

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: P565288

Luminaire Tested: **MSA-SA1D-827-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565288
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2108-334-1)
Test Lab: INNOVATIONS CENTER
Issue Date: 8/19/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4558 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B2 - U0 - G2

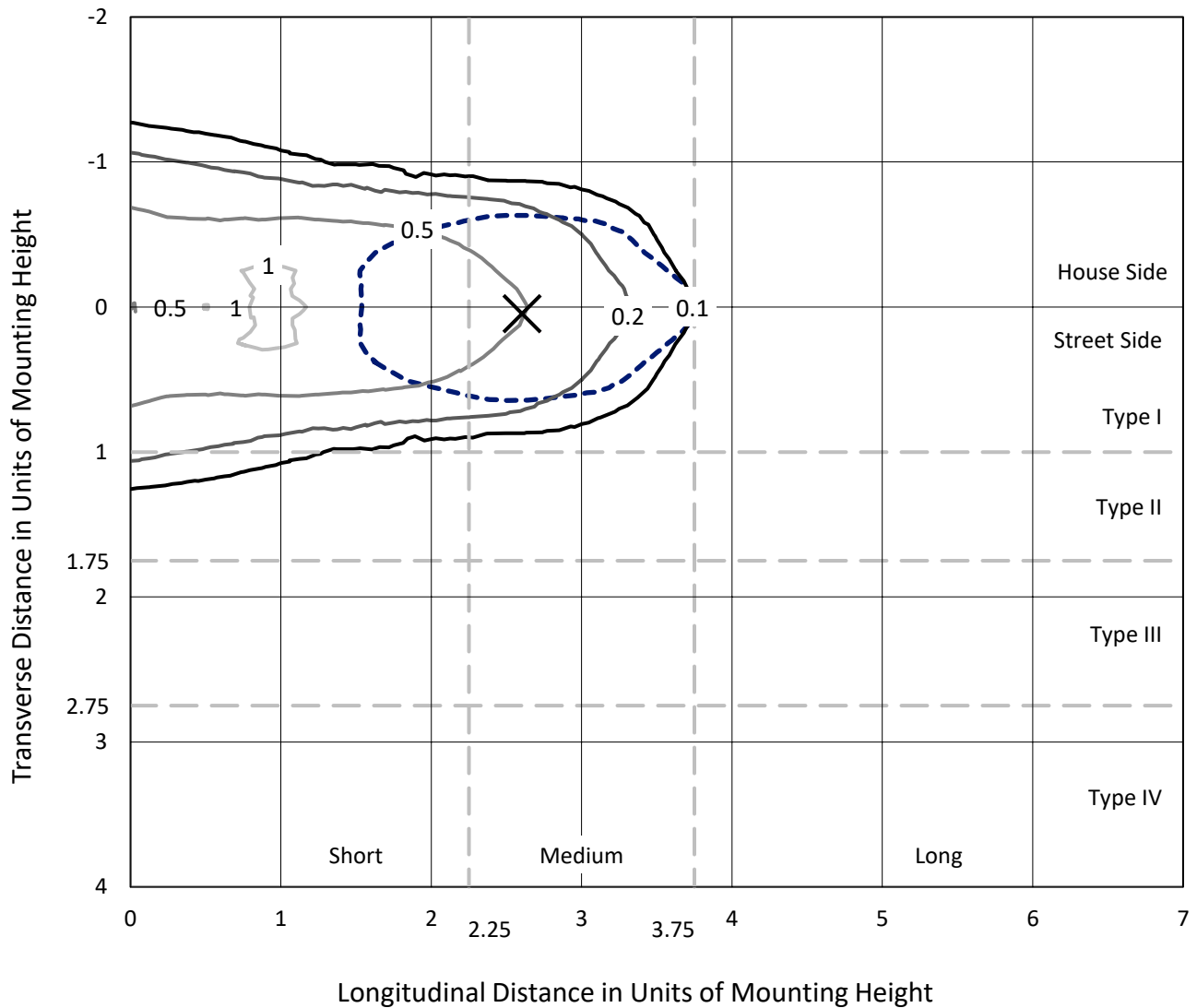
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

