

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: P597145

Luminaire Tested: **MSA-SA4C-835-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597145
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-SA4C-835-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 14470 lumens
Efficiency: N/A
Efficacy: 64.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

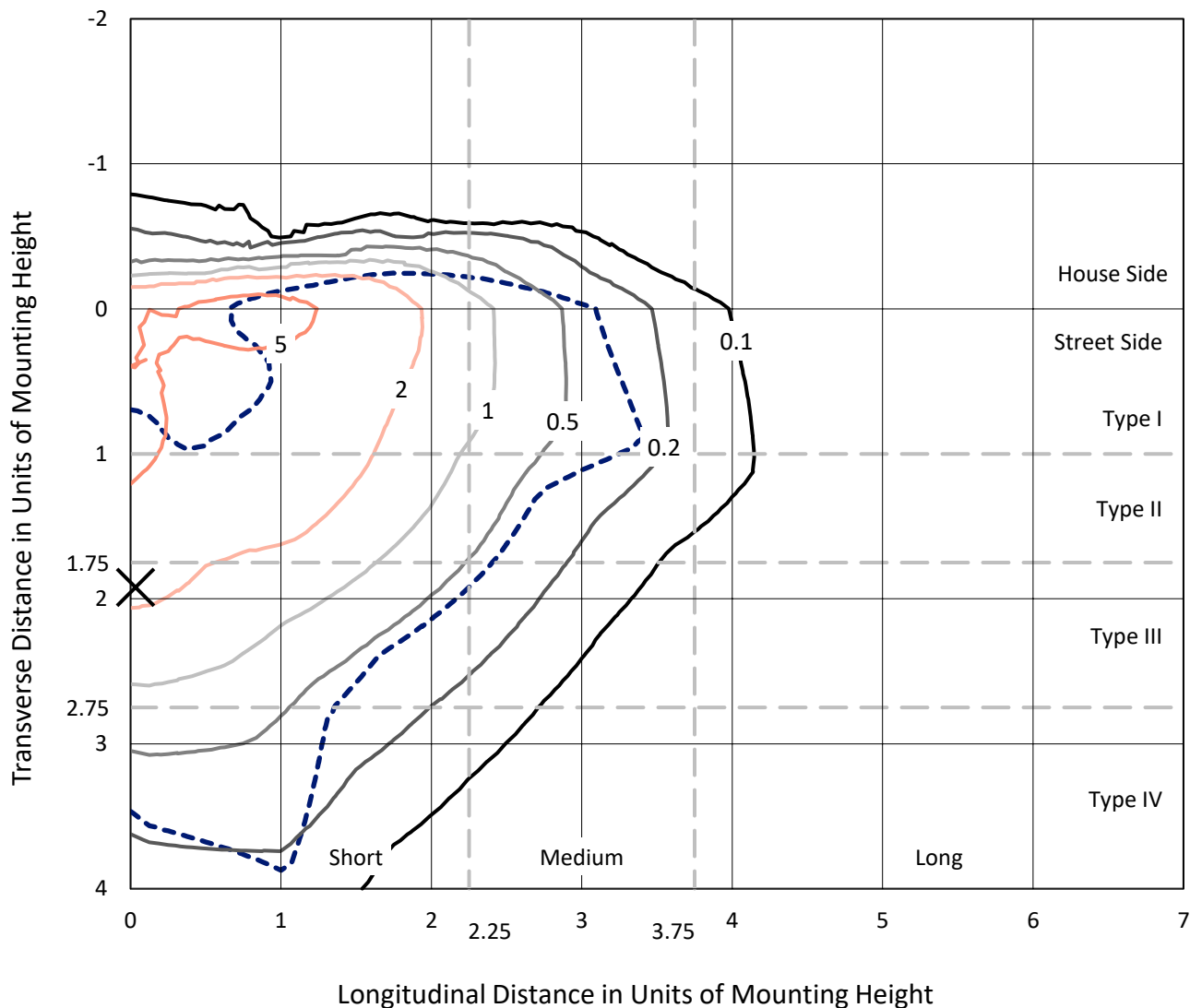
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

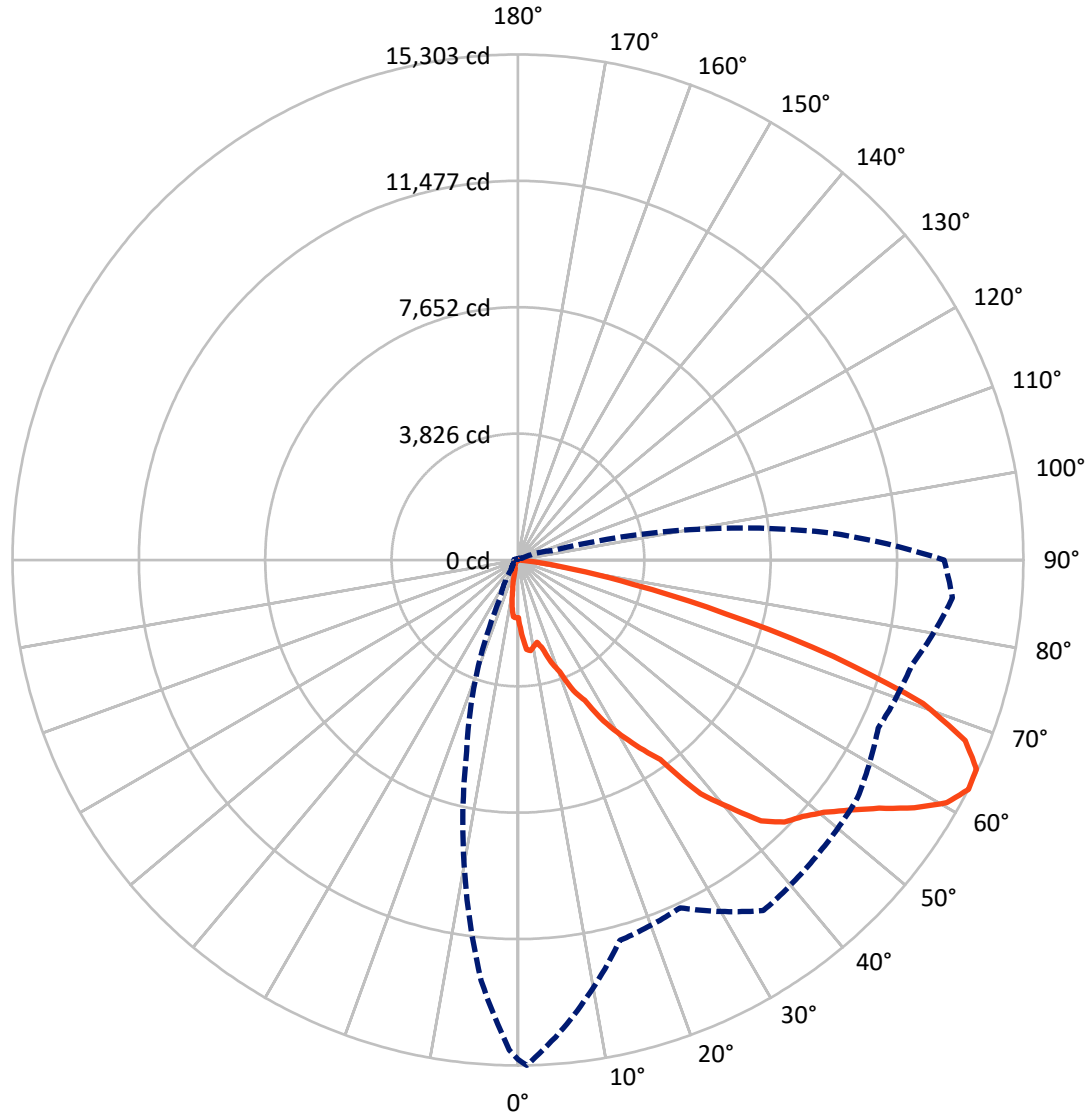
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.4 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	1654.7	0.0	1654.7
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	12815.3	0.0	12815.3
	% Fixture	88.6	0.0	88.6
Total	Lumens	14470.0	0.0	14470.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.8	1.3
10°-20°	508.7	3.5
20°-30°	822.3	5.7
30°-40°	1377.5	9.5
40°-50°	2252.3	15.6
50°-60°	3334.0	23.0
60°-70°	3827.7	26.5
70°-80°	1892.8	13.1
80°-90°	259.8	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°	14470.0	100.0
0°-180°	14470.0	100.0

Coefficient of Utilization



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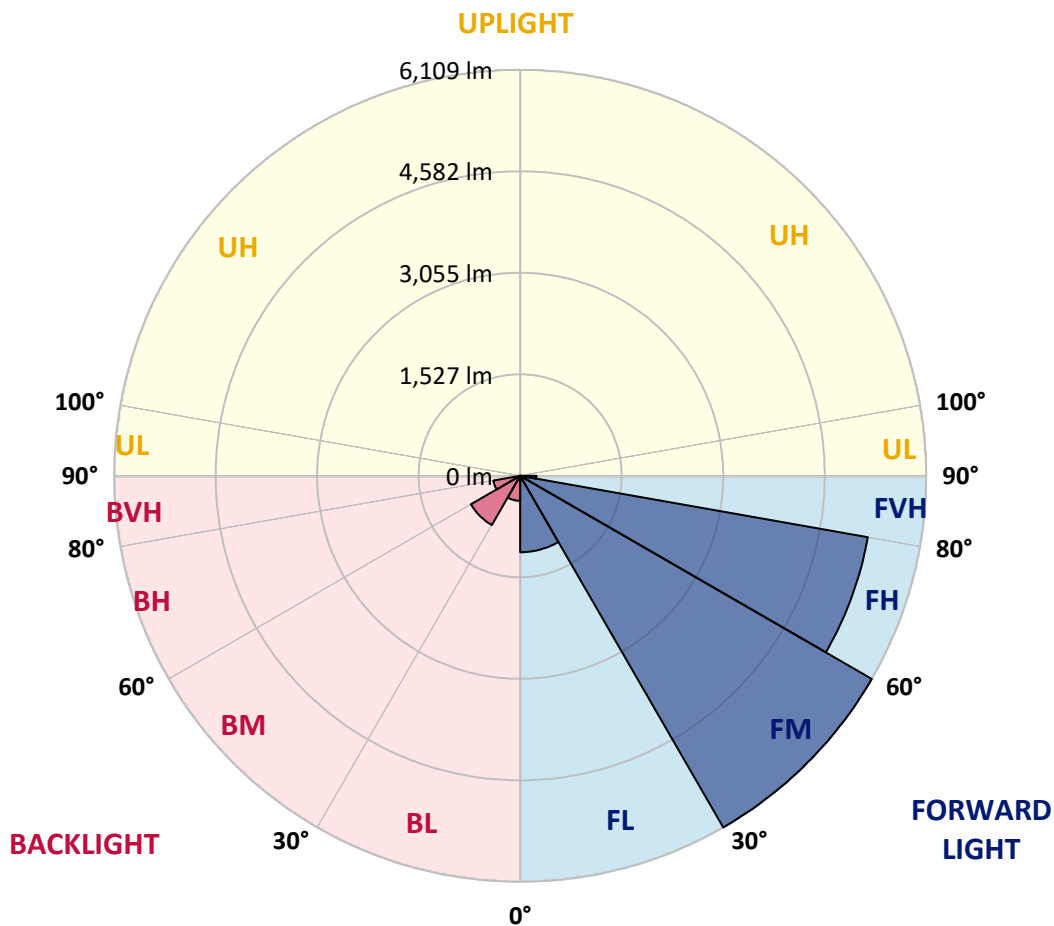
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1149.3	7.9			
FM (30°-60°)	6109.1	42.2			
FH (60°-80°)	5311.4	36.7			G3/7500
FVH (80°-90°)	245.4	1.7			G3/500
BL (0°-30°)	376.5	2.6	B1/500		
BM (30°-60°)	854.7	5.9	B1/1000		
BH (60°-80°)	409.1	2.8	B1/500		G1/500
BVH (80°-90°)	14.4	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1
2.5°	2247.8	2258.5	2208.2	2201.6	2084.5	2230.5	2234.6	2251.9	2144.7	1936.9	2227.2
5°	2689.8	2719.4	2680.7	2853.0	2902.5	3008.9	2813.4	2988.2	2914.0	2934.6	2976.7
