

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: P596551

Luminaire Tested: **MSA-SA1D-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596551
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-SA1D-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: 3677 lumens
Efficiency: N/A
Efficacy: 54.9 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

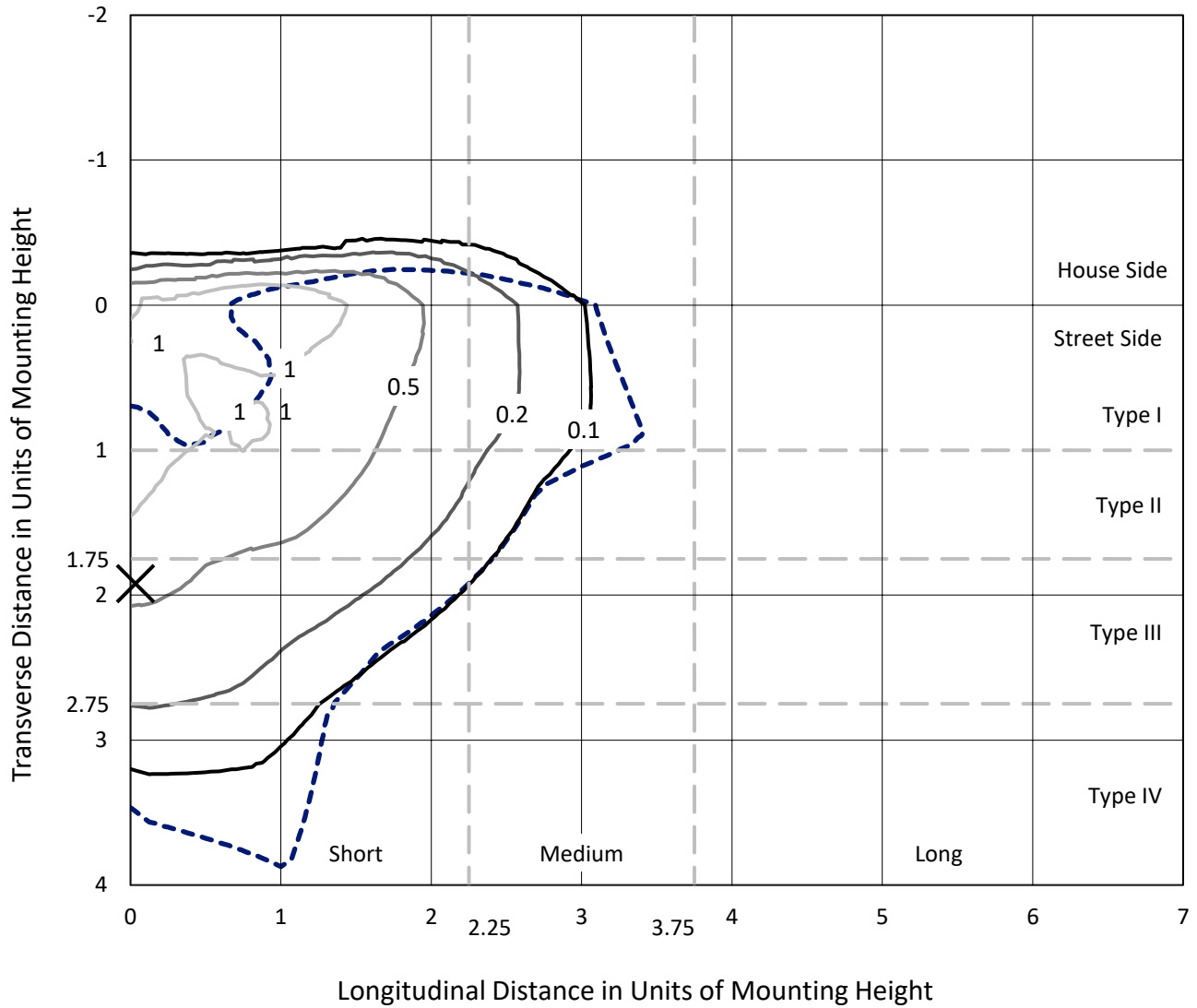
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

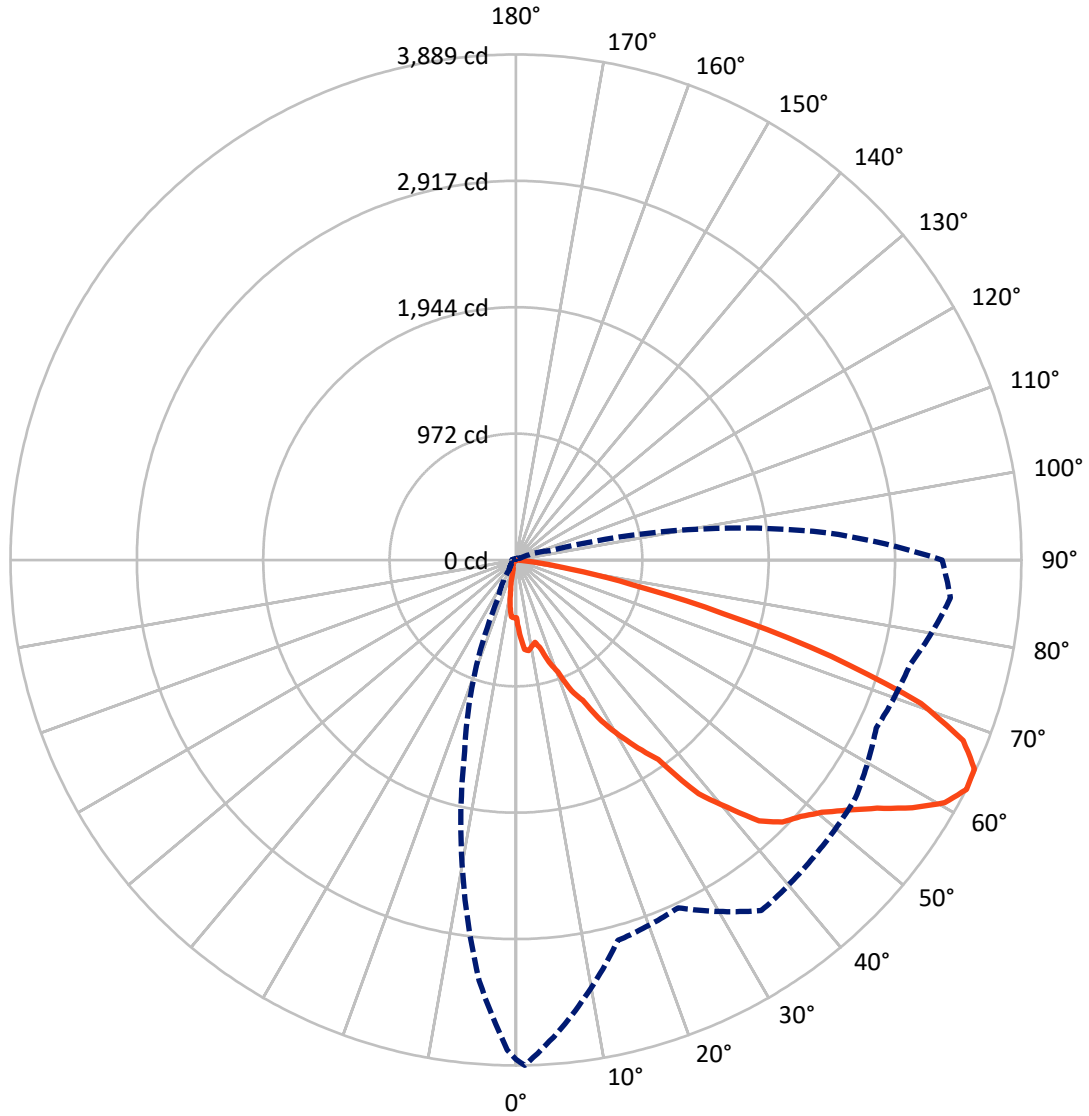
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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	420.5	0.0	420.5
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	3256.5	0.0	3256.5
	% Fixture	88.6	0.0	88.6
Total	Lumens	3677.0	0.0	3677.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	1.3
10°-20°	129.3	3.5
20°-30°	209.0	5.7
30°-40°	350.0	9.5
40°-50°	572.3	15.6
50°-60°	847.2	23.0
60°-70°	972.7	26.5
70°-80°	481.0	13.1
80°-90°	66.0	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°	3677.0	100.0
0°-180°	3677.0	100.0

Coefficient of Utilization

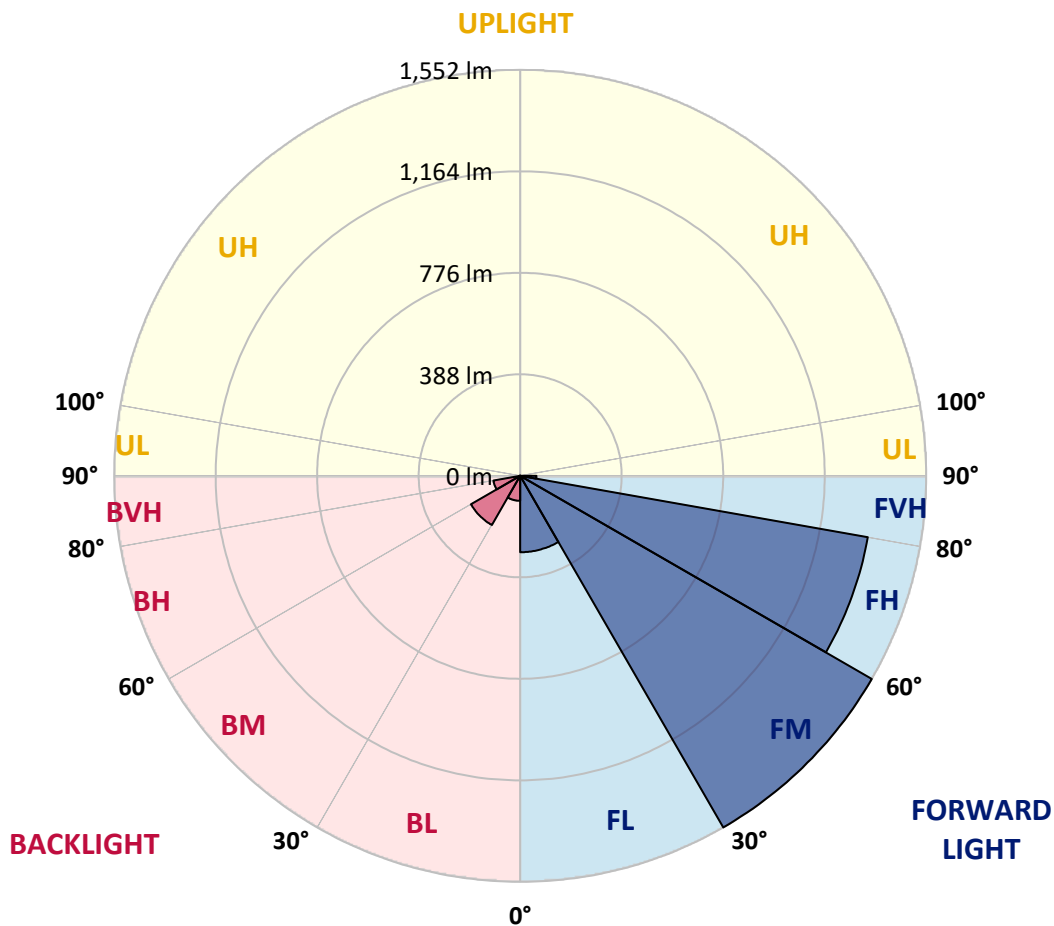


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	292.1	7.9			
FM (30°-60°)	1552.4	42.2			
FH (60°-80°)	1349.7	36.7			G1/1800
FVH (80°-90°)	62.4	1.7			G1/100
BL (0°-30°)	95.7	2.6	B0/110		
BM (30°-60°)	217.2	5.9	B0/220		
BH (60°-80°)	104.0	2.8	B0/110		G0/110
BVH (80°-90°)	3.7	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°	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0
2.5°	571.2	573.9	561.1	559.5	529.7	566.8	567.8	572.2	545.0	492.2	565.9
