

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: P596530

Luminaire Tested: **MSA-SA1C-827-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596530
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-SA1C-827-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: 3950 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

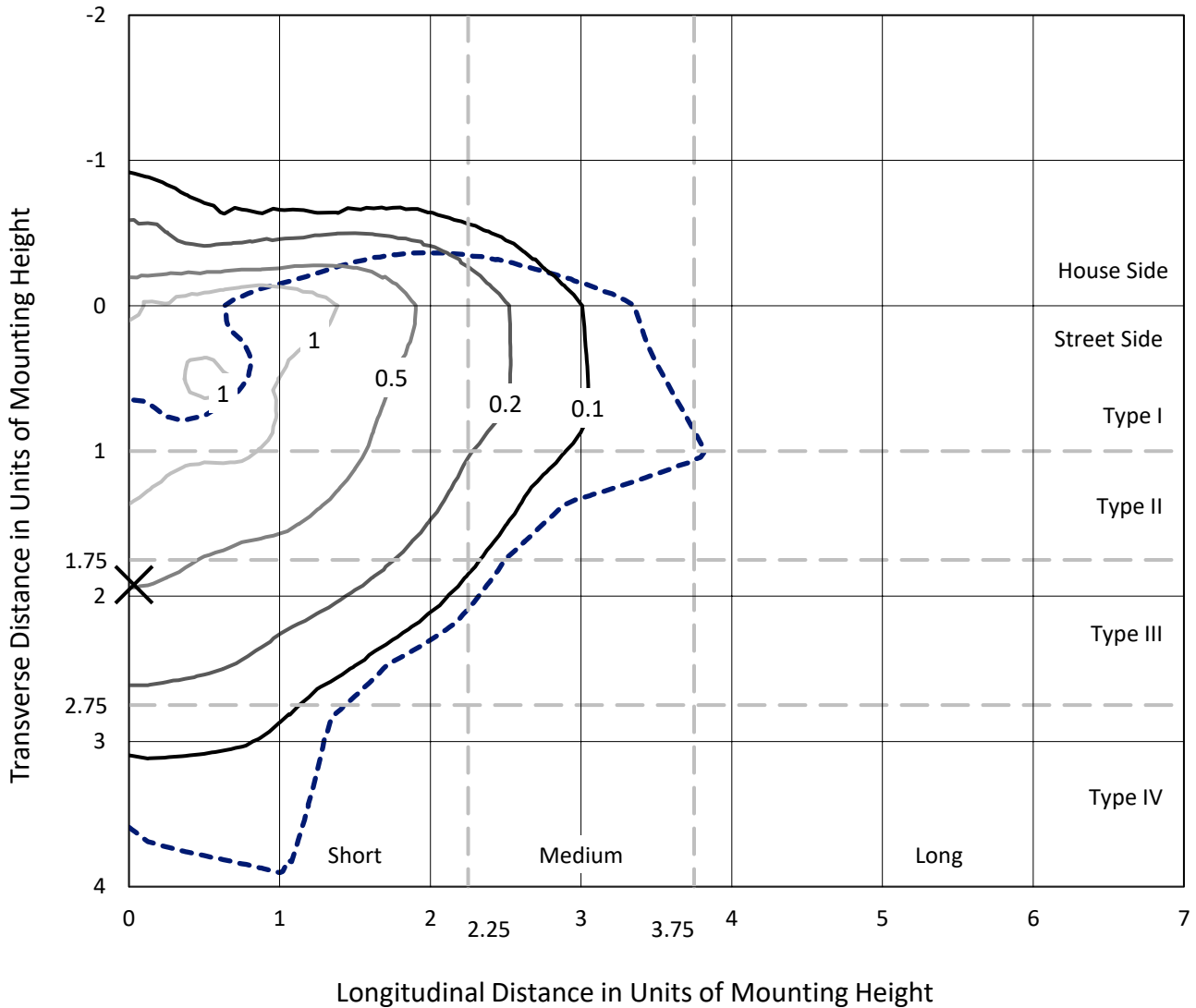
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

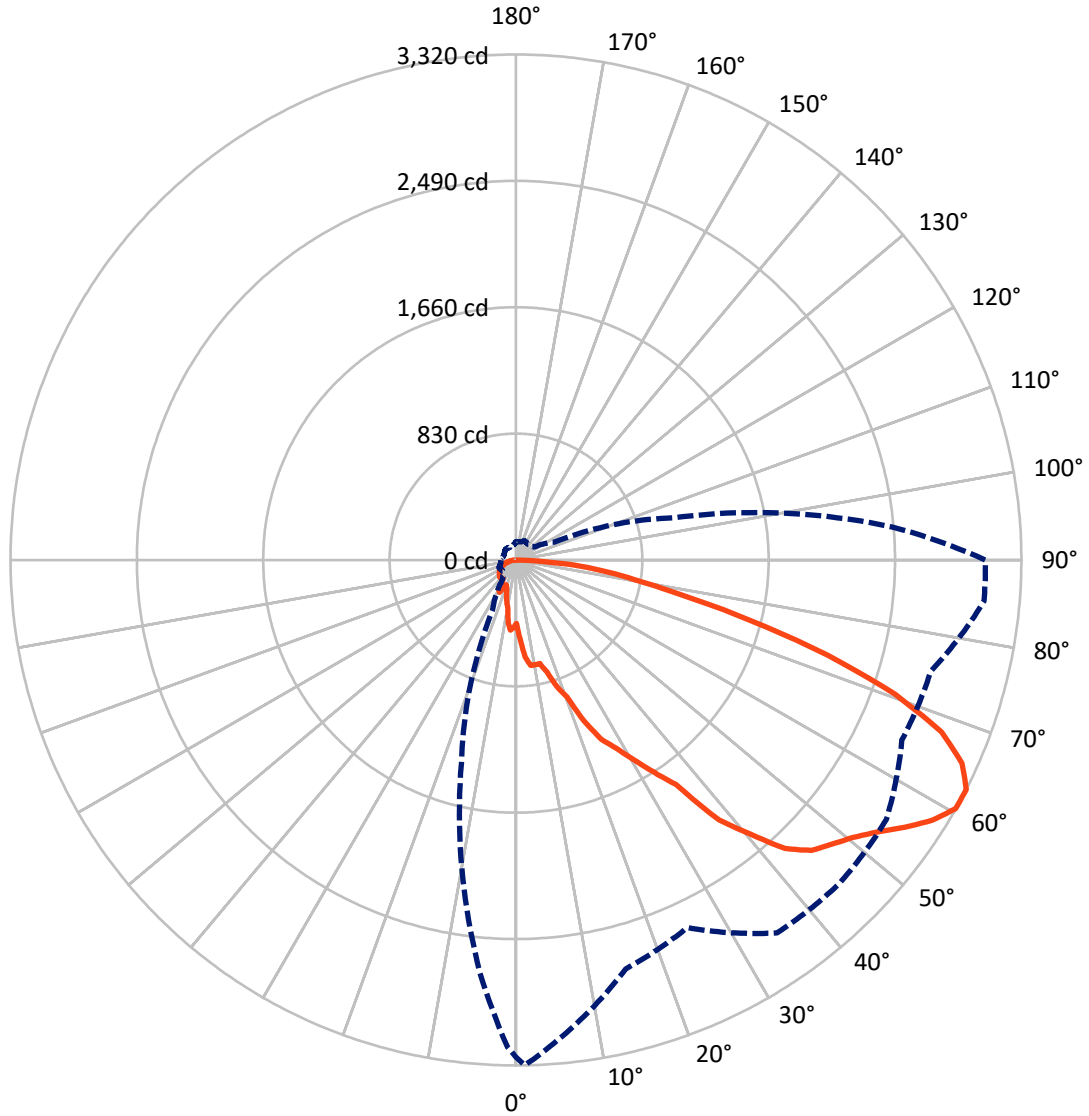
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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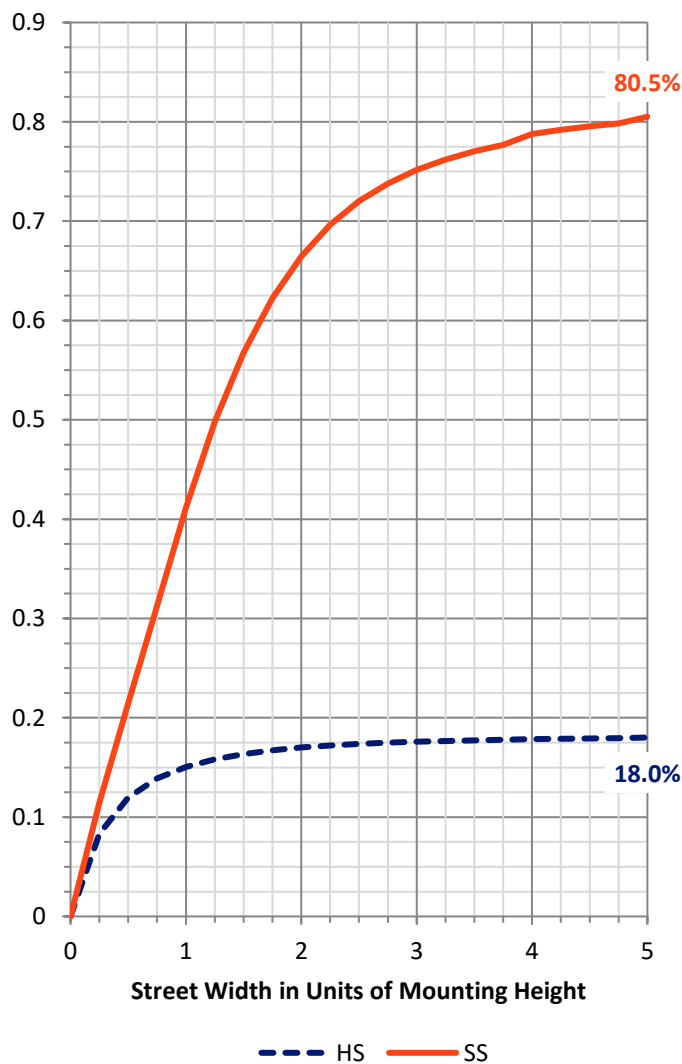
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	719.3	0.0	719.3
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	3230.7	0.0	3230.7
	% Fixture	81.8	0.0	81.8
Total	Lumens	3950.0	0.0	3950.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	1.2
10°-20°	138.8	3.5
20°-30°	245.0	6.2
30°-40°	381.6	9.7
40°-50°	628.3	15.9
50°-60°	896.7	22.7
60°-70°	950.9	24.1
70°-80°	525.2	13.3
80°-90°	135.9	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°	3950.0	100.0
0°-180°	3950.0	100.0

Coefficient of Utilization

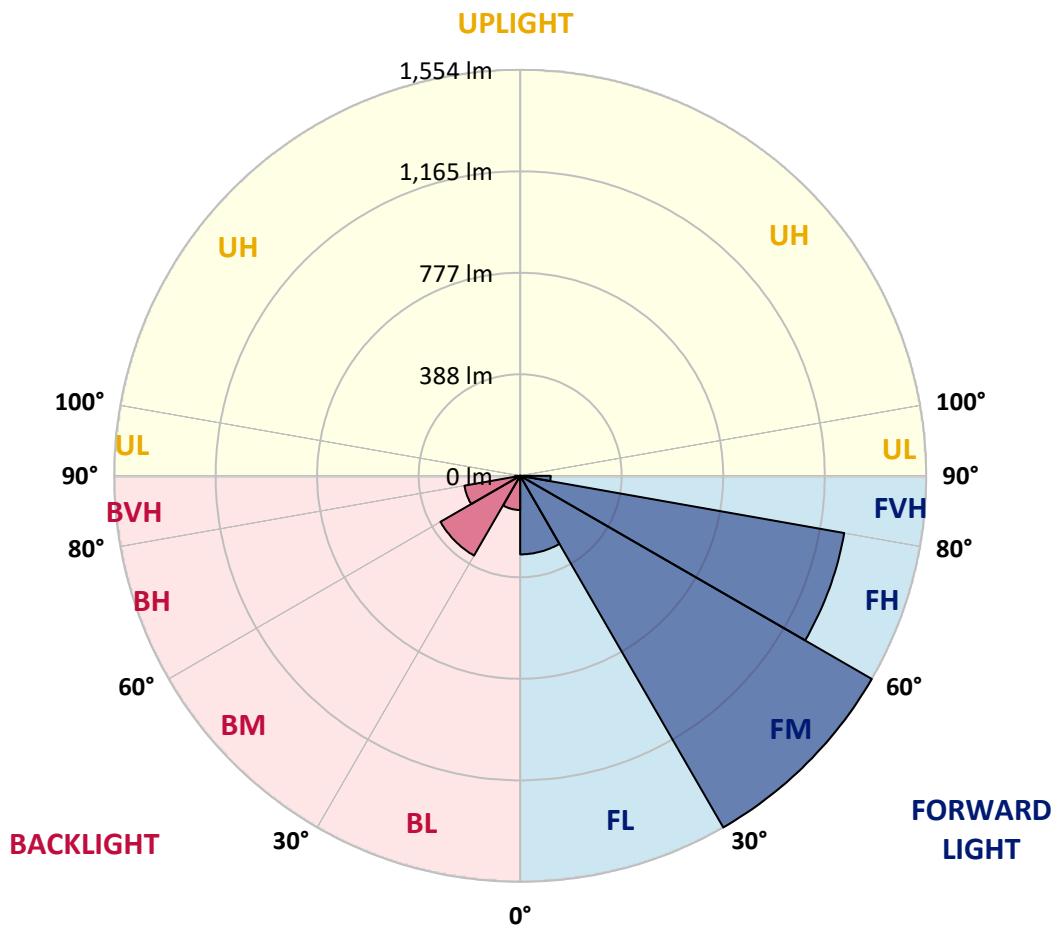


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	300.7	7.6			
FM (30°-60°)	1554.0	39.3			
FH (60°-80°)	1259.4	31.9			G1/1800
FVH (80°-90°)	116.7	3.0			G2/225
BL (0°-30°)	130.8	3.3	B1/500		
BM (30°-60°)	352.6	8.9	B1/1000		
BH (60°-80°)	216.7	5.5	B1/500		G1/500
