

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: P367357

Luminaire Tested: **MSA-SA2B-760-U-SLL-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367357
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-760-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7266 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

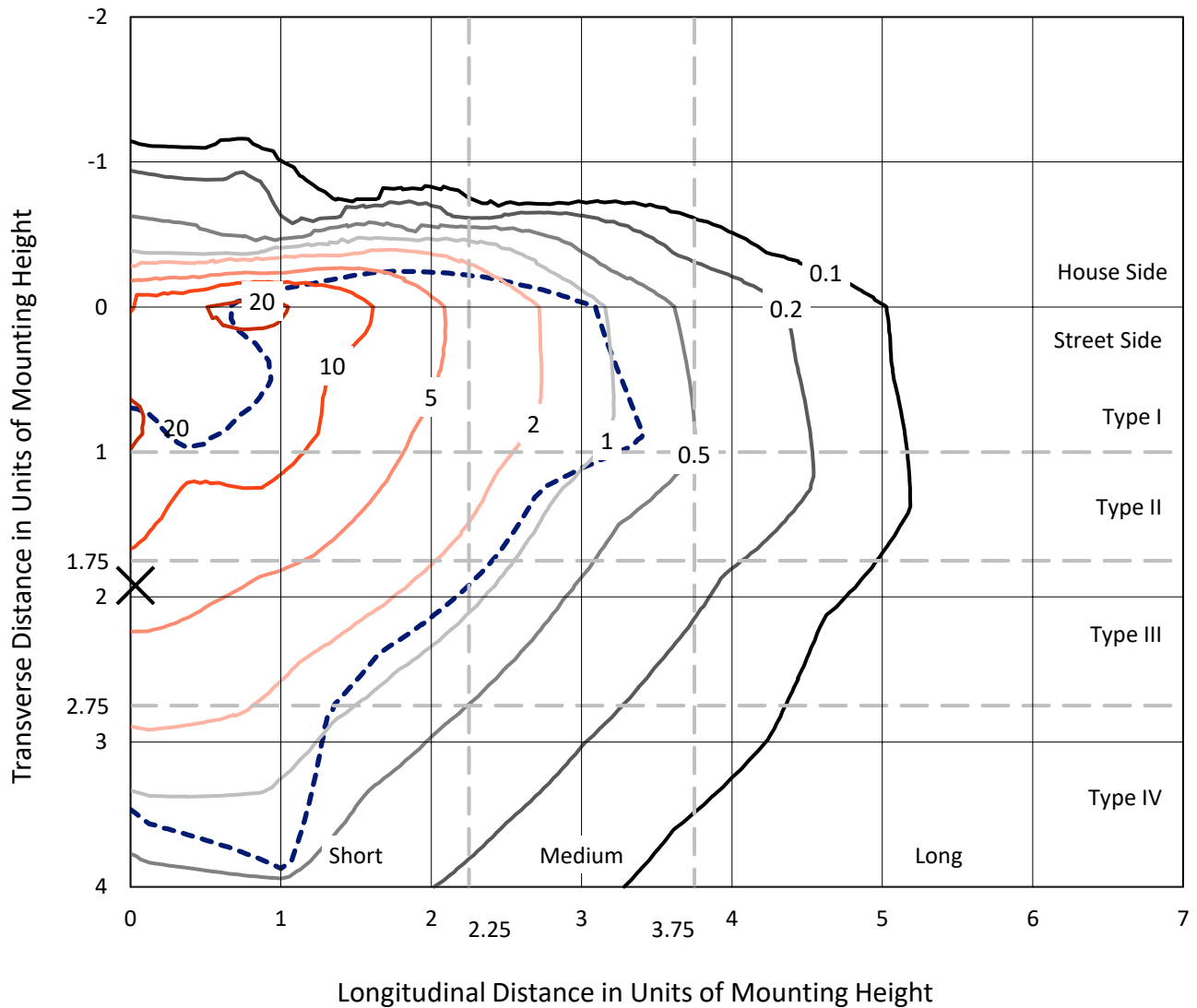
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

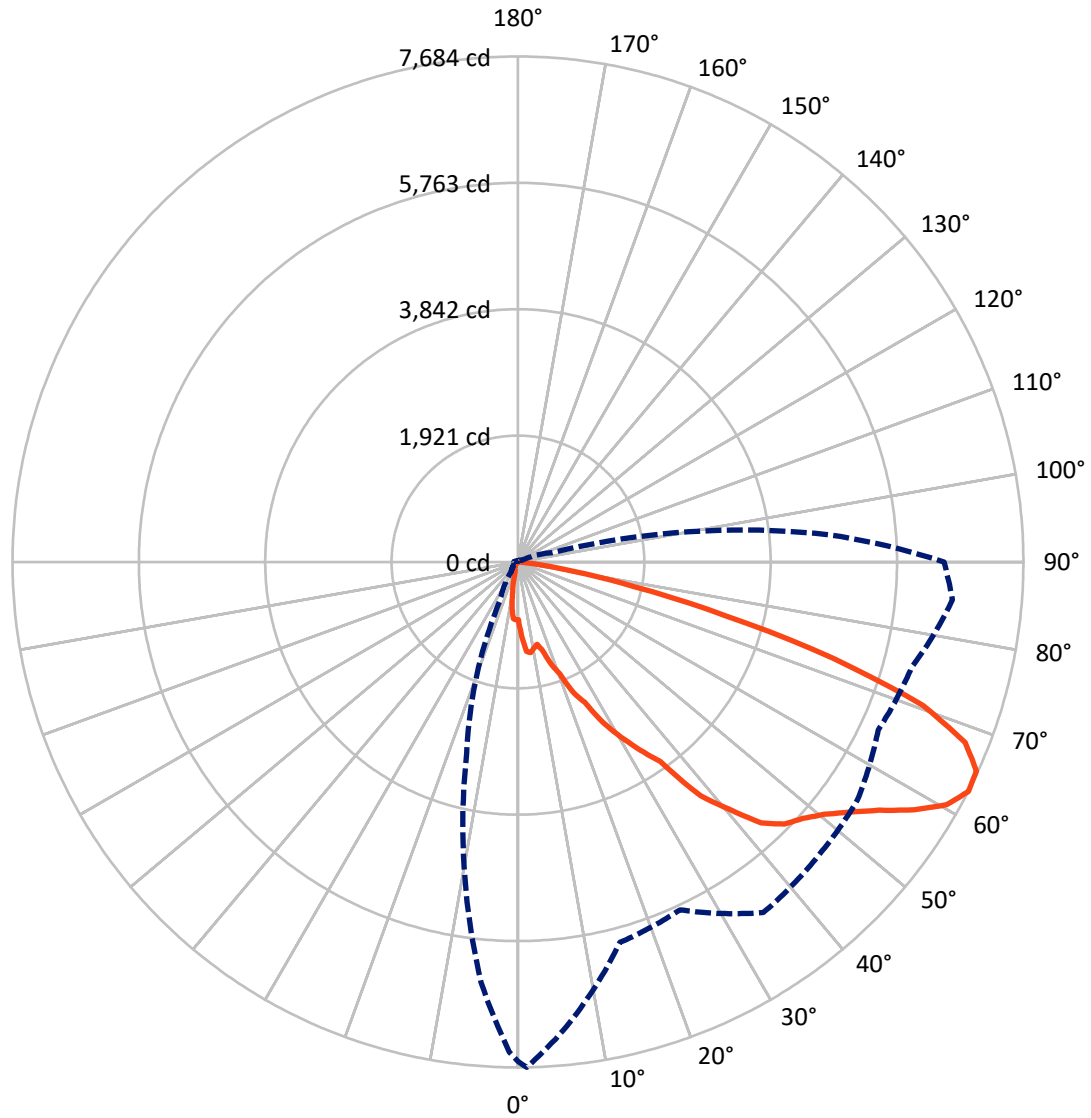
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.3 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	830.9	0.0	830.9
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	6435.1	0.0	6435.1
	% Fixture	88.6	0.0	88.6
Total	Lumens	7266.0	0.0	7266.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.8	1.3
10°-20°	255.4	3.5
20°-30°	412.9	5.7
30°-40°	691.7	9.5
40°-50°	1131.0	15.6
50°-60°	1674.2	23.0
60°-70°	1922.1	26.5
70°-80°	950.5	13.1
80°-90°	130.5	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°	7266.0	100.0
0°-180°	7266.0	100.0

Coefficient of Utilization



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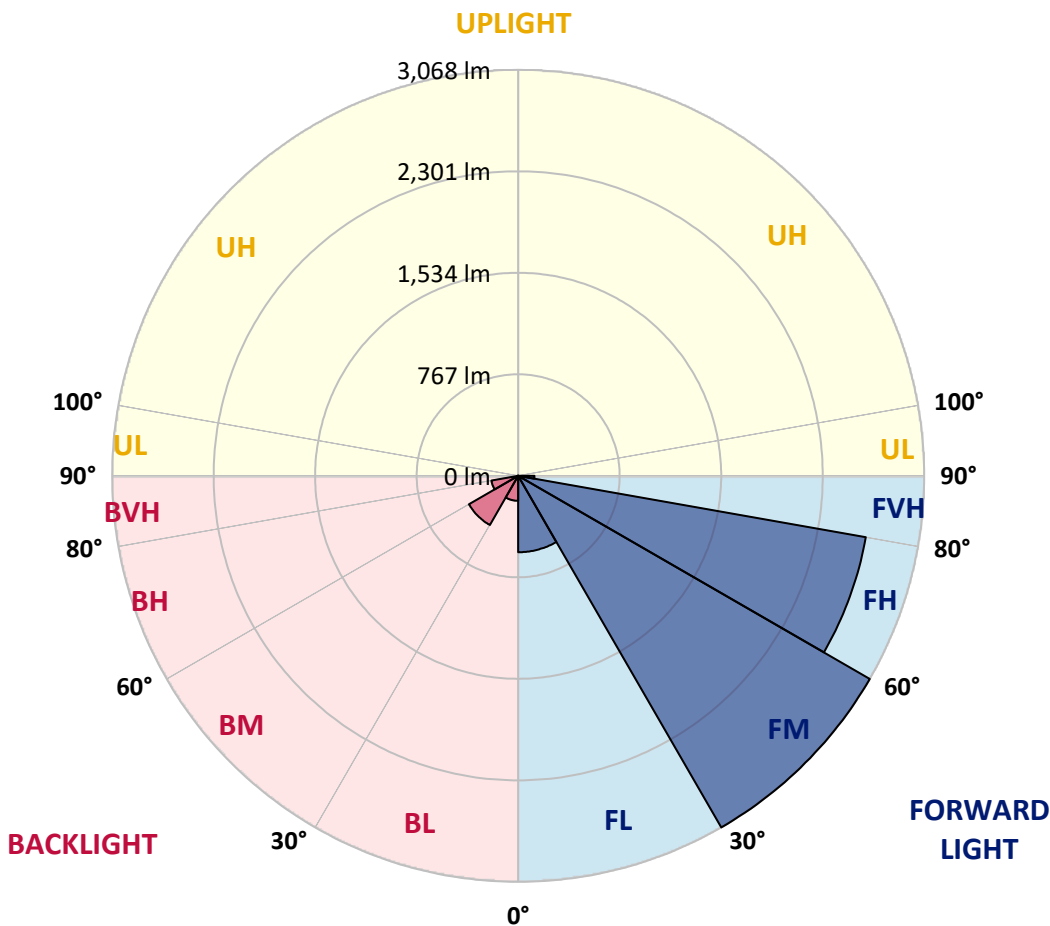
CATALOG NUMBER: MSA-SA2B-760-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	577.1	7.9			
FM (30°-60°)	3067.7	42.2			
FH (60°-80°)	2667.1	36.7			G2/5000
FVH (80°-90°)	123.2	1.7			G2/225
BL (0°-30°)	189.0	2.6	B1/500		
BM (30°-60°)	429.2	5.9	B1/1000		
BH (60°-80°)	205.5	2.8	B1/500		G1/500
BVH (80°-90°)	7.2	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3
2.5°	1128.7	1134.1	1108.8	1105.5	1046.7	1120.0	1122.1	1130.8	1076.9	972.6	1118.4
5°	1350.6	1365.5	1346.1	1432.6	1457.5	1510.9	1412.7	1500.5	1463.3	1473.6	1494.7