5°	683.5	691.0	681.2	725.0	737.6	764.6	714.9	759.3	740.5	745.7	756.4
7.5°	696.9	704.7	725.4	798.7	866.4	849.4	844.0	860.8	859.3	820.5	839.8
10°	669.0	675.5	710.1	843.6	873.1	949.4	968.0	929.5	913.8	828.9	791.8
12.5°	638.7	649.6	693.6	853.6	942.3	1019.4	1080.8	1025.9	973.7	883.4	849.4
15°	696.9	703.0	772.1	874.6	952.1	1005.3	1055.6	1037.4	1029.4	964.5	849.4
17.5°	811.1	825.4	875.4	925.9	987.1	1019.2	1007.2	1001.6	981.2	1083.3	964.3
20°	892.4	919.0	984.6	1006.4	957.8	987.7	980.4	975.4	959.5	1149.3	1096.3
22.5°	1068.4	1092.9	1094.2	1101.9	988.8	941.0	928.9	930.3	1002.6	1169.0	1260.6
25°	1188.3	1196.6	1262.9	1207.5	1073.4	955.3	909.0	929.7	1033.8	1310.6	1415.0
27.5°	1384.4	1404.3	1445.6	1258.2	1124.1	946.3	872.5	947.9	1116.0	1357.6	1586.6
30°	1544.3	1563.3	1629.8	1327.6	1168.1	990.9	888.2	984.6	1167.1	1454.2	1740.8
32.5°	1674.0	1723.2	1798.6	1434.7	1166.5	1042.2	968.5	972.4	1230.0	1579.3	1893.3
35°	1839.7	1885.6	1938.6	1508.4	1242.7	1058.8	992.1	1091.9	1323.4	1710.0	2098.7
37.5°	2213.3	2282.7	2177.9	1694.3	1331.6	1208.4	1085.6	1165.4	1421.3	1843.5	2380.9
40°	2441.3	2499.7	2398.5	1789.2	1485.4	1283.8	1252.4	1293.2	1517.0	1912.4	2593.6
42.5°	2665.9	2743.0	2573.9	1932.1	1631.4	1496.7	1410.8	1443.7	1655.5	2078.8	2832.9
45°	2828.5	2876.3	2611.8	2006.9	1832.2	1739.3	1682.1	1633.1	1848.7	2185.6	2987.3
47.5°	2910.2	2948.3	2686.6	2030.6	1951.6	1996.0	2121.3	2018.9	2019.7	2263.0	3070.5
50°	3023.4	3050.0	2728.5	2058.9	2081.3	2396.0	2459.3	2241.2	2215.0	2340.5	3084.1
52.5°	3182.4	3195.4	2809.8	2133.5	2275.5	2709.3	2732.1	2643.9	2410.5	2484.6	3114.3