BVH (80°-90°)	19.2	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5
2.5°	512.2	516.6	507.6	497.4	455.4	495.9	483.8	506.2	498.9	450.3	539.4
5°	632.9	641.0	632.2	662.6	664.6	672.4	599.8	645.0	629.3	625.3	670.3
7.5°	691.2	699.4	721.9	776.1	818.5	780.1	737.8	728.4	716.1	684.1	711.3
10°	694.8	699.4	729.5	844.5	865.1	892.3	864.9	800.3	773.6	704.0	683.3
12.5°	683.9	698.3	737.2	877.3	938.3	968.0	974.7	902.8	837.5	758.1	747.6
15°	757.3	762.5	818.3	900.7	942.7	967.8	989.7	945.4	924.9	862.0	777.5
17.5°	862.6	876.9	922.6	953.0	981.4	986.2	968.2	950.9	918.3	1002.3	912.4
20°	933.9	961.7	1017.6	1023.4	963.8	974.3	971.8	973.0	954.4	1109.6	1060.2
22.5°	1122.5	1152.6	1160.2	1126.9	1014.6	966.5	976.0	1003.8	1077.1	1210.1	1266.1
25°	1293.3	1305.0	1374.9	1289.1	1110.0	1005.2	989.5	1061.3	1180.8	1379.1	1419.0
27.5°	1382.4	1397.5	1444.1	1257.2	1121.9	955.3	918.5	1028.0	1149.7	1299.6	1474.6
30°	1496.5	1520.6	1584.1	1289.1	1157.8	987.9	906.5	1011.1	1145.7	1351.7	1592.3
32.5°	1614.0	1660.9	1708.1	1401.2	1152.8	1037.8	983.7	992.1	1182.1	1461.0	1714.2
35°	1769.6	1811.0	1851.6	1466.0	1253.2	1079.4	1025.7	1115.0	1275.6	1587.7	1884.2
37.5°	2102.4	2167.9	2060.8	1650.4	1362.5	1266.8	1170.0	1222.9	1374.5	1693.3	2162.0
40°	2314.4	2363.6	2260.1	1775.9	1554.9	1393.1	1377.2	1381.6	1510.8	1783.8	2348.9
42.5°	2525.0	2591.7	2427.1	1948.2	1787.6	1654.0	1572.0	1566.4	1663.4	1946.3	2561.4
45°	2682.2	2721.5	2484.4	2093.5	2037.2	1938.1	1876.6	1779.0	1863.9	2058.8	2692.9
47.5°	2757.0	2789.0	2576.6	2178.1	2199.0	2204.1	2315.1	2148.7	2039.1	2134.9	2761.9