7.5°	2742.5	2773.0	2854.7	3143.3	3409.6	3342.8	3321.4	3387.3	3381.6	3229.0	3304.9
10°	2632.9	2658.4	2794.5	3319.7	3436.0	3736.1	3809.5	3657.8	3596.0	3262.0	3116.1
12.5°	2513.3	2556.2	2729.3	3359.3	3708.1	4011.5	4253.1	4037.1	3831.8	3476.4	3342.8
15°	2742.5	2766.4	3038.5	3441.8	3746.9	3956.3	4154.2	4082.5	4051.1	3795.5	3342.8
17.5°	3191.9	3248.0	3445.1	3643.8	3884.6	4010.7	3963.7	3941.5	3861.5	4263.0	3794.7
20°	3511.8	3616.6	3874.7	3960.4	3769.1	3887.0	3858.2	3838.4	3775.7	4522.8	4314.2
22.5°	4204.5	4301.0	4305.9	4336.4	3891.2	3703.1	3655.3	3661.1	3945.6	4600.3	4960.6
25°	4676.1	4709.1	4969.7	4752.0	4224.3	3759.2	3577.0	3658.6	4068.4	5157.7	5568.3
27.5°	5447.9	5526.3	5688.7	4951.5	4423.8	3723.8	3433.5	3730.4	4391.7	5342.4	6243.7
30°	6077.1	6152.1	6413.5	5224.5	4597.0	3899.4	3495.4	3874.7	4592.9	5722.5	6850.5
32.5°	6587.5	6781.3	7078.1	5645.8	4590.4	4101.4	3811.2	3826.8	4840.2	6214.8	7450.8
35°	7239.7	7420.3	7628.9	5936.1	4890.5	4166.6	3904.3	4296.8	5208.0	6729.3	8258.9
37.5°	8709.9	8982.9	8570.6	6667.5	5240.1	4755.3	4272.1	4586.3	5593.1	7254.6	9369.6
40°	9607.1	9837.1	9438.9	7041.0	5845.4	5052.1	4928.5	5089.3	5969.9	7525.9	10206.5
42.5°	10491.0	10794.5	10129.0	7603.4	6420.1	5889.9	5551.8	5681.3	6514.9	8180.6	11148.2
45°	11130.9	11318.9	10278.3	7897.7	7210.1	6844.8	6619.7	6426.7	7275.2	8601.1	11755.9
47.5°	11452.5	11602.5	10572.7	7990.9	7680.1	7854.9	8348.0	7944.7	7948.0	8905.4	12083.3
50°	11897.7	12002.5	10737.6	8102.2	8190.5	9429.0	9678.0	8819.6	8716.5	9210.5	12136.9
52.5°	12523.6	12574.7	11057.5	8395.8	8954.8	10661.7	10751.6	10404.4	9485.9	9777.8	12255.6
55°	13355.6	13265.7	11628.9	9012.6	9752.2	11564.6	11685.0	11382.4	10453.1	10344.2	12623.4
57.5°	14252.7	14149.6	12475.8	9881.7	10617.2	12254.8	12326.5	12350.4	11095.4	10845.6	13248.4