55°	3393.8	3371.0	2955.0	2290.2	2478.2	2938.7	2969.3	2892.4	2656.3	2628.6	3207.7
57.5°	3621.8	3595.6	3170.2	2511.0	2698.0	3114.1	3132.3	3138.4	2819.5	2756.0	3366.6
60°	3785.2	3790.0	3441.2	2764.4	2834.6	3281.9	3245.5	3190.1	2984.2	2942.7	3443.9
62.5°	3842.4	3888.7	3652.2	3029.9	2952.3	3292.4	3235.8	3189.1	3057.9	3135.2	3355.3
65°	3795.7	3876.6	3701.2	3263.1	3023.6	3161.0	3102.1	3072.2	3055.6	3213.8	3159.1
67.5°	3610.1	3711.3	3560.8	3265.2	2764.6	2691.5	2761.0	2855.9	2801.0	3148.7	2884.4
70°	3194.1	3305.0	3235.0	3073.6	2303.0	2117.5	2194.2	2337.8	2299.0	2800.4	2480.2
72.5°	2396.4	2538.9	2552.7	2653.5	1828.2	1593.7	1604.8	1600.8	1667.7	2258.1	1935.5
75°	1539.4	1650.3	1800.1	2141.2	1388.8	1163.5	1057.1	1031.1	1155.8	1764.5	1385.6
77.5°	893.7	906.9	976.0	1615.5	994.7	838.3	765.8	802.9	846.5	1231.4	918.4
80°	427.4	434.2	462.6	831.2	691.0	725.6	669.7	711.4	581.2	707.8	521.1
82.5°	135.6	137.0	141.9	408.4	429.1	480.7	308.0	413.0	359.3	427.9	347.0
85°	22.6	38.6	47.6	118.0	242.2	162.2	66.8	147.3	200.5	269.9	157.6
87.5°	0.0	0.0	0.0	2.1	19.7	9.2	1.5	8.4	30.8	60.1	7.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0
2.5°	587.3	601.8	547.3	498.5	510.8	501.0	486.1	460.8	402.1	445.3	442.3
5°	755.8	729.0	655.2	620.8	578.9	515.0	507.3	458.2	436.7	440.2	437.1
7.5°	814.5	766.5	701.3	597.8	499.5	407.3	379.0	347.0	340.5	354.3	363.3
10°	768.4	717.4	660.4	531.8	456.2	389.5	319.7	274.9	250.6	247.7	250.2
12.5°	789.5	734.6	617.3	518.8	439.8	379.5	301.5	233.8	181.0	185.0	174.5
15°	804.2	741.1	607.0	491.6	406.1	325.4	231.5	163.9	120.7	108.1	100.6
