

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: P596661

Luminaire Tested: **MSA-SA3A-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596661
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-SA3A-827-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 6290 lumens
Efficiency: N/A
Efficacy: 65.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

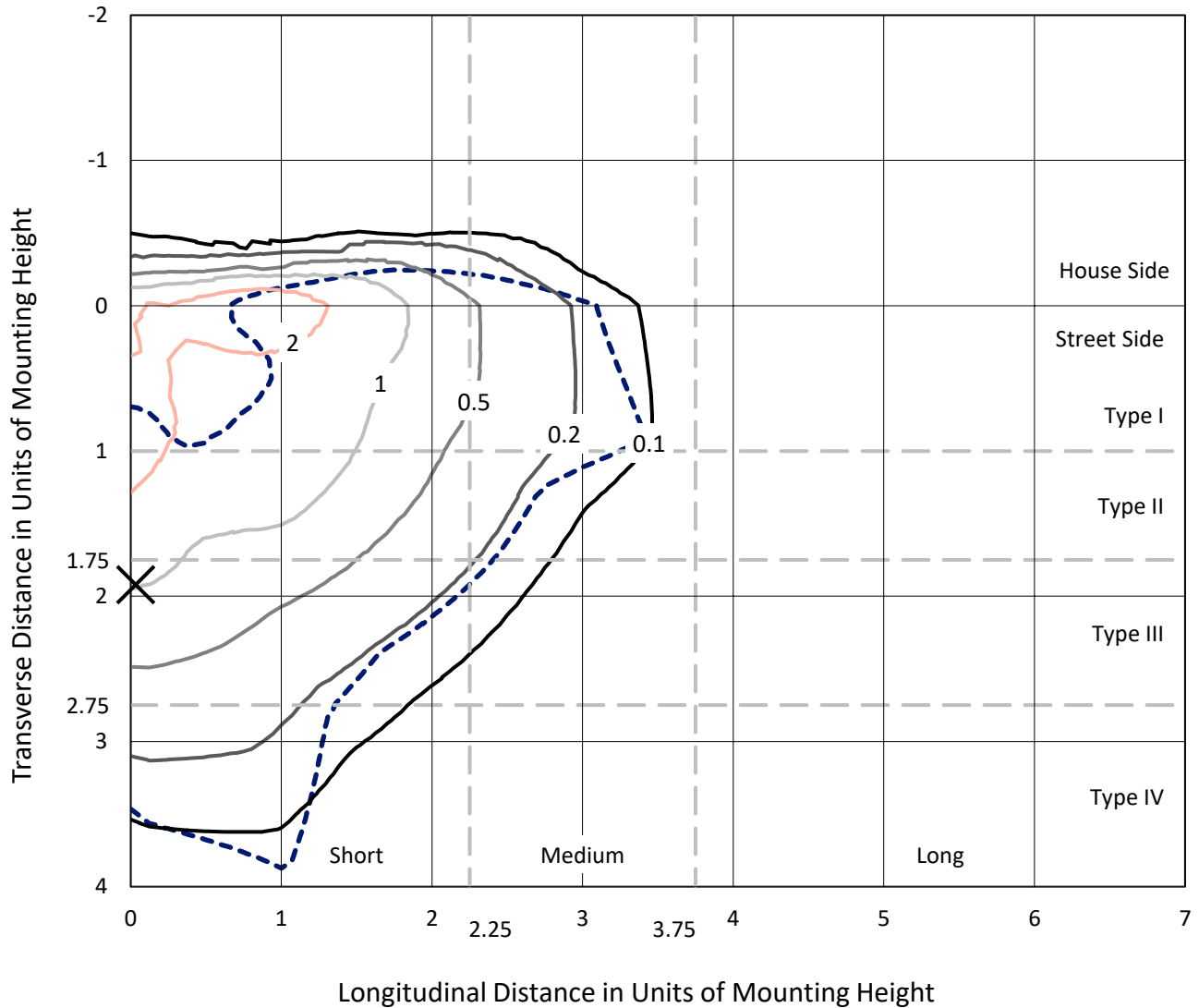
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

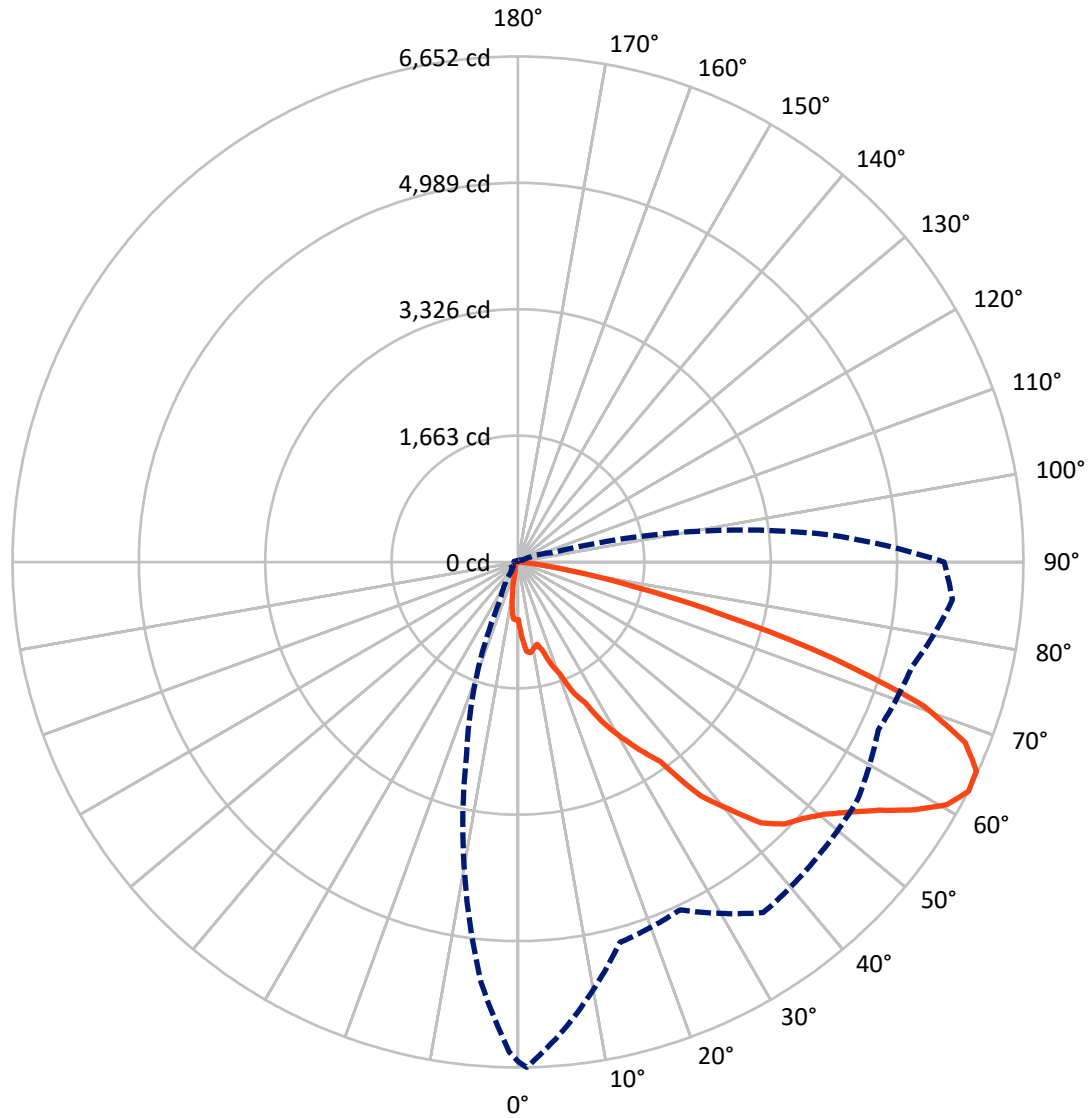
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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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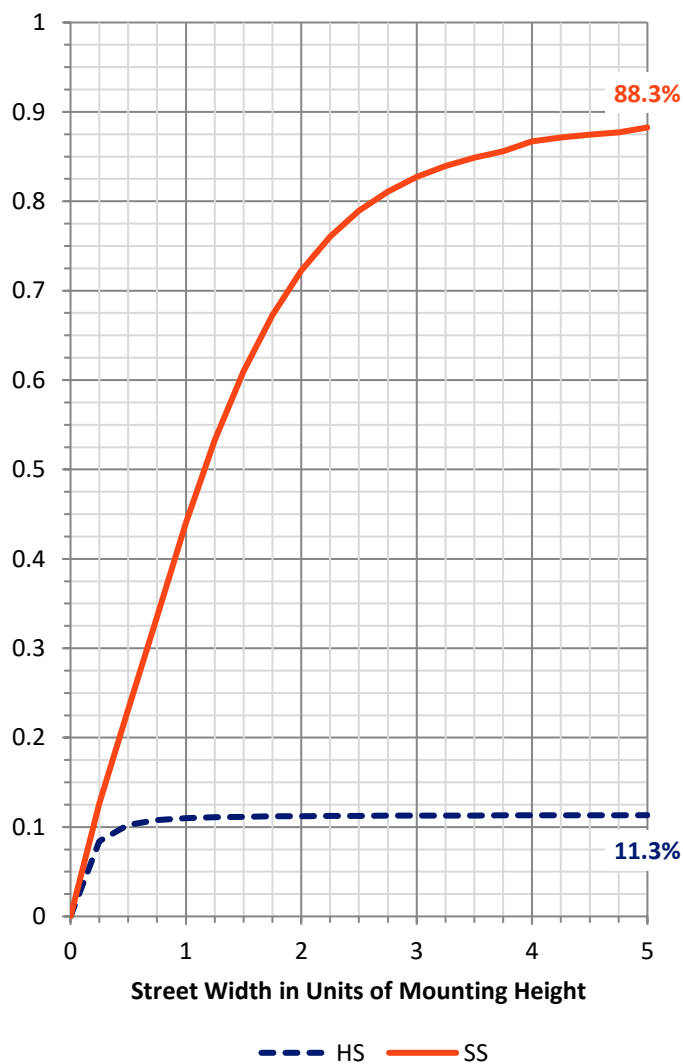
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	719.3	0.0	719.3
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	5570.7	0.0	5570.7
	% Fixture	88.6	0.0	88.6
Total	Lumens	6290.0	0.0	6290.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	1.3
10°-20°	221.1	3.5
20°-30°	357.5	5.7
30°-40°	598.8	9.5
40°-50°	979.1	15.6
50°-60°	1449.3	23.0
60°-70°	1663.9	26.5
70°-80°	822.8	13.1
80°-90°	113.0	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°	6290.0	100.0
0°-180°	6290.0	100.0

Coefficient of Utilization

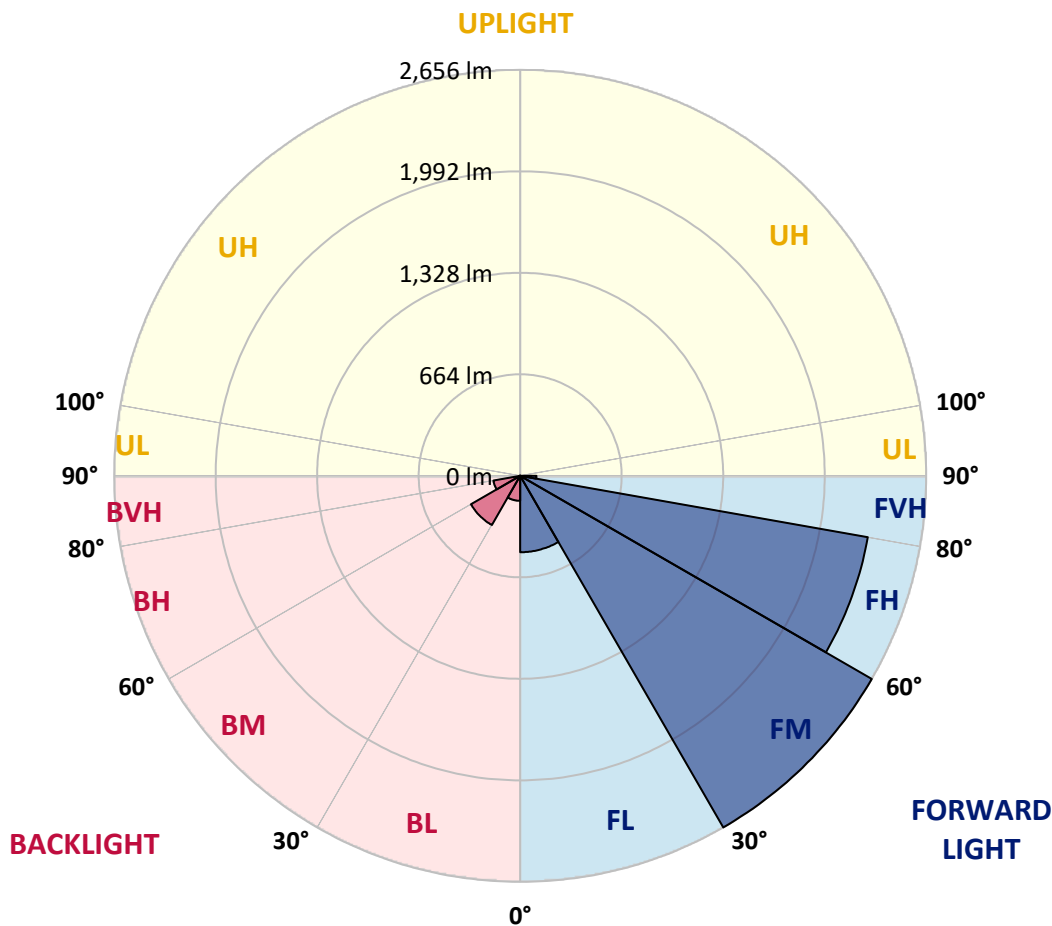


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	499.6	7.9			
FM (30°-60°)	2655.6	42.2			
FH (60°-80°)	2308.8	36.7			G2/5000
FVH (80°-90°)	106.7	1.7			G2/225