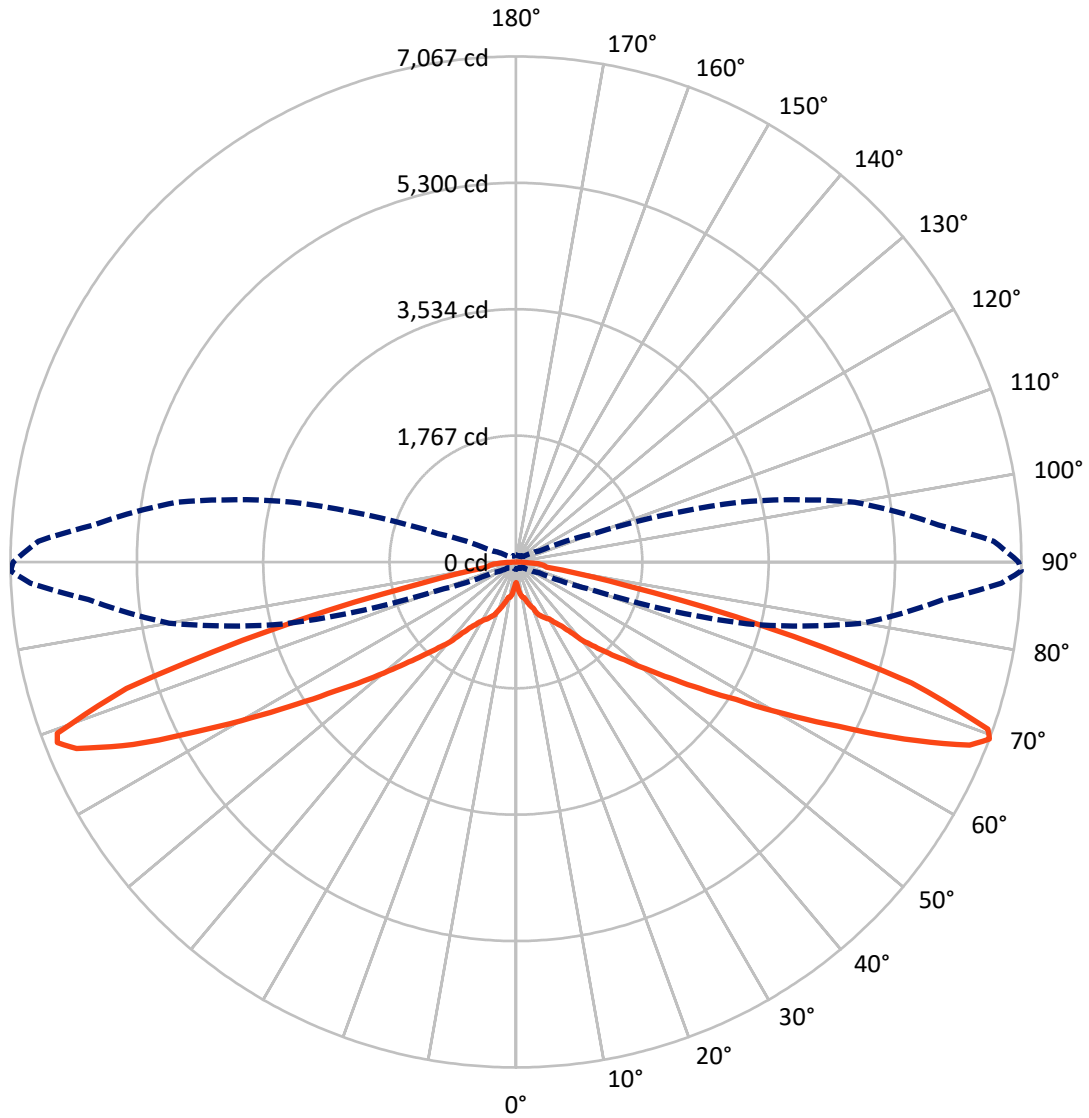
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type I - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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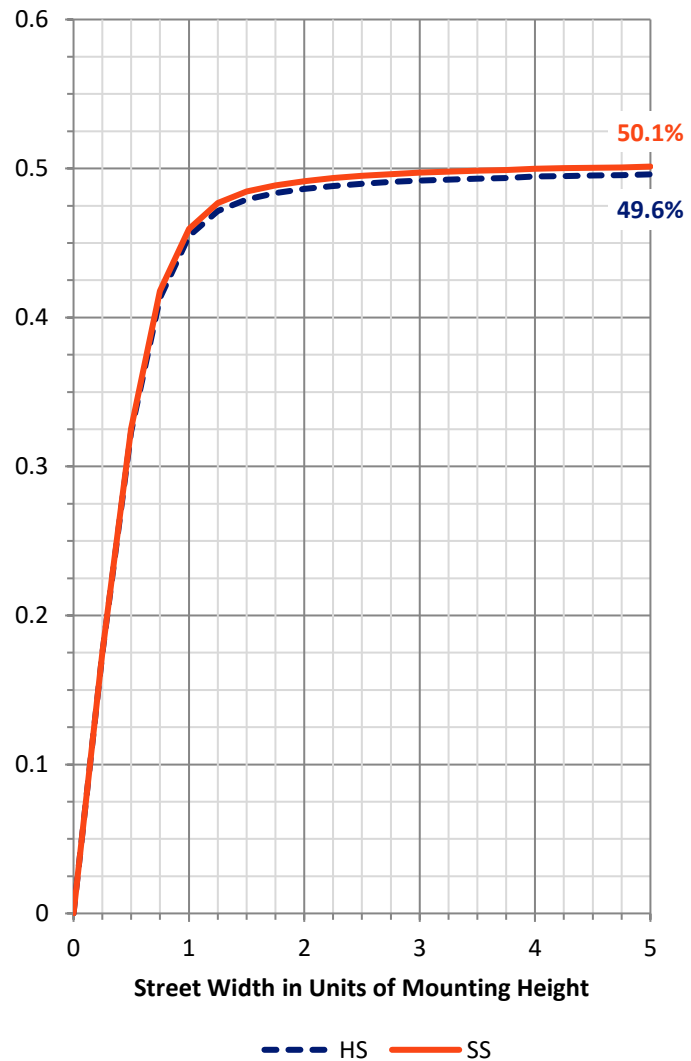
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2279.0	0.0	2279.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2279.0	0.0	2279.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	4558.0	0.0	4558.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.3	0.8
10°-20°	167.1	3.7
20°-30°	333.4	7.3
30°-40°	504.3	11.1
40°-50°	732.1	16.1
50°-60°	961.8	21.1
60°-70°	1173.3	25.7
70°-80°	593.2	13.0
80°-90°	56.5	1.2
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°	4558.0	100.0
0°-180°	4558.0	100.0