50°	2850.3	2865.4	2630.8	2252.4	2352.7	2580.0	2606.7	2324.7	2209.7	2217.9	2802.8
52.5°	2961.9	2968.2	2710.0	2338.3	2508.2	2827.3	2786.1	2623.0	2372.1	2369.6	2879.6
55°	3102.2	3098.3	2809.3	2453.9	2619.1	2974.3	2943.1	2824.2	2549.0	2495.1	2999.2
57.5°	3227.0	3224.7	2941.0	2560.3	2712.5	3049.8	3059.0	3027.6	2669.4	2585.0	3128.8
60°	3288.1	3317.4	3090.9	2676.6	2718.4	3084.0	3087.4	3037.4	2803.9	2700.4	3163.3
62.5°	3264.3	3320.1	3164.5	2781.3	2663.8	2990.8	3005.2	2970.7	2797.8	2821.5	3086.3
65°	3156.2	3220.6	3100.6	2837.1	2630.3	2834.8	2838.4	2751.2	2710.2	2901.9	2905.7
67.5°	2953.4	3013.8	2897.5	2748.1	2400.6	2414.2	2495.5	2502.6	2442.8	2841.3	2652.1
70°	2598.4	2641.0	2568.1	2528.5	2006.5	1926.8	2015.0	2052.7	2079.9	2622.6	2347.7
72.5°	2057.1	2139.4	2150.9	2176.7	1615.5	1482.7	1548.0	1492.0	1669.4	2232.1	1918.2
75°	1521.9	1591.3	1665.9	1810.2	1273.3	1110.0	1102.0	1073.4	1239.0	1795.1	1422.7
77.5°	1075.5	1119.8	1177.1	1446.0	960.9	854.9	859.9	830.9	894.8	1356.7	982.8
80°	770.9	794.1	820.8	952.7	708.8	737.6	738.4	710.9	665.3	921.4	655.9
82.5°	549.4	567.4	597.9	628.3	528.5	604.6	604.0	602.3	527.5	622.8	410.4
85°	305.9	330.1	383.0	492.2	381.6	432.2	380.1	418.6	387.2	414.6	207.8
87.5°	21.5	19.2	85.7	285.2	178.1	130.2	68.2	135.1	173.3	216.6	28.9
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°	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5
2.5°	557.8	564.5	538.2	498.8	509.5	497.8	483.0	460.0	412.7	442.0	442.2