60°	14895.9	14914.8	13541.9	10878.6	11154.8	12915.3	12771.8	12554.1	11743.5	11580.3	13552.7
62.5°	15121.0	15303.2	14372.3	11923.3	11618.2	12956.5	12733.9	12550.0	12033.8	12338.1	13203.9
65°	14937.1	15255.4	14565.2	12841.0	11898.6	12439.5	12207.8	12089.9	12024.7	12647.3	12432.1
67.5°	14206.5	14604.8	14012.8	12849.3	10879.4	10591.6	10865.4	11238.9	11022.9	12390.8	11351.0
70°	12569.8	13006.0	12730.6	12095.6	9062.9	8333.1	8634.9	9199.7	9047.2	11020.4	9760.4
72.5°	9430.6	9991.3	10045.8	10442.4	7194.4	6271.7	6315.4	6299.7	6562.8	8886.4	7616.6
75°	6058.1	6494.3	7083.9	8426.3	5465.3	4578.8	4160.0	4057.7	4548.3	6943.7	5452.9
77.5°	3516.8	3568.7	3840.9	6357.4	3914.2	3299.1	3013.8	3159.8	3331.3	4846.0	3614.1
80°	1682.1	1708.5	1820.7	3271.1	2719.4	2855.5	2635.3	2799.4	2287.4	2785.4	2050.7
82.5°	533.5	539.3	558.2	1607.1	1688.7	1891.6	1212.1	1625.2	1414.1	1683.8	1365.5
85°	89.1	151.7	187.2	464.2	953.2	638.2	263.0	579.7	789.1	1062.0	620.1
87.5°	0.0	0.0	0.0	8.2	77.5	36.3	5.8	33.0	121.2	236.7	28.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1
2.5°	2311.3	2368.2	2153.8	1961.7	2010.3	1971.5	1913.0	1813.2	1582.4	1752.2	1740.7
5°	2974.2	2868.7	2578.4	2443.2	2278.3	2026.8	1996.3	1803.3	1718.4	1732.4	1720.1
7.5°	3205.1	3016.3	2759.8	2352.5	1965.8	1603.0	1491.6	1365.5	1339.9	1394.3	1429.8
10°	3023.7	2823.3	2599.0	2092.8	1795.1	1532.9	1258.3	1081.8	986.2	974.6	984.5
12.5°	3107.0	2890.9	2429.2	2041.6	1730.8	1493.3	1186.6	920.2	712.4	728.1	686.9
15°	3164.7	2916.5	2388.8	1934.4	1598.0	1280.6	911.2	644.8	475.0	425.5	395.8
17.5°	3503.6	3149.0	2337.7	1810.8	1412.5	996.9	572.3	373.5	318.3	301.0	287.0
20°	3939.0	3435.2	2336.8	1680.5	1138.7	623.4	357.0	270.5	257.3	267.2	256.4
