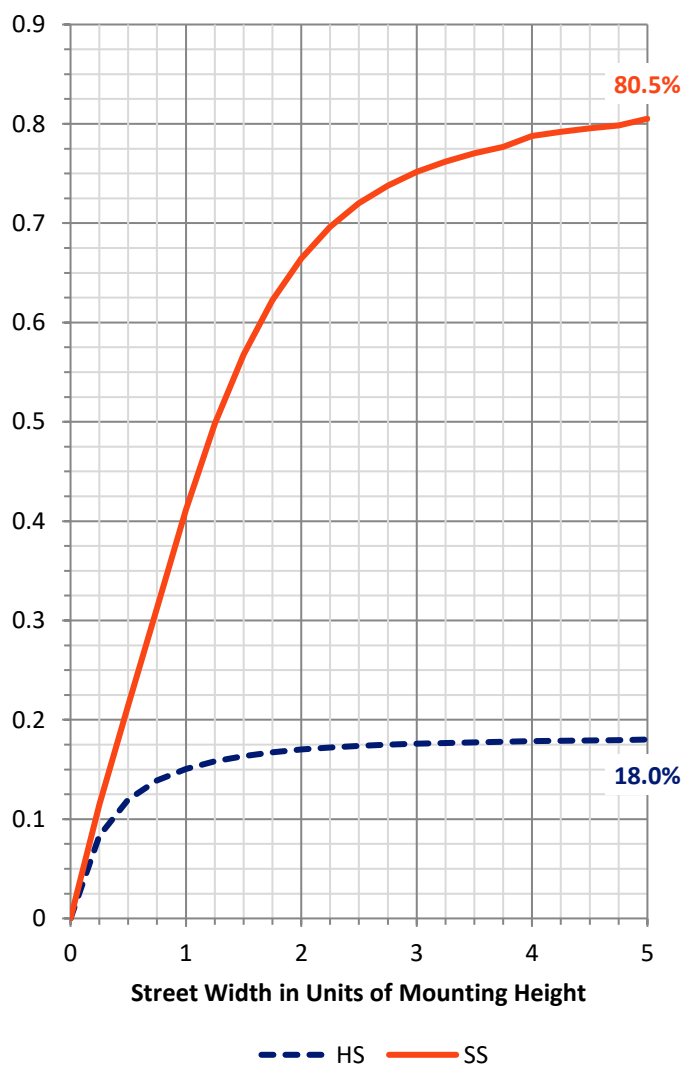
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	519.7	0.0	519.7
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	2334.3	0.0	2334.3
	% Fixture	81.8	0.0	81.8
Total	Lumens	2854.0	0.0	2854.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	1.2
10°-20°	100.3	3.5
20°-30°	177.0	6.2
30°-40°	275.7	9.7
40°-50°	454.0	15.9
50°-60°	647.9	22.7
60°-70°	687.0	24.1
70°-80°	379.5	13.3
80°-90°	98.2	3.4
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°	2854.0	100.0
0°-180°	2854.0	100.0

Coefficient of Utilization



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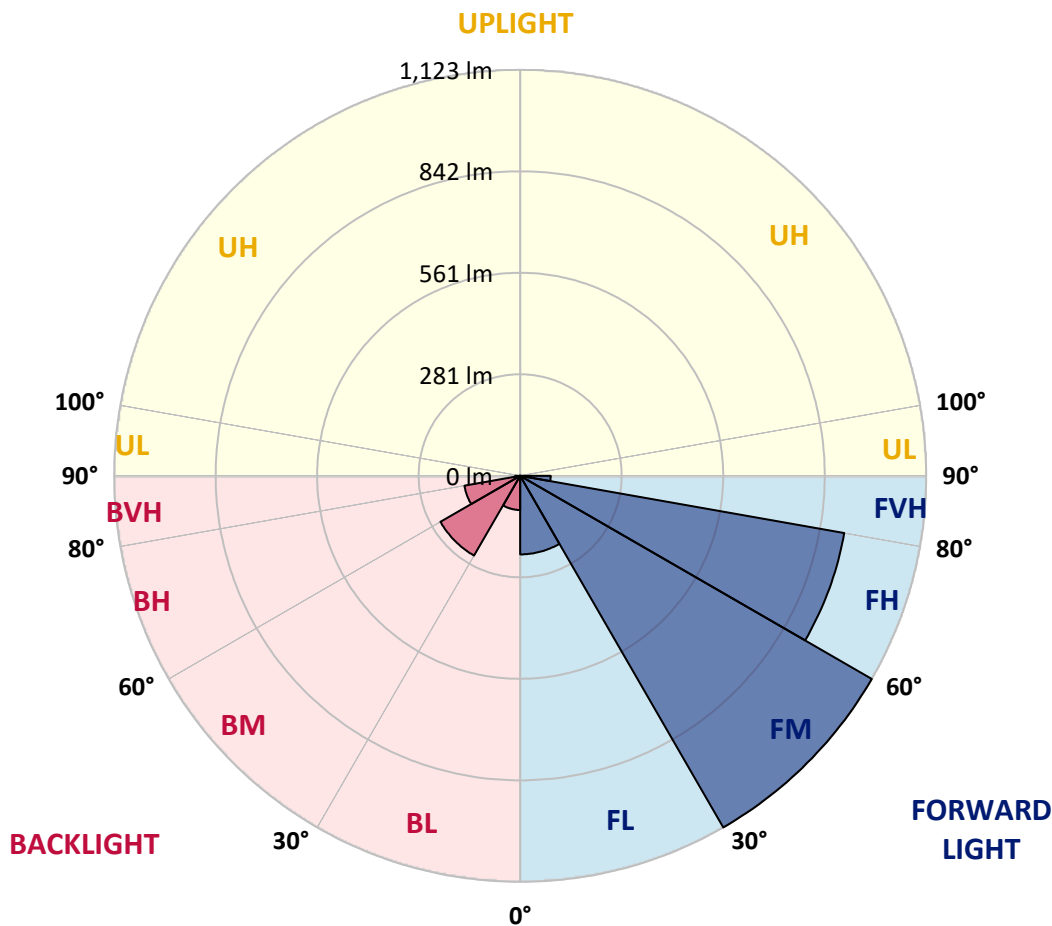
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	217.2	7.6			
FM (30°-60°)	1122.8	39.3			
FH (60°-80°)	910.0	31.9			G1/1800
FVH (80°-90°)	84.3	3.0			G1/100
BL (0°-30°)	94.5	3.3	B0/110		
BM (30°-60°)	254.8	8.9	B1/1000		
BH (60°-80°)	156.6	5.5	B1/500		G1/500
BVH (80°-90°)	13.8	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
2.5°	370.1	373.2	366.7	359.4	329.1	358.3	349.6	365.8	360.5	325.3	389.7
5°	457.3	463.1	456.8	478.8	480.2	485.8	433.4	466.0	454.7	451.8	484.3
7.5°	499.4	505.4	521.6	560.8	591.4	563.7	533.1	526.3	517.4	494.3	514.0
10°	502.0	505.4	527.1	610.2	625.0	644.7	624.9	578.2	559.0	508.7	493.7
12.5°	494.2	504.5	532.7	633.9	677.9	699.4	704.3	652.3	605.1	547.8	540.1
15°	547.2	550.9	591.2	650.8	681.1	699.3	715.1	683.1	668.2	622.8	561.7
17.5°	623.2	633.6	666.6	688.6	709.1	712.6	699.5	687.1	663.5	724.2	659.2
20°	674.8	694.8	735.3	739.4	696.4	704.0	702.2	703.0	689.6	801.8	766.0
22.5°	811.0	832.8	838.3	814.2	733.1	698.3	705.2	725.3	778.2	874.3	914.8
25°	934.4	942.9	993.4	931.4	802.0	726.3	714.9	766.9	853.1	996.5	1025.3
27.5°	998.8	1009.8	1043.4	908.4	810.6	690.3	663.7	742.8	830.7	939.0	1065.4
30°	1081.2	1098.7	1144.5	931.4	836.5	713.8	654.9	730.6	827.8	976.7	1150.5