17.5°	890.3	800.2	594.0	460.1	358.9	253.3	145.4	94.9	80.9	76.5	72.9
20°	1000.9	872.9	593.8	427.0	289.4	158.4	90.7	68.7	65.4	67.9	65.2
22.5°	1129.6	969.7	625.5	385.8	207.6	99.9	70.6	61.0	57.6	59.7	59.9
25°	1259.1	1114.9	651.2	346.6	144.6	76.7	62.9	56.2	52.4	54.3	53.2
27.5°	1492.9	1235.2	645.4	296.5	106.4	67.5	58.5	52.6	46.9	49.9	49.7
30°	1645.9	1447.5	668.2	226.3	84.4	59.1	54.5	48.0	41.9	45.3	45.0
32.5°	1828.8	1538.6	692.9	173.7	70.2	55.9	49.0	42.7	39.2	41.3	40.9
35°	2034.4	1718.8	647.5	144.6	61.0	50.5	43.4	38.6	35.4	36.5	36.5
37.5°	2397.5	1869.5	620.2	117.8	56.8	45.7	40.6	34.8	32.9	32.9	33.9
40°	2603.7	2099.5	538.9	93.2	58.0	42.1	37.9	31.8	29.3	29.1	30.2
42.5°	2871.9	2232.2	488.0	75.4	52.6	41.1	34.8	28.9	26.0	25.8	26.8
45°	3030.9	2306.3	416.3	59.3	47.1	47.8	32.3	26.6	22.2	21.4	23.3
47.5°	3131.3	2404.6	375.7	47.1	41.1	47.6	31.4	23.0	18.6	17.6	19.3
50°	3182.2	2453.2	367.7	40.4	35.6	42.5	36.0	19.3	15.9	14.5	15.9
52.5°	3235.2	2532.2	370.7	37.3	31.4	34.2	34.2	16.6	14.0	12.4	13.4
55°	3342.3	2648.9	364.2	35.4	28.9	26.0	22.0	14.7	12.8	10.9	11.9
57.5°	3473.9	2732.7	364.2	33.7	26.8	22.2	17.6	13.6	11.7	9.4	10.3
60°	3448.9	2644.5	346.1	32.1	25.1	20.7	15.9	12.6	10.9	8.6	9.2
62.5°	3277.7	2404.6	280.4	29.5	23.7	19.7	14.5	11.9	10.3	7.5	8.2
65°	3076.6	2149.8	194.9	26.8	22.0	17.8	13.0	11.3	9.4	6.7	7.1
67.5°	2834.4	1846.2	108.1	24.1	20.3	15.5	11.9	11.1	9.0	6.1	6.5
70°	2414.0	1393.8	58.0	22.0	19.1	14.2	11.3	11.1	9.0	5.9	6.1
72.5°	1812.3	877.7	33.9	20.1	17.4	13.2	10.7	11.3	8.8	5.7	5.7
75°	1233.1	532.8	24.3	17.2	15.5	11.1	10.3	10.9	9.0	5.7	5.2
77.5°	838.3	374.4	19.9	15.5	14.0	9.8	10.5	10.9	9.0	4.6	3.6