5°	669.9	644.4	623.9	604.6	572.0	522.7	516.2	476.7	454.5	466.2	464.4
7.5°	705.0	668.8	637.9	568.7	508.3	431.9	408.9	385.5	375.7	404.1	415.4
10°	666.5	628.7	598.4	514.3	473.3	425.5	362.3	329.9	310.7	318.2	322.6
12.5°	697.5	659.0	563.7	516.8	449.1	420.0	364.6	317.0	288.7	295.6	287.3
15°	727.4	675.5	580.2	486.7	431.9	389.7	344.8	295.8	262.4	250.5	244.2
17.5°	836.7	750.4	578.3	469.8	406.9	358.4	304.4	250.7	228.5	216.2	205.7
20°	969.9	849.7	588.7	452.4	380.5	319.3	260.5	210.7	195.1	187.1	184.2
22.5°	1128.4	977.0	647.9	449.9	355.6	290.8	236.3	205.3	187.8	179.0	175.4
25°	1254.4	1108.7	691.6	466.7	354.2	267.2	221.8	228.1	220.1	222.7	201.5
27.5°	1376.7	1144.5	667.1	459.3	318.6	225.4	218.3	231.6	238.5	240.6	239.8
30°	1480.0	1296.0	672.4	417.1	269.1	183.6	167.1	173.7	192.6	222.7	228.5
32.5°	1631.2	1368.4	718.2	391.6	240.6	164.3	145.9	143.4	147.8	158.7	168.1
35°	1808.1	1535.2	731.1	384.9	220.8	155.6	142.8	137.1	139.4	147.6	149.5
37.5°	2138.0	1656.7	778.6	376.7	213.5	150.5	140.5	138.4	143.4	150.1	153.9
40°	2319.9	1875.2	780.9	369.6	204.1	148.4	142.0	141.1	144.1	153.3	155.6
42.5°	2562.4	1999.8	816.9	361.3	200.9	151.2	145.1	144.7	147.4	152.8	157.0
45°	2710.2	2083.2	818.9	356.5	200.1	163.9	149.1	147.8	147.2	150.5	154.3
47.5°	2805.4	2203.4	842.2	351.2	204.7	167.1	153.9	148.2	146.3	147.6	150.5
50°	2895.7	2299.4	886.5	350.4	209.5	163.9	162.4	148.0	144.1	143.6	145.7
52.5°	3006.5	2457.4	941.2	357.7	208.4	159.1	168.7	147.2	140.3	139.0	141.1