32.5°	1166.1	1200.1	1234.1	1012.4	832.9	749.8	710.8	716.9	854.1	1055.6	1238.6
35°	1278.6	1308.5	1337.9	1059.2	905.5	779.9	741.1	805.6	921.7	1147.2	1361.4
37.5°	1519.0	1566.4	1489.0	1192.4	984.4	915.3	845.4	883.6	993.2	1223.5	1562.1
40°	1672.2	1707.8	1633.0	1283.2	1123.5	1006.6	995.1	998.3	1091.6	1288.8	1697.1
42.5°	1824.4	1872.6	1753.6	1407.7	1291.6	1195.1	1135.8	1131.8	1201.9	1406.3	1850.7
45°	1938.0	1966.4	1795.0	1512.7	1471.9	1400.3	1355.9	1285.4	1346.7	1487.6	1945.7
47.5°	1992.0	2015.1	1861.7	1573.7	1588.8	1592.6	1672.8	1552.5	1473.3	1542.6	1995.6
50°	2059.4	2070.4	1900.9	1627.5	1699.9	1864.2	1883.4	1679.7	1596.6	1602.5	2025.1
52.5°	2140.0	2144.6	1958.1	1689.5	1812.2	2042.8	2013.0	1895.2	1713.9	1712.1	2080.6
55°	2241.4	2238.6	2029.8	1773.0	1892.4	2149.0	2126.5	2040.6	1841.7	1802.8	2167.0
57.5°	2331.6	2329.9	2124.9	1849.9	1959.9	2203.6	2210.3	2187.5	1928.7	1867.8	2260.7
60°	2375.8	2396.9	2233.2	1934.0	1964.1	2228.3	2230.8	2194.6	2025.9	1951.1	2285.6
62.5°	2358.6	2398.9	2286.4	2009.6	1924.7	2161.0	2171.3	2146.4	2021.5	2038.7	2229.9
65°	2280.5	2327.0	2240.3	2049.9	1900.4	2048.2	2050.8	1987.8	1958.2	2096.7	2099.5
67.5°	2133.9	2177.6	2093.5	1985.6	1734.5	1744.4	1803.1	1808.2	1765.0	2052.9	1916.2
70°	1877.4	1908.2	1855.6	1826.9	1449.8	1392.2	1455.9	1483.2	1502.8	1894.9	1696.3
72.5°	1486.3	1545.8	1554.1	1572.8	1167.2	1071.3	1118.5	1078.1	1206.2	1612.8	1385.9
75°	1099.7	1149.8	1203.7	1308.0	920.0	802.0	796.2	775.6	895.2	1297.0	1027.9
77.5°	777.1	809.1	850.5	1044.8	694.3	617.7	621.3	600.4	646.5	980.3	710.1
80°	557.0	573.8	593.0	688.3	512.2	532.9	533.5	513.7	480.7	665.7	473.9
82.5°	396.9	409.9	432.0	454.0	381.8	436.8	436.4	435.2	381.1	450.0	296.5
85°	221.0	238.5	276.7	355.7	275.7	312.3	274.6	302.5	279.8	299.6	150.1
87.5°	15.5	13.8	61.9	206.1	128.7	94.0	49.3	97.6	125.2	156.5	20.9