Coefficient of Utilization

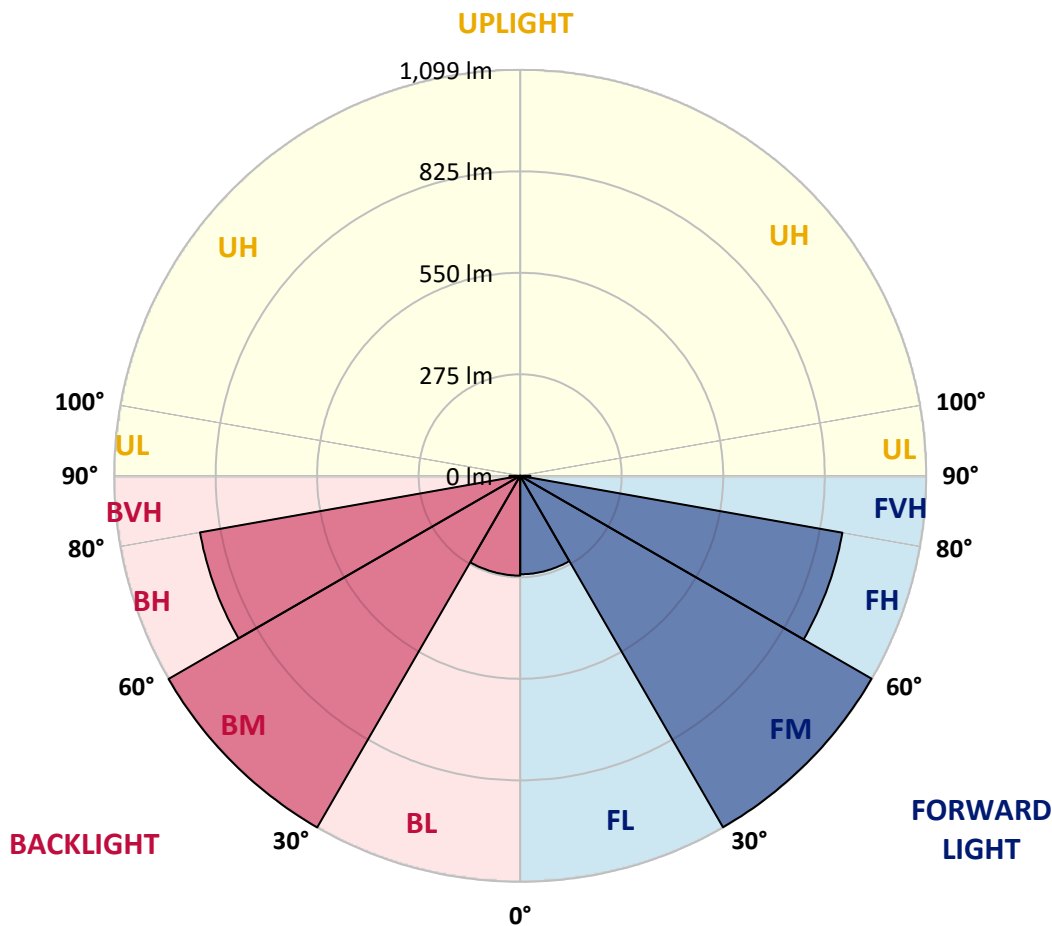


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	266.6	5.8			
FM (30°-60°)	1098.7	24.1			
FH (60°-80°)	886.0	19.4			G1/1800
FVH (80°-90°)	27.7	0.6			G1/100
BL (0°-30°)	270.3	5.9	B1/500		
BM (30°-60°)	1099.5	24.1	B2/2500		
BH (60°-80°)	880.4	19.3	B2/1000		G2/1000
BVH (80°-90°)	28.8	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2
 Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7
2.5°	338.8	299.7	296.3	287.0	293.8	296.3	290.4	281.9	291.3	296.3	287.0
5°	427.1	369.4	349.8	333.7	301.4	287.9	301.4	336.3	340.5	361.7	355.8
7.5°	470.4	461.1	436.5	383.0	331.2	302.3	338.8	388.9	414.4	434.8	456.0
10°	502.7	497.6	454.3	416.1	394.8	396.5	397.4	413.5	435.6	469.6	481.5
12.5°	510.3	508.6	515.4	506.9	508.6	518.0	508.6	504.4	517.1	528.2	516.3
15°	559.6	558.7	561.3	563.0	596.9	611.4	596.9	584.2	574.9	565.5	585.0
17.5°	593.5	589.3	590.1	606.3	644.5	684.4	676.8	659.8	638.5	651.3	667.4
20°	612.2	604.6	609.7	616.5	681.0	725.2	730.3	707.3	694.6	710.7	724.3
22.5°	630.1	618.2	600.3	607.1	666.6	730.3	754.9	748.9	758.3	763.4	760.8
25°	608.8	616.5	596.9	616.5	676.8	735.3	784.6	819.4	820.3	817.7	836.4
27.5°	596.1	590.1	557.0	607.1	657.2	693.7	819.4	878.0	895.8	841.5	878.0
30°	574.0	583.4	538.3	580.0	643.6	704.8	859.3	943.4	917.1	910.3	918.8