55°	3167.7	2626.6	999.2	351.5	196.5	149.9	162.5	146.6	136.3	133.8	135.7
57.5°	3272.2	2723.6	1064.2	346.4	178.5	143.0	157.0	147.0	136.7	131.1	132.3
60°	3237.5	2671.5	1089.7	314.7	161.4	137.6	143.8	144.0	133.2	128.0	129.0
62.5°	3084.2	2482.7	1065.9	277.9	148.7	130.0	130.2	138.2	123.3	119.6	121.1
65°	2869.9	2247.8	969.7	254.0	142.8	121.9	118.8	121.3	109.8	107.1	110.2
67.5°	2606.9	1958.4	826.5	228.7	140.7	111.0	107.3	106.4	99.1	96.0	99.1
70°	2277.0	1639.8	660.7	210.8	132.6	99.1	96.2	95.3	89.1	86.8	89.5
72.5°	1830.2	1280.4	509.9	197.2	123.8	88.2	85.7	84.5	79.4	76.1	79.4
75°	1301.7	978.5	378.8	176.3	111.4	77.1	74.2	72.6	67.9	64.8	67.7
77.5°	925.1	734.5	264.5	145.9	91.8	65.2	63.4	61.0	56.7	53.1	56.0
80°	683.9	524.8	170.6	112.5	70.2	52.1	51.2	49.5	45.4	41.0	43.1
82.5°	450.3	378.4	97.8	76.3	51.0	37.6	38.3	37.2	33.4	28.8	29.9
85°	201.6	224.1	51.9	42.0	33.2	22.6	24.7	24.0	21.1	16.7	17.1
87.5°	19.4	37.8	15.9	15.3	12.3	7.1	8.8	7.5	6.3	4.0	3.1
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°	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5
2.5°	448.9	421.9	394.9	411.3	411.7	416.1	416.7	400.4	413.5	423.4	433.8
5°	456.0	438.4	439.3	423.4	414.8	425.9	423.6	419.2	427.1	438.0	451.2
7.5°	404.6	393.1	391.2	375.9	338.7	330.5	337.4	340.2	350.8	367.6	381.8
10°	315.9	338.7	313.0	307.1	297.3	278.1	267.0	265.7	288.1	301.7	313.6
12.5°	284.6	278.9	275.8	259.5	259.5	239.2	232.7	238.6	273.1	282.9	298.3
15°	242.5	238.3	224.1	216.0	212.2	203.9	210.8	216.6	248.8	249.6	265.7