BL (0°-30°)	163.6	2.6	B1/500		
BM (30°-60°)	371.5	5.9	B1/1000		
BH (60°-80°)	177.8	2.8	B1/500		G1/500
BVH (80°-90°)	6.3	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°	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7
2.5°	977.1	981.8	959.9	957.0	906.1	969.6	971.4	978.9	932.3	842.0	968.1
5°	1169.2	1182.1	1165.3	1240.2	1261.7	1307.9	1223.0	1299.0	1266.7	1275.7	1293.9
7.5°	1192.2	1205.4	1240.9	1366.4	1482.1	1453.1	1443.8	1472.5	1469.9	1403.6	1436.6
10°	1144.5	1155.6	1214.7	1443.1	1493.6	1624.1	1656.0	1590.0	1563.1	1418.0	1354.5
12.5°	1092.5	1111.1	1186.4	1460.3	1611.9	1743.8	1848.8	1754.9	1665.6	1511.2	1453.1
15°	1192.2	1202.5	1320.8	1496.1	1628.7	1719.8	1805.8	1774.6	1761.0	1649.9	1453.1
17.5°	1387.5	1411.9	1497.5	1583.9	1688.6	1743.4	1723.0	1713.3	1678.6	1853.1	1649.5
20°	1526.6	1572.1	1684.3	1721.6	1638.4	1689.7	1677.1	1668.5	1641.3	1966.0	1875.3
22.5°	1827.7	1869.6	1871.7	1885.0	1691.5	1609.7	1588.9	1591.5	1715.1	1999.7	2156.3
25°	2032.7	2047.0	2160.3	2065.7	1836.3	1634.1	1554.9	1590.4	1768.5	2242.0	2420.5
27.5°	2368.2	2402.2	2472.8	2152.4	1923.0	1618.7	1492.5	1621.6	1909.0	2322.3	2714.1
30°	2641.7	2674.3	2787.9	2271.0	1998.3	1695.0	1519.4	1684.3	1996.5	2487.5	2977.9
32.5°	2863.5	2947.8	3076.8	2454.2	1995.4	1782.9	1656.7	1663.5	2104.0	2701.5	3238.8
35°	3147.1	3225.6	3316.2	2580.4	2125.9	1811.2	1697.2	1867.8	2263.9	2925.2	3590.1
37.5°	3786.1	3904.8	3725.6	2898.3	2277.9	2067.1	1857.1	1993.6	2431.3	3153.5	4072.9