7.5°	1377.1	1392.5	1433.4	1578.4	1712.1	1678.6	1667.8	1700.9	1698.0	1621.4	1659.5
10°	1322.1	1334.9	1403.2	1667.0	1725.4	1876.1	1912.9	1836.7	1805.7	1638.0	1564.7
12.5°	1262.0	1283.6	1370.5	1686.8	1862.0	2014.4	2135.7	2027.2	1924.1	1745.6	1678.6
15°	1377.1	1389.1	1525.8	1728.3	1881.5	1986.6	2086.0	2050.0	2034.2	1905.9	1678.6
17.5°	1602.8	1631.0	1729.9	1829.7	1950.6	2013.9	1990.3	1979.2	1939.0	2140.6	1905.5
20°	1763.4	1816.0	1945.6	1988.7	1892.6	1951.8	1937.3	1927.4	1895.9	2271.1	2166.3
22.5°	2111.3	2159.7	2162.2	2177.5	1953.9	1859.5	1835.5	1838.4	1981.2	2310.0	2490.9
25°	2348.1	2364.7	2495.5	2386.2	2121.2	1887.7	1796.2	1837.1	2042.9	2589.9	2796.1
27.5°	2735.6	2775.0	2856.5	2486.4	2221.4	1869.9	1724.1	1873.2	2205.2	2682.6	3135.2
30°	3051.6	3089.2	3220.5	2623.4	2308.3	1958.1	1755.2	1945.6	2306.3	2873.5	3439.9
32.5°	3307.9	3405.2	3554.2	2835.0	2305.0	2059.5	1913.7	1921.6	2430.5	3120.7	3741.4
35°	3635.4	3726.1	3830.8	2980.8	2455.7	2092.2	1960.5	2157.6	2615.2	3379.1	4147.1
37.5°	4373.6	4510.7	4303.7	3348.0	2631.3	2387.8	2145.2	2303.0	2808.5	3642.8	4704.9
40°	4824.1	4939.6	4739.7	3535.6	2935.2	2536.9	2474.8	2555.5	2997.7	3779.1	5125.1
42.5°	5268.0	5420.4	5086.2	3818.0	3223.8	2957.6	2787.8	2852.8	3271.4	4107.8	5598.0
45°	5589.3	5683.7	5161.2	3965.8	3620.5	3437.0	3324.0	3227.1	3653.2	4319.0	5903.1
47.5°	5750.8	5826.1	5309.0	4012.6	3856.5	3944.3	4191.9	3989.4	3991.0	4471.8	6067.5
50°	5974.4	6026.9	5391.8	4068.5	4112.8	4734.7	4859.7	4428.7	4376.9	4625.0	6094.4
52.5°	6288.6	6314.3	5552.4	4215.9	4496.6	5353.7	5398.8	5224.5	4763.3	4909.8	6154.1
55°	6706.4	6661.3	5839.4	4525.6	4897.0	5807.1	5867.5	5715.6	5248.9	5194.3	6338.7