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°	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
2.5°	403.0	407.9	388.9	360.4	368.1	359.7	349.0	332.4	298.2	319.4	319.5
5°	484.0	465.6	450.8	436.8	413.3	377.7	373.0	344.4	328.4	336.8	335.6
7.5°	509.4	483.2	460.9	410.9	367.3	312.0	295.4	278.5	271.5	291.9	300.1
10°	481.5	454.3	432.4	371.6	341.9	307.5	261.8	238.4	224.5	229.9	233.1
12.5°	504.0	476.1	407.3	373.4	324.5	303.4	263.4	229.1	208.6	213.6	207.6
15°	525.6	488.1	419.2	351.6	312.0	281.6	249.2	213.7	189.6	181.0	176.4
17.5°	604.5	542.2	417.8	339.5	294.0	259.0	219.9	181.2	165.1	156.2	148.6
20°	700.8	614.0	425.3	326.9	274.9	230.7	188.2	152.2	141.0	135.2	133.1
22.5°	815.3	705.9	468.1	325.0	256.9	210.1	170.8	148.3	135.7	129.4	126.7
25°	906.3	801.1	499.7	337.2	255.9	193.1	160.2	164.8	159.0	160.9	145.6
27.5°	994.7	827.0	482.0	331.8	230.2	162.9	157.7	167.3	172.3	173.8	173.3
30°	1069.3	936.4	485.8	301.4	194.4	132.7	120.8	125.5	139.2	160.9	165.1
32.5°	1178.6	988.7	518.9	282.9	173.8	118.7	105.4	103.6	106.8	114.7	121.5
35°	1306.4	1109.2	528.2	278.1	159.5	112.5	103.2	99.0	100.7	106.6	108.0
37.5°	1544.8	1197.0	562.6	272.1	154.3	108.7	101.5	100.0	103.6	108.4	111.2
40°	1676.2	1354.9	564.2	267.0	147.5	107.2	102.6	101.9	104.1	110.8	112.5
42.5°	1851.4	1444.9	590.3	261.1	145.1	109.3	104.8	104.6	106.5	110.4	113.4
45°	1958.2	1505.2	591.7	257.6	144.6	118.4	107.7	106.8	106.4	108.7	111.5
47.5°	2027.0	1592.0	608.6	253.7	147.9	120.8	111.2	107.1	105.7	106.6	108.7
50°	2092.3	1661.4	640.5	253.2	151.4	118.4	117.3	106.9	104.1	103.7	105.3
52.5°	2172.3	1775.5	680.0	258.4	150.5	115.0	121.9	106.4	101.4	100.4	101.9
55°	2288.8	1897.8	722.0	254.0	142.0	108.3	117.4	105.9	98.5	96.7	98.1
57.5°	2364.3	1967.9	768.9	250.3	128.9	103.3	113.4	106.2	98.7	94.7	95.6
60°	2339.2	1930.2	787.3	227.4	116.6	99.4	103.9	104.0	96.3	92.5	93.2