40°	4176.1	4276.1	4103.0	3060.7	2540.9	2196.1	2142.4	2212.3	2595.1	3271.4	4436.7
42.5°	4560.4	4692.3	4403.0	3305.1	2790.8	2560.3	2413.3	2469.6	2832.0	3556.0	4846.0
45°	4838.5	4920.2	4467.9	3433.1	3134.2	2975.4	2877.5	2793.6	3162.5	3738.8	5110.2
47.5°	4978.3	5043.5	4595.9	3473.6	3338.5	3414.5	3628.8	3453.5	3455.0	3871.1	5252.5
50°	5171.9	5217.4	4667.5	3522.0	3560.3	4098.7	4207.0	3833.8	3789.0	4003.7	5275.8
52.5°	5443.9	5466.1	4806.6	3649.6	3892.6	4634.6	4673.6	4522.7	4123.4	4250.3	5327.4
55°	5805.6	5766.5	5055.0	3917.7	4239.2	5027.0	5079.4	4947.8	4543.9	4496.6	5487.3
57.5°	6195.5	6150.7	5423.1	4295.5	4615.2	5327.1	5358.2	5368.6	4823.1	4714.5	5759.0
60°	6475.1	6483.4	5886.6	4728.8	4848.9	5614.2	5551.8	5457.2	5104.8	5033.9	5891.2
62.5°	6573.0	6652.2	6247.5	5183.0	5050.3	5632.1	5535.3	5455.4	5231.0	5363.3	5739.6
65°	6493.0	6631.4	6331.4	5581.9	5172.2	5407.3	5306.6	5255.4	5227.1	5497.7	5404.1
67.5°	6175.5	6348.6	6091.2	5585.5	4729.2	4604.1	4723.1	4885.5	4791.6	5386.2	4934.2
70°	5464.0	5653.6	5533.9	5257.9	3939.6	3622.3	3753.5	3999.1	3932.7	4790.5	4242.8
72.5°	4099.4	4343.2	4366.8	4539.2	3127.3	2726.3	2745.3	2738.4	2852.8	3862.9	3310.9
75°	2633.4	2823.0	3079.3	3662.8	2375.7	1990.4	1808.3	1763.9	1977.1	3018.4	2370.3
77.5°	1528.7	1551.3	1669.6	2763.5	1701.5	1434.1	1310.1	1373.5	1448.1	2106.5	1571.0
80°	731.2	742.7	791.4	1421.9	1182.1	1241.3	1145.6	1216.9	994.3	1210.8	891.4
82.5°	231.9	234.4	242.7	698.6	734.1	822.2	526.9	706.5	614.7	731.9	593.6