57.5°	7156.9	7105.1	6264.6	4962.0	5331.3	6153.6	6189.7	6201.7	5571.5	5446.0	6652.6
60°	7479.9	7489.4	6800.0	5462.6	5601.3	6485.3	6413.3	6303.9	5896.9	5814.9	6805.4
62.5°	7592.9	7684.4	7216.9	5987.2	5834.0	6506.0	6394.2	6301.9	6042.7	6195.5	6630.2
65°	7500.6	7660.4	7313.8	6448.0	5974.8	6246.4	6130.0	6070.8	6038.1	6350.7	6242.7
67.5°	7133.7	7333.7	7036.4	6452.2	5463.0	5318.5	5456.0	5643.5	5535.0	6222.0	5699.8
70°	6311.8	6530.8	6392.6	6073.7	4550.8	4184.4	4336.0	4619.6	4543.0	5533.8	4901.1
72.5°	4735.5	5017.1	5044.4	5243.6	3612.6	3149.3	3171.2	3163.4	3295.4	4462.2	3824.6
75°	3042.0	3261.1	3557.1	4231.2	2744.3	2299.2	2088.9	2037.6	2283.9	3486.7	2738.1
77.5°	1765.9	1792.0	1928.7	3192.3	1965.5	1656.6	1513.4	1586.6	1672.8	2433.4	1814.8
80°	844.7	857.9	914.2	1642.5	1365.5	1433.9	1323.3	1405.7	1148.6	1398.7	1029.7
82.5°	267.9	270.8	280.3	807.0	848.0	949.8	608.7	816.1	710.1	845.5	685.7
85°	44.7	76.2	94.0	233.1	478.6	320.5	132.1	291.1	396.2	533.3	311.4
87.5°	0.0	0.0	0.0	4.1	38.9	18.2	2.9	16.6	60.9	118.8	14.1
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°	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3
2.5°	1160.6	1189.2	1081.5	985.0	1009.5	990.0	960.6	910.5	794.6	879.9	874.1
5°	1493.5	1440.5	1294.7	1226.8	1144.0	1017.7	1002.4	905.5	862.9	869.9	863.7
7.5°	1609.4	1514.6	1385.8	1181.3	987.1	804.9	749.0	685.7	672.8	700.2	718.0
10°	1518.3	1417.7	1305.1	1050.9	901.4	769.7	631.8	543.2	495.2	489.4	494.4
12.5°	1560.1	1451.7	1219.8	1025.2	869.1	749.8	595.8	462.1	357.7	365.6	344.9
15°	1589.1	1464.5	1199.5	971.4	802.4	643.0	457.5	323.8	238.5	213.7	198.7