17.5°	201.3	198.8	185.4	183.8	180.0	176.3	182.7	196.5	213.9	210.8	218.3
20°	180.0	171.4	159.1	163.5	159.5	156.6	153.9	173.5	185.7	189.8	194.2
22.5°	174.6	158.9	151.6	147.6	147.8	143.2	143.8	160.1	178.6	181.1	178.5
25°	199.5	171.6	148.0	136.3	131.9	130.3	134.8	149.1	171.6	176.9	179.0
27.5°	233.5	186.3	152.4	132.5	123.6	124.4	130.7	140.7	167.1	176.7	179.2
30°	224.1	175.2	152.6	129.6	118.7	122.7	125.0	134.6	163.7	178.1	190.5
32.5°	172.9	157.6	153.5	131.9	127.5	121.1	124.4	133.6	153.5	162.5	163.1
35°	146.4	134.8	132.1	126.7	120.6	117.9	121.5	129.6	142.6	148.2	147.4
37.5°	145.3	132.5	121.9	119.6	117.1	116.4	118.5	125.9	139.2	148.9	146.8
40°	147.2	131.3	120.6	116.5	117.5	114.1	116.2	125.4	139.7	148.9	147.0
42.5°	144.9	130.0	118.8	115.8	116.7	111.9	114.4	124.0	138.2	149.1	145.5
45°	140.3	126.9	117.9	112.7	117.1	110.0	113.1	120.6	133.6	145.5	141.3
47.5°	135.7	123.3	113.9	110.6	115.0	108.1	109.5	116.0	129.0	140.7	137.1
50°	130.7	118.7	110.6	109.6	112.7	107.7	105.6	111.0	123.4	135.1	132.1
52.5°	125.4	114.8	108.3	107.9	110.8	105.2	102.2	106.4	117.5	129.2	126.7
55°	120.2	110.6	105.4	106.4	109.6	103.1	99.3	102.0	111.2	122.7	119.2
57.5°	115.0	105.8	101.6	104.3	106.8	100.4	95.6	97.2	104.7	116.0	111.9
60°	110.4	101.6	97.4	100.6	102.9	96.4	90.9	91.8	98.5	108.7	105.0
62.5°	104.5	97.0	91.4	95.6	97.4	91.0	85.1	86.3	91.6	101.2	98.5
65°	96.0	91.2	86.1	88.9	91.2	84.7	79.2	80.5	84.5	93.5	91.6
67.5°	88.7	84.1	80.7	83.0	83.4	78.4	73.4	74.2	77.4	85.9	83.8
70°	80.7	76.3	73.6	75.3	75.1	70.9	67.1	67.3	70.0	77.6	74.8