85°	38.7	66.0	81.4	201.8	414.4	277.4	114.3	252.0	343.0	461.7	269.5
87.5°	0.0	0.0	0.0	3.6	33.7	15.8	2.5	14.3	52.7	102.9	12.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7
2.5°	1004.7	1029.4	936.2	852.7	873.9	857.0	831.6	788.2	687.8	761.7	756.7
5°	1292.9	1247.0	1120.8	1062.0	990.4	881.0	867.8	783.9	747.0	753.1	747.7
7.5°	1393.2	1311.2	1199.7	1022.6	854.5	696.8	648.4	593.6	582.5	606.1	621.5
10°	1314.4	1227.3	1129.8	909.7	780.3	666.3	547.0	470.3	428.7	423.7	428.0
12.5°	1350.6	1256.7	1055.9	887.5	752.4	649.1	515.8	400.0	309.7	316.5	298.6
15°	1375.7	1267.8	1038.4	840.9	694.6	556.6	396.1	280.3	206.5	185.0	172.0
17.5°	1523.0	1368.9	1016.2	787.1	614.0	433.3	248.8	162.4	138.4	130.8	124.7
20°	1712.2	1493.2	1015.8	730.5	495.0	271.0	155.2	117.6	111.8	116.1	111.5
22.5°	1932.3	1658.8	1069.9	659.9	355.2	171.0	120.8	104.3	98.6	102.2	102.5
25°	2153.8	1907.2	1114.0	592.9	247.3	131.2	107.5	96.1	89.6	92.8	91.0
27.5°	2553.8	2113.0	1104.0	507.2	182.1	115.4	100.0	90.0	80.3	85.3	84.9
30°	2815.5	2476.1	1143.0	387.1	144.4	101.1	93.2	82.1	71.7	77.4	77.1
32.5°	3128.4	2632.0	1185.3	297.1	120.1	95.7	83.9	73.1	67.0	70.6	69.9
35°	3480.0	2940.2	1107.6	247.3	104.3	86.4	74.2	66.0	60.6	62.4	62.4
37.5°	4101.2	3198.0	1061.0	201.4	97.1	78.1	69.5	59.5	56.3	56.3	58.1
40°	4453.9	3591.5	921.9	159.5	99.3	72.0	64.9	54.5	50.2	49.8	51.6
42.5°	4912.7	3818.4	834.8	129.0	90.0	70.3	59.5	49.5	44.4	44.1	45.9