17.5°	1759.3	1581.3	1173.8	909.3	709.3	500.6	287.4	187.6	159.8	151.1	144.1
20°	1977.9	1724.9	1173.4	843.8	571.8	313.0	179.3	135.8	129.2	134.2	128.8
22.5°	2232.2	1916.2	1235.9	762.3	410.3	197.5	139.5	120.5	113.9	118.0	118.4
25°	2488.0	2203.2	1286.9	684.8	285.7	151.5	124.2	111.0	103.5	107.2	105.2
27.5°	2950.1	2440.8	1275.3	585.9	210.3	133.3	115.5	103.9	92.7	98.5	98.1
30°	3252.4	2860.3	1320.4	447.2	166.9	116.8	107.7	94.8	82.8	89.4	89.0
32.5°	3613.8	3040.4	1369.3	343.2	138.7	110.6	96.9	84.5	77.4	81.6	80.7
35°	4020.0	3396.5	1279.4	285.7	120.5	99.8	85.7	76.2	70.0	72.0	72.0
37.5°	4737.6	3694.2	1225.6	232.7	112.2	90.3	80.3	68.7	65.0	65.0	67.1
40°	5145.0	4148.8	1064.9	184.3	114.7	83.2	74.9	62.9	58.0	57.6	59.6
42.5°	5675.0	4410.9	964.3	149.1	103.9	81.2	68.7	57.1	51.3	50.9	53.0
45°	5989.3	4557.5	822.7	117.2	93.2	94.4	63.8	52.6	43.9	42.2	46.0
47.5°	6187.6	4751.7	742.4	93.2	81.2	94.0	62.1	45.5	36.9	34.8	38.1
50°	6288.2	4847.7	726.7	79.9	70.4	84.1	71.2	38.1	31.5	28.6	31.5
52.5°	6393.0	5003.8	732.5	73.7	62.1	67.5	67.5	32.7	27.7	24.4	26.5
55°	6604.5	5234.4	719.6	70.0	57.1	51.3	43.5	29.0	25.3	21.5	23.6
57.5°	6864.6	5400.1	719.6	66.7	53.0	43.9	34.8	26.9	23.2	18.6	20.3
60°	6815.3	5225.8	684.0	63.3	49.7	41.0	31.5	24.8	21.5	17.0	18.2
62.5°	6477.0	4751.7	554.0	58.4	46.8	38.9	28.6	23.6	20.3	14.9	16.1
65°	6079.5	4248.2	385.1	53.0	43.5	35.2	25.7	22.4	18.6	13.2	14.1
67.5°	5600.9	3648.2	213.7	47.6	40.2	30.6	23.6	21.9	17.8	12.0	12.8
70°	4770.3	2754.3	114.7	43.5	37.7	28.2	22.4	21.9	17.8	11.6	12.0
72.5°	3581.1	1734.5	67.1	39.7	34.4	26.1	21.1	22.4	17.4	11.2	11.2
75°	2436.7	1052.9	48.0	34.0	30.6	21.9	20.3	21.5	17.8	11.2	10.4
77.5°	1656.6	739.9	39.3	30.6	27.7	19.5	20.7	21.5	17.8	9.1	7.0