62.5°	2228.4	1793.8	770.2	200.8	107.5	93.9	94.0	99.9	89.1	86.4	87.5
65°	2073.6	1624.1	700.7	183.5	103.2	88.1	85.9	87.7	79.4	77.4	79.6
67.5°	1883.5	1415.0	597.2	165.2	101.7	80.2	77.6	76.9	71.6	69.4	71.6
70°	1645.2	1184.8	477.4	152.3	95.8	71.6	69.5	68.8	64.4	62.7	64.7
72.5°	1322.4	925.2	368.4	142.5	89.5	63.7	61.9	61.1	57.3	55.0	57.3
75°	940.5	707.0	273.7	127.4	80.5	55.7	53.6	52.5	49.0	46.8	48.9
77.5°	668.4	530.7	191.1	105.4	66.3	47.1	45.8	44.0	41.0	38.4	40.4
80°	494.2	379.2	123.3	81.3	50.7	37.7	37.0	35.7	32.8	29.6	31.2
82.5°	325.3	273.4	70.6	55.1	36.8	27.1	27.7	26.9	24.1	20.8	21.6
85°	145.7	161.9	37.5	30.3	24.0	16.3	17.9	17.3	15.2	12.0	12.3
87.5°	14.0	27.3	11.5	11.1	8.9	5.1	6.4	5.4	4.6	2.9	2.2
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
2.5°	324.4	304.8	285.3	297.2	297.5	300.7	301.1	289.3	298.7	305.9	313.4
5°	329.5	316.7	317.4	305.9	299.7	307.7	306.1	302.9	308.6	316.5	326.0
7.5°	292.4	284.1	282.7	271.6	244.7	238.8	243.8	245.8	253.4	265.6	275.9
10°	228.2	244.7	226.2	221.9	214.8	201.0	192.9	192.0	208.2	218.0	226.6
12.5°	205.7	201.5	199.3	187.5	187.5	172.8	168.1	172.4	197.4	204.4	215.5
15°	175.2	172.2	161.9	156.1	153.3	147.4	152.3	156.5	179.8	180.3	192.0
17.5°	145.4	143.6	133.9	132.8	130.0	127.4	132.0	142.0	154.6	152.3	157.7
20°	130.0	123.8	115.0	118.1	115.2	113.2	111.2	125.3	134.2	137.1	140.3
22.5°	126.2	114.8	109.6	106.6	106.8	103.5	103.9	115.6	129.1	130.9	128.9
25°	144.2	124.0	106.9	98.5	95.3	94.2	97.4	107.7	124.0	127.8	129.4
27.5°	168.7	134.6	110.1	95.7	89.3	89.9	94.5	101.7	120.8	127.7	129.5
30°	161.9	126.6	110.2	93.6	85.7	88.6	90.3	97.2	118.3	128.7	137.7
32.5°	124.9	113.8	110.9	95.3	92.1	87.5	89.9	96.5	110.9	117.4	117.9
35°	105.8	97.4	95.4	91.5	87.1	85.2	87.8	93.6	103.0	107.1	106.5
37.5°	105.0	95.7	88.1	86.4	84.6	84.1	85.6	91.0	100.5	107.6	106.1