45°	5184.8	3945.3	712.2	101.4	80.6	81.7	55.2	45.5	38.0	36.6	39.8
47.5°	5356.5	4113.4	642.7	80.6	70.3	81.4	53.8	39.4	31.9	30.1	33.0
50°	5443.6	4196.6	629.1	69.2	60.9	72.8	61.7	33.0	27.2	24.7	27.2
52.5°	5534.2	4331.7	634.1	63.8	53.8	58.4	58.4	28.3	24.0	21.1	22.9
55°	5717.4	4531.3	623.0	60.6	49.5	44.4	37.6	25.1	21.9	18.6	20.4
57.5°	5942.5	4674.7	623.0	57.7	45.9	38.0	30.1	23.3	20.1	16.1	17.6
60°	5899.8	4523.8	592.1	54.8	43.0	35.5	27.2	21.5	18.6	14.7	15.8
62.5°	5607.0	4113.4	479.6	50.5	40.5	33.7	24.7	20.4	17.6	12.9	14.0
65°	5262.9	3677.5	333.3	45.9	37.6	30.5	22.2	19.4	16.1	11.5	12.2
67.5°	4848.5	3158.2	185.0	41.2	34.8	26.5	20.4	19.0	15.4	10.4	11.1
70°	4129.5	2384.3	99.3	37.6	32.6	24.4	19.4	19.0	15.4	10.0	10.4
72.5°	3100.1	1501.5	58.1	34.4	29.8	22.6	18.3	19.4	15.1	9.7	9.7
75°	2109.4	911.5	41.6	29.4	26.5	19.0	17.6	18.6	15.4	9.7	9.0
77.5°	1434.1	640.5	34.1	26.5	24.0	16.8	17.9	18.6	15.4	7.9	6.1
80°	895.4	330.5	25.8	21.1	20.8	14.7	17.9	16.1	10.0	1.8	0.0
82.5°	626.2	122.9	15.1	16.1	16.1	10.4	14.0	11.5	5.7	0.0	0.0
85°	262.7	21.1	8.2	11.5	10.0	6.1	11.1	8.6	3.6	0.0	0.0
87.5°	4.7	0.0	3.2	6.8	7.2	3.6	5.7	3.6	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°	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7
2.5°	780.3	746.3	674.6	709.0	705.4	721.2	722.6	686.0	764.9	813.6	820.8
5°	748.4	725.5	721.5	701.8	696.8	725.8	710.1	709.0	747.0	802.5	802.9
7.5°	621.9	604.3	612.6	589.6	530.5	534.1	539.4	562.0	594.6	631.2	644.5