80°	1034.3	381.8	29.8	24.4	24.0	17.0	20.7	18.6	11.6	2.1	0.0
82.5°	723.3	142.0	17.4	18.6	18.6	12.0	16.1	13.2	6.6	0.0	0.0
85°	303.5	24.4	9.5	13.2	11.6	7.0	12.8	9.9	4.1	0.0	0.0
87.5°	5.4	0.0	3.7	7.9	8.3	4.1	6.6	4.1	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°	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3
2.5°	901.4	862.1	779.2	819.0	814.9	833.1	834.7	792.5	883.6	939.9	948.2
5°	864.5	838.0	833.5	810.7	804.9	838.5	820.2	819.0	862.9	927.1	927.5
7.5°	718.4	698.1	707.6	681.1	612.8	616.9	623.1	649.2	686.9	729.1	744.5
10°	493.1	545.7	507.2	503.9	496.9	474.9	457.5	471.2	520.0	559.0	573.5
12.5°	351.9	360.2	383.8	375.1	387.1	368.5	361.5	404.1	451.7	491.5	520.0
15°	205.8	219.9	233.9	263.8	275.8	272.0	293.6	329.2	367.7	385.9	421.1
17.5°	144.9	146.2	149.1	181.4	202.5	210.8	223.6	250.5	266.2	274.5	289.0
20°	126.7	123.0	118.0	136.2	156.1	166.4	162.7	183.8	196.7	205.0	215.3
22.5°	114.7	108.5	105.6	111.8	127.1	136.2	137.9	150.3	169.8	175.6	178.9
25°	103.5	99.4	97.3	100.6	108.9	117.6	119.2	135.4	152.8	155.3	161.9
27.5°	96.1	88.2	89.0	91.5	95.2	106.0	109.3	118.4	143.7	146.6	148.6
30°	88.2	79.9	82.4	84.9	83.2	96.5	101.4	111.8	136.2	140.8	143.3
32.5°	80.3	74.1	73.7	76.2	79.1	86.1	96.9	108.9	131.3	137.5	143.7
35°	71.6	66.7	67.5	67.9	71.6	80.7	88.6	94.8	110.1	113.5	115.5
37.5°	65.4	61.3	60.5	64.6	68.3	75.4	78.3	81.2	101.4	108.9	109.3
40°	58.0	55.5	55.5	58.4	66.7	65.8	69.6	78.7	98.1	106.0	106.8
42.5°	52.6	49.3	50.1	53.0	58.8	54.7	62.1	75.4	96.9	104.8	104.3
45°	44.3	43.5	45.1	47.6	50.1	46.4	58.0	72.0	92.7	103.1	100.2
47.5°	36.9	36.9	38.9	41.4	40.2	41.4	52.6	67.5	90.3	99.8	97.7
50°	30.2	30.6	32.7	36.9	33.1	36.4	47.2	62.9	86.1	96.5	94.8