40°	106.4	94.9	87.1	84.2	84.9	82.4	83.9	90.6	101.0	107.6	106.2
42.5°	104.7	93.9	85.9	83.7	84.3	80.9	82.7	89.6	99.9	107.7	105.1
45°	101.4	91.7	85.2	81.4	84.6	79.5	81.7	87.1	96.5	105.1	102.1
47.5°	98.1	89.1	82.3	79.9	83.1	78.1	79.1	83.8	93.2	101.7	99.0
50°	94.5	85.7	79.9	79.2	81.4	77.8	76.3	80.2	89.2	97.6	95.4
52.5°	90.6	83.0	78.3	78.0	80.1	76.0	73.8	76.9	84.9	93.3	91.5
55°	86.8	79.9	76.2	76.9	79.2	74.5	71.7	73.7	80.3	88.6	86.1
57.5°	83.1	76.4	73.4	75.3	77.1	72.6	69.1	70.2	75.6	83.8	80.9
60°	79.8	73.4	70.4	72.7	74.4	69.7	65.6	66.3	71.2	78.5	75.9
62.5°	75.5	70.1	66.1	69.1	70.4	65.8	61.5	62.3	66.2	73.1	71.2
65°	69.4	65.9	62.2	64.3	65.9	61.2	57.2	58.2	61.1	67.6	66.2
67.5°	64.1	60.8	58.3	60.0	60.2	56.6	53.0	53.6	56.0	62.0	60.5
70°	58.3	55.1	53.2	54.4	54.3	51.2	48.5	48.6	50.6	56.1	54.0
72.5°	51.9	48.9	47.9	48.6	48.1	45.3	42.7	43.6	44.9	49.0	47.4
75°	45.1	42.4	41.8	42.5	41.7	39.1	36.7	37.7	38.8	42.2	40.2
77.5°	38.1	35.6	35.7	35.9	34.8	33.0	30.6	31.6	32.3	34.6	32.5
80°	30.3	28.4	28.9	28.9	27.7	26.5	24.2	24.5	24.9	25.8	24.2
82.5°	22.2	22.2	22.2	22.3	19.7	20.1	18.1	18.0	17.6	17.5	16.5
85°	13.2	13.7	14.0	14.4	10.7	12.5	10.8	10.4	9.6	8.7	8.4
87.5°	2.9	3.7	3.7	3.6	0.0	1.4	0.7	1.1	0.3	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°	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0	301.0
2.5°	304.8	296.5	312.0	325.9	323.7	331.7	313.0	340.7	370.1	370.1
5°	323.5	316.5	320.5	328.5	334.6	362.6	385.8	409.0	456.8	457.3
7.5°	272.8	288.1	291.7	289.3	315.5	351.5	389.9	455.8	496.2	499.4
10°	255.1	262.0	273.0	279.1	289.7	325.2	372.8	451.1	494.0	502.0
12.5°	231.1	256.8	273.4	307.5	315.9	323.0	398.7	466.5	496.1	494.2
15°	205.0	224.4	248.3	286.0	307.5	361.5	414.1	515.8	532.5	547.2
17.5°	163.4	177.7	209.5	252.5	305.7	355.4	452.1	576.7	608.0	623.2
20°	134.5	134.6	166.5	223.4	281.3	329.9	466.5	627.2	667.0	674.8