10°	426.9	472.4	439.1	436.2	430.1	411.1	396.1	407.9	450.2	483.9	496.4
12.5°	304.7	311.8	332.3	324.7	335.1	319.0	312.9	349.8	391.1	425.5	450.2
15°	178.1	190.3	202.5	228.3	238.7	235.5	254.1	285.0	318.3	334.1	364.5
17.5°	125.5	126.5	129.0	157.0	175.3	182.4	193.6	216.9	230.5	237.6	250.2
20°	109.7	106.5	102.2	117.9	135.1	144.1	140.9	159.1	170.3	177.4	186.4
22.5°	99.3	93.9	91.4	96.8	110.0	117.9	119.4	130.1	147.0	152.0	154.8
25°	89.6	86.0	84.2	87.1	94.3	101.8	103.2	117.2	132.3	134.4	140.1
27.5°	83.2	76.3	77.1	79.2	82.4	91.8	94.6	102.5	124.4	126.9	128.7
30°	76.3	69.2	71.3	73.5	72.0	83.5	87.8	96.8	117.9	121.9	124.0
32.5°	69.5	64.2	63.8	66.0	68.5	74.6	83.9	94.3	113.6	119.0	124.4
35°	62.0	57.7	58.4	58.8	62.0	69.9	76.7	82.1	95.3	98.2	100.0
37.5°	56.6	53.0	52.3	55.9	59.1	65.2	67.7	70.3	87.8	94.3	94.6
40°	50.2	48.0	48.0	50.5	57.7	57.0	60.2	68.1	84.9	91.8	92.5
42.5°	45.5	42.7	43.4	45.9	50.9	47.3	53.8	65.2	83.9	90.7	90.3
45°	38.4	37.6	39.1	41.2	43.4	40.1	50.2	62.4	80.3	89.3	86.7
47.5°	31.9	31.9	33.7	35.8	34.8	35.8	45.5	58.4	78.1	86.4	84.6
50°	26.2	26.5	28.3	31.9	28.7	31.5	40.9	54.5	74.6	83.5	82.1
52.5°	22.2	22.6	23.7	26.2	24.7	28.7	37.6	50.5	71.0	78.5	77.8
55°	19.4	20.1	20.1	21.5	22.2	26.9	34.1	46.6	65.6	73.8	72.4
57.5°	17.2	17.9	17.6	18.6	19.4	23.7	30.5	42.3	60.2	67.0	64.9
60°	15.4	16.1	15.8	17.2	16.8	20.4	26.5	37.6	54.5	59.9	58.1
62.5°	13.6	14.3	14.3	15.1	15.4	17.2	22.9	33.3	48.7	53.0	51.6
65°	12.2	12.9	13.3	12.9	13.6	14.7	19.4	30.1	42.3	46.6	44.4