80°	523.4	193.2	15.1	12.4	12.2	8.6	10.5	9.4	5.9	1.0	0.0
82.5°	366.1	71.9	8.8	9.4	9.4	6.1	8.2	6.7	3.4	0.0	0.0
85°	153.6	12.4	4.8	6.7	5.9	3.6	6.5	5.0	2.1	0.0	0.0
87.5°	2.7	0.0	1.9	4.0	4.2	2.1	3.4	2.1	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°	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0
2.5°	456.2	436.2	394.3	414.5	412.4	421.6	422.4	401.0	447.1	475.6	479.8
5°	437.5	424.1	421.8	410.3	407.3	424.3	415.1	414.5	436.7	469.1	469.4
7.5°	363.5	353.3	358.1	344.7	310.1	312.2	315.3	328.5	347.6	369.0	376.7
10°	249.6	276.2	256.7	255.0	251.4	240.3	231.5	238.4	263.2	282.9	290.2
12.5°	178.1	182.3	194.2	189.8	195.9	186.5	182.9	204.5	228.6	248.7	263.2
15°	104.1	111.3	118.4	133.5	139.5	137.7	148.6	166.6	186.1	195.3	213.1
17.5°	73.3	74.0	75.4	91.8	102.5	106.7	113.1	126.8	134.7	138.9	146.3
20°	64.1	62.2	59.7	68.9	79.0	84.2	82.3	93.0	99.5	103.7	109.0
22.5°	58.0	54.9	53.4	56.6	64.3	68.9	69.8	76.1	85.9	88.8	90.5
25°	52.4	50.3	49.2	50.9	55.1	59.5	60.3	68.5	77.3	78.6	81.9
27.5°	48.6	44.6	45.0	46.3	48.2	53.6	55.3	59.9	72.7	74.2	75.2
30°	44.6	40.4	41.7	43.0	42.1	48.8	51.3	56.6	68.9	71.2	72.5
32.5°	40.6	37.5	37.3	38.6	40.0	43.6	49.0	55.1	66.4	69.6	72.7
35°	36.2	33.7	34.2	34.4	36.2	40.9	44.8	48.0	55.7	57.4	58.5
37.5°	33.1	31.0	30.6	32.7	34.6	38.1	39.6	41.1	51.3	55.1	55.3
40°	29.3	28.1	28.1	29.5	33.7	33.3	35.2	39.8	49.7	53.6	54.1
42.5°	26.6	24.9	25.4	26.8	29.8	27.7	31.4	38.1	49.0	53.0	52.8
45°	22.4	22.0	22.8	24.1	25.4	23.5	29.3	36.5	46.9	52.2	50.7
47.5°	18.6	18.6	19.7	21.0	20.3	21.0	26.6	34.2	45.7	50.5	49.4