22.5°	4445.3	3816.1	2461.3	1518.0	817.2	393.3	277.9	240.0	226.8	235.0	235.8
25°	4954.8	4387.5	2562.8	1363.8	569.0	301.8	247.4	221.0	206.1	213.6	209.4
27.5°	5875.1	4860.8	2539.7	1166.8	418.9	265.5	230.1	207.0	184.7	196.2	195.4
30°	6477.0	5696.1	2629.6	890.5	332.3	232.5	214.4	188.8	164.9	178.1	177.3
32.5°	7196.9	6054.8	2726.9	683.6	276.2	220.2	192.9	168.2	154.2	162.4	160.8
35°	8005.8	6764.0	2547.9	569.0	240.0	198.7	170.7	151.7	139.4	143.5	143.5
37.5°	9434.7	7356.8	2440.7	463.4	223.5	179.8	160.0	136.9	129.5	129.5	133.6
40°	10246.1	8262.2	2120.8	366.9	228.4	165.7	149.2	125.3	115.4	114.6	118.7
42.5°	11301.6	8784.2	1920.4	296.8	207.0	161.6	136.9	113.8	102.2	101.4	105.5
45°	11927.4	9076.1	1638.4	233.4	185.5	188.0	127.0	104.7	87.4	84.1	91.5
47.5°	12322.4	9462.8	1478.5	185.5	161.6	187.2	123.7	90.7	73.4	69.3	75.9
50°	12522.8	9654.1	1447.1	159.1	140.2	167.4	141.8	75.9	62.7	56.9	62.7
52.5°	12731.4	9964.9	1458.7	146.8	123.7	134.4	134.4	65.1	55.2	48.6	52.8
55°	13152.7	10424.2	1433.1	139.4	113.8	102.2	86.6	57.7	50.3	42.9	47.0
57.5°	13670.6	10754.1	1433.1	132.8	105.5	87.4	69.3	53.6	46.2	37.1	40.4
60°	13572.4	10406.9	1362.2	126.2	98.9	81.6	62.7	49.5	42.9	33.8	36.3
62.5°	12898.8	9462.8	1103.3	116.3	93.2	77.5	56.9	47.0	40.4	29.7	32.2
65°	12107.2	8460.1	766.9	105.5	86.6	70.1	51.1	44.5	37.1	26.4	28.0
67.5°	11154.0	7265.3	425.5	94.8	80.0	61.0	47.0	43.7	35.5	23.9	25.6
70°	9499.9	5485.0	228.4	86.6	75.0	56.1	44.5	43.7	35.5	23.1	23.9
72.5°	7131.7	3454.1	133.6	79.2	68.4	51.9	42.1	44.5	34.6	22.3	22.3
75°	4852.6	2096.9	95.7	67.6	61.0	43.7	40.4	42.9	35.5	22.3	20.6
77.5°	3299.1	1473.5	78.3	61.0	55.2	38.8	41.2	42.9	35.5	18.1	14.0
80°	2059.8	760.3	59.4	48.6	47.8	33.8	41.2	37.1	23.1	4.1	0.0