72.5°	71.9	67.7	66.3	67.3	66.5	62.7	59.0	60.4	62.1	67.9	65.6
75°	62.5	58.7	57.9	58.8	57.7	54.1	50.8	52.1	53.7	58.5	55.6
77.5°	52.7	49.3	49.5	49.6	48.1	45.6	42.4	43.7	44.7	47.9	45.0
80°	42.0	39.3	40.1	40.1	38.3	36.6	33.5	33.9	34.5	35.7	33.5
82.5°	30.7	30.7	30.7	30.9	27.2	27.8	25.1	24.9	24.3	24.2	22.8
85°	18.2	19.0	19.4	19.9	14.8	17.3	15.0	14.4	13.2	12.1	11.7
87.5°	4.0	5.2	5.2	5.0	0.0	1.9	1.0	1.5	0.4	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°	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5	416.5
2.5°	421.9	410.4	431.9	451.0	448.0	459.1	433.2	471.5	512.2	512.2
5°	447.8	438.0	443.6	454.7	463.1	501.8	534.0	566.0	632.2	632.9
7.5°	377.6	398.7	403.7	400.4	436.7	486.5	539.6	630.8	686.8	691.2
10°	353.1	362.7	377.8	386.2	401.0	450.1	516.0	624.3	683.7	694.8
12.5°	319.9	355.4	378.4	425.5	437.2	447.0	551.9	645.6	686.6	683.9
15°	283.7	310.5	343.7	395.8	425.5	500.3	573.1	713.8	737.0	757.3
17.5°	226.2	245.9	290.0	349.4	423.0	491.9	625.6	798.2	841.5	862.6
20°	186.1	186.3	230.4	309.2	389.3	456.6	645.6	868.1	923.1	933.9
22.5°	176.0	167.1	190.3	254.4	352.1	477.5	685.8	980.6	1095.5	1122.5
25°	170.4	159.7	174.2	224.5	325.5	488.4	766.9	1135.3	1282.7	1293.3
27.5°	172.7	177.7	182.3	200.1	291.7	467.9	748.1	1204.5	1362.5	1382.4
30°	188.2	196.3	185.7	191.9	263.9	438.2	781.7	1316.9	1462.9	1496.5
32.5°	156.6	153.5	152.6	166.0	236.2	411.3	852.0	1475.0	1571.8	1614.0
35°	141.3	136.5	138.4	153.7	222.5	407.5	891.5	1605.9	1743.7	1769.6