50°	15.3	15.5	16.6	18.6	16.8	18.4	23.9	31.8	43.6	48.8	48.0
52.5°	13.0	13.2	13.8	15.3	14.5	16.8	22.0	29.5	41.5	45.9	45.5
55°	11.3	11.7	11.7	12.6	13.0	15.7	19.9	27.2	38.3	43.2	42.3
57.5°	10.1	10.5	10.3	10.9	11.3	13.8	17.8	24.7	35.2	39.2	37.9
60°	9.0	9.4	9.2	10.1	9.8	11.9	15.5	22.0	31.8	35.0	33.9
62.5°	8.0	8.4	8.4	8.8	9.0	10.1	13.4	19.5	28.5	31.0	30.2
65°	7.1	7.5	7.8	7.5	8.0	8.6	11.3	17.6	24.7	27.2	26.0
67.5°	6.5	6.9	7.3	6.5	6.9	7.1	9.6	15.7	21.8	23.9	22.8
70°	6.3	6.5	6.5	5.7	5.4	5.7	8.4	13.4	19.1	21.2	19.7
72.5°	5.9	6.1	5.9	4.6	4.0	4.4	7.1	11.3	16.1	17.8	16.6
75°	5.4	5.7	5.4	3.8	2.5	3.1	5.9	9.8	13.8	14.7	14.0
77.5°	4.6	5.0	5.0	2.7	0.8	1.9	4.4	8.0	11.5	11.5	11.7
80°	0.4	1.3	2.1	1.5	0.0	0.2	1.5	4.2	7.3	7.1	7.8
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.5	1.9	2.1
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°	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0	443.0
2.5°	470.0	463.5	471.7	496.6	486.5	488.4	481.7	523.0	569.7	571.2
5°	469.8	463.9	476.1	475.0	503.7	534.9	565.1	613.9	683.1	683.5
7.5°	373.2	408.0	417.0	414.2	451.1	494.1	540.6	634.0	690.8	696.9
10°	336.5	351.6	370.0	376.7	392.0	432.9	485.5	591.3	655.0	669.0
12.5°	291.7	339.9	364.4	411.9	420.7	426.6	509.6	601.6	640.3	638.7
15°	241.6	283.5	322.3	380.3	404.2	465.8	531.2	651.6	674.7	696.9
17.5°	171.0	202.6	262.1	323.1	396.0	463.1	590.7	741.1	784.7	811.1
20°	114.4	129.7	183.6	264.2	356.6	423.3	615.0	822.0	869.6	892.4
22.5°	92.8	100.2	128.0	193.6	304.7	421.4	624.8	910.2	1038.0	1068.4
25°	81.7	86.7	101.6	143.3	252.9	413.0	679.3	1009.5	1163.7	1188.3
27.5°	71.5	79.0	90.1	118.2	216.9	407.1	707.0	1176.3	1360.3	1384.4