82.5°	1440.5	282.8	34.6	37.1	37.1	23.9	32.2	26.4	13.2	0.0	0.0
85°	604.4	48.6	19.0	26.4	23.1	14.0	25.6	19.8	8.2	0.0	0.0
87.5°	10.7	0.0	7.4	15.7	16.5	8.2	13.2	8.2	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°	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1
2.5°	1795.1	1716.8	1551.8	1631.0	1622.8	1659.0	1662.3	1578.2	1759.6	1871.8	1888.3
5°	1721.7	1668.9	1659.9	1614.5	1603.0	1669.8	1633.5	1631.0	1718.4	1846.2	1847.0
7.5°	1430.6	1390.2	1409.2	1356.4	1220.4	1228.6	1241.0	1292.9	1368.0	1452.1	1482.6
10°	982.1	1086.8	1010.1	1003.5	989.5	945.8	911.2	938.4	1035.7	1113.2	1142.0
12.5°	700.9	717.4	764.4	747.1	771.0	733.9	719.9	804.8	899.6	978.8	1035.7
15°	409.8	437.8	465.9	525.3	549.2	541.7	584.6	655.5	732.2	768.5	838.6
17.5°	288.6	291.1	296.8	361.2	403.2	419.7	445.3	498.9	530.2	546.7	575.6
20°	252.3	244.9	235.0	271.3	310.9	331.5	324.1	366.1	391.7	408.2	428.8
22.5°	228.4	216.0	210.3	222.6	253.1	271.3	274.6	299.3	338.1	349.6	356.2
25°	206.1	197.9	193.8	200.4	216.9	234.2	237.5	269.6	304.3	309.2	322.4
27.5°	191.3	175.6	177.3	182.2	189.7	211.1	217.7	235.8	286.1	291.9	296.0
30°	175.6	159.1	164.1	169.0	165.7	192.1	202.0	222.6	271.3	280.4	285.3
32.5°	160.0	147.6	146.8	151.7	157.5	171.5	192.9	216.9	261.4	273.8	286.1
35°	142.7	132.8	134.4	135.2	142.7	160.8	176.5	188.8	219.3	225.9	230.1
37.5°	130.3	122.0	120.4	128.6	136.1	150.1	155.8	161.6	202.0	216.9	217.7
40°	115.4	110.5	110.5	116.3	132.8	131.1	138.5	156.7	195.4	211.1	212.7
42.5°	104.7	98.1	99.8	105.5	117.1	108.8	123.7	150.1	192.9	208.6	207.8
45°	88.2	86.6	89.9	94.8	99.8	92.4	115.4	143.5	184.7	205.3	199.5
47.5°	73.4	73.4	77.5	82.5	80.0	82.5	104.7	134.4	179.8	198.7	194.6
50°	60.2	61.0	65.1	73.4	66.0	72.6	94.0	125.3	171.5	192.1	188.8