67.5°	11.1	11.8	12.5	11.1	11.8	12.2	16.5	26.9	37.3	40.9	39.1
70°	10.8	11.1	11.1	9.7	9.3	9.7	14.3	22.9	32.6	36.2	33.7
72.5°	10.0	10.4	10.0	7.9	6.8	7.5	12.2	19.4	27.6	30.5	28.3
75°	9.3	9.7	9.3	6.5	4.3	5.4	10.0	16.8	23.7	25.1	24.0
77.5°	7.9	8.6	8.6	4.7	1.4	3.2	7.5	13.6	19.7	19.7	20.1
80°	0.7	2.2	3.6	2.5	0.0	0.4	2.5	7.2	12.5	12.2	13.3
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	4.3	3.2	3.6
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°	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7	757.7
2.5°	804.0	792.9	806.8	849.5	832.3	835.5	824.0	894.7	974.6	977.1
5°	803.6	793.6	814.4	812.6	861.7	915.1	966.7	1050.2	1168.5	1169.2
7.5°	638.4	697.9	713.3	708.6	771.7	845.2	924.8	1084.6	1181.8	1192.2
10°	575.6	601.5	633.0	644.5	670.6	740.5	830.5	1011.5	1120.5	1144.5
12.5°	498.9	581.4	623.3	704.7	719.7	729.8	871.7	1029.1	1095.4	1092.5
15°	413.3	485.0	551.3	650.6	691.4	796.8	908.6	1114.7	1154.2	1192.2
17.5°	292.5	346.6	448.4	552.7	677.4	792.1	1010.4	1267.8	1342.3	1387.5
20°	195.7	221.9	314.0	452.0	610.1	724.0	1052.0	1406.1	1487.5	1526.6
22.5°	158.8	171.3	219.0	331.2	521.2	720.8	1068.9	1557.0	1775.7	1827.7
25°	139.8	148.4	173.8	245.2	432.6	706.5	1162.0	1726.9	1990.7	2032.7
27.5°	122.2	135.1	154.1	202.2	371.0	696.4	1209.4	2012.3	2327.0	2368.2
30°	116.8	132.6	150.9	184.2	328.0	657.7	1284.6	2269.6	2568.2	2641.7
32.5°	126.2	131.5	140.5	168.8	294.6	616.9	1416.9	2577.1	2767.8	2863.5