30°	68.3	77.5	88.2	107.7	191.7	384.5	751.0	1326.8	1501.3	1544.3
32.5°	73.8	76.9	82.1	98.7	172.2	360.6	828.3	1506.5	1618.0	1674.0
35°	58.5	64.1	73.3	90.5	164.1	359.3	872.1	1622.2	1805.1	1839.7
37.5°	57.2	62.4	74.4	88.2	173.9	369.0	937.0	1859.2	2142.5	2213.3
40°	55.5	62.2	73.5	87.2	173.9	378.4	978.5	2048.8	2369.4	2441.3
42.5°	54.9	63.5	73.3	91.6	168.5	383.7	1041.2	2238.0	2609.1	2665.9
45°	54.5	64.7	74.0	96.8	167.2	400.8	1076.6	2330.0	2763.3	2828.5
47.5°	53.4	64.7	82.6	93.7	160.3	399.2	1122.5	2466.4	2855.3	2910.2
50°	52.6	65.2	93.5	87.8	161.3	388.9	1184.7	2594.4	2984.2	3023.4
52.5°	50.7	66.6	91.8	79.6	158.2	387.8	1277.5	2776.5	3153.7	3182.4
55°	46.5	64.7	83.0	69.6	147.1	375.9	1400.5	3013.3	3388.8	3393.8
57.5°	42.7	60.1	69.4	63.9	123.2	377.4	1506.5	3231.2	3598.3	3621.8
60°	39.0	62.4	53.9	59.5	102.0	350.5	1557.9	3314.6	3750.9	3785.2
62.5°	35.4	57.6	45.9	54.7	90.9	325.6	1522.3	3247.6	3770.3	3842.4
65°	31.4	40.0	38.8	49.0	92.0	290.6	1403.2	3051.2	3696.4	3795.7
67.5°	27.0	31.4	34.2	42.3	98.5	260.7	1199.2	2736.1	3497.5	3610.1
70°	23.7	28.3	29.8	37.1	102.5	241.0	946.3	2298.8	3090.2	3194.1
72.5°	19.7	26.2	26.6	32.5	98.7	221.5	674.3	1650.3	2346.6	2396.4
75°	17.0	21.8	24.1	27.2	83.0	165.3	371.5	1021.5	1483.7	1539.4
77.5°	15.3	16.6	18.2	18.9	35.2	86.1	127.8	629.9	830.8	893.7
80°	11.7	13.0	12.6	13.0	19.3	29.8	48.6	295.2	392.5	427.4
82.5°	3.8	6.3	6.9	5.9	12.6	14.7	14.0	102.0	127.6	135.6
85°	0.8	2.3	1.0	0.0	4.2	7.5	1.0	15.5	30.6	22.6
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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