52.5°	51.1	51.9	54.4	60.2	56.9	66.0	86.6	116.3	163.3	180.6	178.9
55°	44.5	46.2	46.2	49.5	51.1	61.8	78.3	107.2	150.9	169.9	166.6
57.5°	39.6	41.2	40.4	42.9	44.5	54.4	70.1	97.3	138.5	154.2	149.2
60°	35.5	37.1	36.3	39.6	38.8	47.0	61.0	86.6	125.3	137.7	133.6
62.5°	31.3	33.0	33.0	34.6	35.5	39.6	52.8	76.7	112.1	122.0	118.7
65°	28.0	29.7	30.5	29.7	31.3	33.8	44.5	69.3	97.3	107.2	102.2
67.5°	25.6	27.2	28.9	25.6	27.2	28.0	37.9	61.8	85.8	94.0	89.9
70°	24.7	25.6	25.6	22.3	21.4	22.3	33.0	52.8	75.0	83.3	77.5
72.5°	23.1	23.9	23.1	18.1	15.7	17.3	28.0	44.5	63.5	70.1	65.1
75°	21.4	22.3	21.4	14.8	9.9	12.4	23.1	38.8	54.4	57.7	55.2
77.5°	18.1	19.8	19.8	10.7	3.3	7.4	17.3	31.3	45.4	45.4	46.2
80°	1.6	4.9	8.2	5.8	0.0	0.8	5.8	16.5	28.9	28.0	30.5
82.5°	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	9.9	7.4	8.2
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°	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1	1743.1
2.5°	1849.5	1824.0	1856.1	1954.2	1914.7	1922.1	1895.7	2058.1	2242.0	2247.8
5°	1848.7	1825.6	1873.4	1869.3	1982.3	2105.1	2223.9	2416.0	2688.1	2689.8
7.5°	1468.6	1605.4	1640.9	1630.2	1775.3	1944.3	2127.4	2495.2	2718.6	2742.5
10°	1324.3	1383.6	1456.2	1482.6	1542.8	1703.6	1910.5	2326.9	2577.6	2632.9
12.5°	1147.8	1337.5	1433.9	1621.1	1655.7	1678.8	2005.4	2367.3	2519.9	2513.3
15°	950.7	1115.6	1268.2	1496.6	1590.6	1833.0	2090.3	2564.4	2655.1	2742.5
17.5°	672.9	797.4	1031.5	1271.5	1558.4	1822.3	2324.5	2916.5	3088.0	3191.9
20°	450.2	510.4	722.3	1039.8	1403.4	1665.6	2420.1	3234.8	3422.0	3511.8
22.5°	365.3	394.1	503.8	761.9	1198.9	1658.2	2458.9	3581.9	4084.9	4204.5
25°	321.6	341.4	399.9	564.0	995.3	1625.2	2673.3	3972.8	4579.7	4676.1
27.5°	281.2	310.9	354.6	465.1	853.4	1602.1	2782.1	4629.1	5353.1	5447.9