52.5°	25.7	26.1	27.3	30.2	28.6	33.1	43.5	58.4	82.0	90.7	89.8
55°	22.4	23.2	23.2	24.8	25.7	31.1	39.3	53.8	75.8	85.3	83.6
57.5°	19.9	20.7	20.3	21.5	22.4	27.3	35.2	48.9	69.6	77.4	74.9
60°	17.8	18.6	18.2	19.9	19.5	23.6	30.6	43.5	62.9	69.1	67.1
62.5°	15.7	16.6	16.6	17.4	17.8	19.9	26.5	38.5	56.3	61.3	59.6
65°	14.1	14.9	15.3	14.9	15.7	17.0	22.4	34.8	48.9	53.8	51.3
67.5°	12.8	13.7	14.5	12.8	13.7	14.1	19.0	31.1	43.1	47.2	45.1
70°	12.4	12.8	12.8	11.2	10.8	11.2	16.6	26.5	37.7	41.8	38.9
72.5°	11.6	12.0	11.6	9.1	7.9	8.7	14.1	22.4	31.9	35.2	32.7
75°	10.8	11.2	10.8	7.5	5.0	6.2	11.6	19.5	27.3	29.0	27.7
77.5°	9.1	9.9	9.9	5.4	1.7	3.7	8.7	15.7	22.8	22.8	23.2
80°	0.8	2.5	4.1	2.9	0.0	0.4	2.9	8.3	14.5	14.1	15.3
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	5.0	3.7	4.1
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°	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3	875.3
2.5°	928.7	915.9	932.0	981.3	961.4	965.2	951.9	1033.5	1125.8	1128.7
5°	928.3	916.7	940.7	938.7	995.4	1057.1	1116.7	1213.2	1349.8	1350.6
7.5°	737.4	806.2	824.0	818.6	891.5	976.3	1068.3	1252.9	1365.1	1377.1
10°	665.0	694.8	731.2	744.5	774.7	855.4	959.4	1168.5	1294.3	1322.1
12.5°	576.4	671.6	720.0	814.0	831.4	843.0	1007.0	1188.7	1265.3	1262.0
15°	477.4	560.2	636.8	751.5	798.7	920.4	1049.6	1287.7	1333.2	1377.1
17.5°	337.9	400.4	518.0	638.5	782.6	915.1	1167.2	1464.5	1550.6	1602.8
20°	226.1	256.3	362.7	522.1	704.7	836.4	1215.2	1624.3	1718.3	1763.4
22.5°	183.4	197.9	253.0	382.6	602.0	832.7	1234.7	1798.6	2051.2	2111.3
25°	161.5	171.4	200.8	283.2	499.8	816.1	1342.4	1994.9	2299.6	2348.1
27.5°	141.2	156.1	178.0	233.5	428.5	804.5	1397.0	2324.5	2688.0	2735.6