37.5°	140.7	135.1	137.6	149.1	227.3	414.4	954.8	1816.0	2047.0	2102.4
40°	139.4	136.3	137.6	146.3	222.4	418.2	991.2	1992.5	2258.2	2314.4
42.5°	139.2	137.6	139.0	148.6	217.2	420.0	1041.6	2152.0	2480.7	2525.0
45°	138.6	140.1	140.1	150.5	214.9	431.5	1071.3	2230.2	2627.6	2682.2
47.5°	135.9	140.5	148.0	149.9	205.5	426.1	1113.3	2348.9	2705.6	2757.0
50°	132.5	139.9	157.9	146.1	203.9	413.1	1162.4	2443.0	2805.6	2850.3
52.5°	127.9	139.0	155.6	138.6	201.3	410.8	1231.2	2565.3	2922.4	2961.9
55°	121.3	135.5	148.6	131.1	194.7	403.5	1336.4	2716.9	3075.1	3102.2
57.5°	115.4	130.3	138.2	126.9	179.2	405.0	1409.6	2840.5	3203.4	3227.0
60°	110.0	129.8	123.4	122.5	163.3	384.5	1433.4	2839.2	3251.1	3288.1
62.5°	104.3	122.5	113.1	116.5	149.3	363.4	1383.0	2717.5	3199.5	3264.3
65°	96.8	105.0	104.5	112.3	149.7	329.1	1267.4	2502.8	3070.9	3156.2
67.5°	88.0	93.0	96.2	105.4	154.5	302.5	1081.5	2244.6	2852.0	2953.4
70°	79.0	84.0	87.6	96.4	158.9	290.2	860.8	1881.9	2495.5	2598.4
72.5°	69.8	74.9	77.8	85.5	153.0	263.9	637.1	1464.3	2003.1	2057.1
75°	60.2	65.2	67.5	74.6	132.8	218.3	439.9	1109.1	1467.1	1521.9
77.5°	50.4	55.8	56.5	62.3	101.4	167.0	282.0	850.7	1038.9	1075.5
80°	40.3	45.6	45.6	48.7	71.3	114.8	168.9	641.7	756.6	770.9
82.5°	28.9	34.7	34.3	34.5	49.3	71.1	97.8	480.9	546.7	549.4
85°	17.1	21.1	20.9	19.2	29.1	38.3	52.9	298.6	305.2	305.9
87.5°	3.3	5.0	4.4	1.9	8.1	11.3	15.3	55.4	22.0	21.5
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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