30°	268.8	305.1	347.1	423.8	754.5	1513.1	2955.3	5221.2	5908.1	6077.1
32.5°	290.2	302.6	323.2	388.4	677.8	1419.1	3259.5	5928.7	6367.3	6587.5
35°	230.1	252.3	288.6	356.2	645.6	1414.1	3431.9	6383.8	7103.7	7239.7
37.5°	225.1	245.7	292.7	347.1	684.4	1452.1	3687.5	7316.4	8431.2	8709.9
40°	218.5	244.9	289.4	343.0	684.4	1489.2	3850.7	8062.7	9324.3	9607.1
42.5°	216.0	249.8	288.6	360.3	663.0	1509.8	4097.3	8807.2	10267.6	10491.0
45°	214.4	254.8	291.1	381.0	658.0	1577.4	4236.6	9169.2	10874.4	11130.9
47.5°	210.3	254.8	324.9	368.6	630.8	1570.8	4417.2	9706.0	11236.4	11452.5
50°	207.0	256.4	367.8	345.5	634.9	1530.4	4662.1	10209.8	11743.5	11897.7
52.5°	199.5	262.2	361.2	313.3	622.6	1526.3	5027.4	10926.4	12410.6	12523.6
55°	183.1	254.8	326.5	273.8	578.8	1479.3	5511.4	11858.2	13335.8	13355.6
57.5°	168.2	236.7	272.9	251.5	484.8	1485.1	5928.7	12715.7	14160.4	14252.7
60°	153.4	245.7	211.9	234.2	401.6	1379.5	6130.7	13043.9	14760.6	14895.9
62.5°	139.4	226.8	180.6	215.2	357.9	1281.4	5990.5	12780.0	14837.3	15121.0
65°	123.7	157.5	152.5	192.9	362.0	1143.7	5522.2	12007.4	14546.3	14937.1
67.5°	106.4	123.7	134.4	166.6	387.5	1025.8	4719.0	10767.3	13763.7	14206.5
70°	93.2	111.3	117.1	145.9	403.2	948.3	3723.8	9046.4	12160.8	12569.8
72.5°	77.5	103.1	104.7	127.8	388.4	871.6	2653.5	6494.3	9234.4	9430.6
75°	66.8	85.8	94.8	107.2	326.5	650.6	1462.0	4019.8	5838.8	6058.1
77.5°	60.2	65.1	71.7	74.2	138.5	338.9	503.0	2478.7	3269.4	3516.8
80°	46.2	51.1	49.5	51.1	75.9	117.1	191.3	1161.8	1544.4	1682.1
82.5°	14.8	24.7	27.2	23.1	49.5	57.7	55.2	401.6	502.2	533.5
85°	3.3	9.1	4.1	0.0	16.5	29.7	4.1	61.0	120.4	89.1
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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