35°	100.0	109.7	125.5	154.8	280.7	614.7	1491.8	2775.0	3087.9	3147.1
37.5°	97.9	106.8	127.2	150.9	297.5	631.2	1602.9	3180.4	3665.0	3786.1
40°	95.0	106.5	125.8	149.1	297.5	647.3	1673.9	3504.8	4053.2	4176.1
42.5°	93.9	108.6	125.5	156.6	288.2	656.3	1781.1	3828.4	4463.2	4560.4
45°	93.2	110.8	126.5	165.6	286.0	685.7	1841.6	3985.8	4727.0	4838.5
47.5°	91.4	110.8	141.2	160.2	274.2	682.8	1920.1	4219.1	4884.4	4978.3
50°	90.0	111.5	159.9	150.2	276.0	665.3	2026.6	4438.1	5104.8	5171.9
52.5°	86.7	114.0	157.0	136.2	270.6	663.5	2185.4	4749.6	5394.8	5443.9
55°	79.6	110.8	141.9	119.0	251.6	643.0	2395.8	5154.7	5797.0	5805.6
57.5°	73.1	102.9	118.6	109.3	210.8	645.5	2577.1	5527.4	6155.4	6195.5
60°	66.7	106.8	92.1	101.8	174.6	599.7	2665.0	5670.1	6416.3	6475.1
62.5°	60.6	98.6	78.5	93.6	155.6	557.0	2604.0	5555.4	6449.7	6573.0
65°	53.8	68.5	66.3	83.9	157.4	497.1	2400.4	5219.5	6323.1	6493.0
67.5°	46.2	53.8	58.4	72.4	168.5	445.9	2051.3	4680.4	5983.0	6175.5
70°	40.5	48.4	50.9	63.4	175.3	412.2	1618.7	3932.4	5286.2	5464.0
72.5°	33.7	44.8	45.5	55.6	168.8	378.9	1153.4	2823.0	4014.1	4099.4
75°	29.0	37.3	41.2	46.6	141.9	282.8	635.5	1747.4	2538.1	2633.4
77.5°	26.2	28.3	31.2	32.3	60.2	147.3	218.6	1077.5	1421.2	1528.7
80°	20.1	22.2	21.5	22.2	33.0	50.9	83.2	505.0	671.3	731.2
82.5°	6.5	10.8	11.8	10.0	21.5	25.1	24.0	174.6	218.3	231.9
85°	1.4	3.9	1.8	0.0	7.2	12.9	1.8	26.5	52.3	38.7
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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