22.5°	127.1	120.8	137.5	183.8	254.4	345.0	495.5	708.5	791.5	811.0
25°	123.1	115.4	125.9	162.2	235.2	352.9	554.1	820.3	926.8	934.4
27.5°	124.8	128.4	131.7	144.6	210.8	338.1	540.5	870.3	984.4	998.8
30°	136.0	141.8	134.2	138.6	190.7	316.6	564.8	951.5	1057.0	1081.2
32.5°	113.2	110.9	110.2	119.9	170.6	297.2	615.6	1065.7	1135.7	1166.1
35°	102.1	98.6	100.0	111.1	160.8	294.4	644.1	1160.3	1259.9	1278.6
37.5°	101.7	97.6	99.4	107.7	164.3	299.4	689.8	1312.1	1479.0	1519.0
40°	100.7	98.5	99.4	105.7	160.7	302.2	716.2	1439.7	1631.6	1672.2
42.5°	100.5	99.4	100.4	107.3	156.9	303.4	752.6	1554.9	1792.4	1824.4
45°	100.1	101.2	101.2	108.7	155.3	311.8	774.1	1611.4	1898.5	1938.0
47.5°	98.2	101.5	106.9	108.3	148.5	307.9	804.4	1697.1	1954.9	1992.0
50°	95.7	101.1	114.1	105.5	147.4	298.5	839.8	1765.1	2027.2	2059.4
52.5°	92.4	100.4	112.5	100.1	145.4	296.8	889.6	1853.5	2111.5	2140.0
55°	87.7	97.9	107.3	94.7	140.7	291.5	965.6	1963.0	2221.9	2241.4
57.5°	83.4	94.2	99.9	91.7	129.5	292.6	1018.5	2052.4	2314.5	2331.6
60°	79.5	93.8	89.2	88.5	118.0	277.8	1035.7	2051.4	2349.0	2375.8
62.5°	75.3	88.5	81.7	84.2	107.9	262.6	999.2	1963.5	2311.8	2358.6
65°	69.9	75.9	75.5	81.2	108.2	237.8	915.7	1808.3	2218.8	2280.5
67.5°	63.6	67.2	69.5	76.2	111.6	218.5	781.4	1621.8	2060.7	2133.9
70°	57.1	60.7	63.3	69.7	114.8	209.7	622.0	1359.8	1803.1	1877.4
72.5°	50.4	54.2	56.2	61.8	110.5	190.7	460.4	1058.0	1447.3	1486.3
75°	43.5	47.1	48.8	53.9	96.0	157.7	317.8	801.3	1060.0	1099.7
77.5°	36.4	40.3	40.9	45.0	73.3	120.6	203.7	614.6	750.6	777.1
80°	29.1	33.0	33.0	35.2	51.5	83.0	122.0	463.7	546.6	557.0
82.5°	20.9	25.1	24.8	24.9	35.6	51.4	70.6	347.5	395.0	396.9
85°	12.3	15.2	15.1	13.8	21.1	27.7	38.2	215.8	220.5	221.0
87.5°	2.4	3.6	3.2	1.4	5.8	8.2	11.1	40.0	15.9	15.5
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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