30°	135.0	153.2	174.3	212.8	378.9	759.8	1484.0	2621.8	2966.7	3051.6
32.5°	145.7	152.0	162.3	195.0	340.4	712.6	1636.7	2977.0	3197.3	3307.9
35°	115.5	126.7	144.9	178.9	324.2	710.1	1723.3	3205.6	3567.1	3635.4
37.5°	113.0	123.4	147.0	174.3	343.7	729.1	1851.6	3673.9	4233.7	4373.6
40°	109.7	123.0	145.3	172.2	343.7	747.8	1933.6	4048.6	4682.1	4824.1
42.5°	108.5	125.5	144.9	180.9	332.9	758.1	2057.4	4422.5	5155.8	5268.0
45°	107.7	127.9	146.2	191.3	330.4	792.1	2127.4	4604.3	5460.5	5589.3
47.5°	105.6	127.9	163.1	185.1	316.7	788.8	2218.1	4873.8	5642.3	5750.8
50°	103.9	128.8	184.7	173.5	318.8	768.5	2341.1	5126.8	5896.9	5974.4
52.5°	100.2	131.7	181.4	157.3	312.6	766.4	2524.5	5486.6	6231.9	6288.6
55°	91.9	127.9	164.0	137.5	290.7	742.8	2767.5	5954.5	6696.5	6706.4
57.5°	84.5	118.8	137.1	126.3	243.5	745.7	2977.0	6385.1	7110.5	7156.9
60°	77.0	123.4	106.4	117.6	201.6	692.7	3078.5	6549.9	7411.9	7479.9
62.5°	70.0	113.9	90.7	108.1	179.7	643.4	3008.1	6417.4	7450.5	7592.9
65°	62.1	79.1	76.6	96.9	181.8	574.3	2772.9	6029.4	7304.3	7500.6
67.5°	53.4	62.1	67.5	83.6	194.6	515.1	2369.6	5406.7	6911.4	7133.7
70°	46.8	55.9	58.8	73.3	202.5	476.2	1869.9	4542.6	6106.4	6311.8
72.5°	38.9	51.8	52.6	64.2	195.0	437.7	1332.4	3261.1	4637.0	4735.5
75°	33.5	43.1	47.6	53.8	164.0	326.7	734.1	2018.5	2931.9	3042.0
77.5°	30.2	32.7	36.0	37.3	69.6	170.2	252.6	1244.6	1641.7	1765.9
80°	23.2	25.7	24.8	25.7	38.1	58.8	96.1	583.4	775.5	844.7
82.5°	7.5	12.4	13.7	11.6	24.8	29.0	27.7	201.6	252.2	267.9
85°	1.7	4.6	2.1	0.0	8.3	14.9	2.1	30.6	60.5	44.7
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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