32.5°	560.4	554.5	533.3	556.2	604.6	737.9	884.8	981.6	1014.7	998.6	996.9
35°	538.3	542.6	509.5	534.1	602.0	709.9	901.8	1077.5	1128.5	1115.8	1105.6
37.5°	541.7	527.3	503.5	521.4	585.9	725.2	944.2	1170.1	1250.8	1257.6	1210.9
40°	516.3	507.8	472.1	501.8	555.3	715.8	954.4	1275.4	1412.1	1442.7	1375.6
42.5°	479.8	468.7	448.3	481.5	537.5	670.0	968.9	1401.9	1576.0	1639.7	1578.5
45°	427.1	412.7	402.5	446.6	498.4	658.1	953.6	1507.2	1733.1	1820.5	1818.8
47.5°	363.4	354.1	349.0	395.7	466.2	628.4	922.2	1573.4	1842.6	2066.8	2032.8
50°	291.3	284.5	283.6	332.9	411.8	567.2	886.5	1606.6	2009.0	2292.6	2322.4
52.5°	233.5	228.4	227.6	267.5	344.7	484.9	811.8	1632.0	2167.8	2549.1	2701.9
55°	182.6	177.5	178.3	211.4	274.3	396.5	698.0	1603.2	2307.1	2811.5	3101.0
57.5°	149.4	144.4	145.2	163.9	209.7	303.1	556.2	1540.3	2369.9	3135.8	3566.3
60°	131.6	126.5	124.0	132.5	161.3	228.4	413.5	1295.8	2380.1	3405.0	4071.6
62.5°	122.3	117.2	114.6	117.2	133.3	174.9	298.0	1026.6	2321.5	3635.1	4534.3
65°	113.8	109.5	106.1	108.7	117.2	139.3	217.4	703.1	2015.0	3740.4	4870.6
67.5°	104.4	101.0	97.6	101.0	107.0	117.2	169.0	444.9	1510.6	3603.7	5010.7
69°	99.3	94.3	92.6	95.1	101.0	107.8	146.1	354.9	1148.9	3343.9	4925.8
70°	94.3	90.9	88.3	92.6	97.6	102.7	131.6	301.4	900.9	3010.2	4715.2
72.5°	83.2	80.7	79.0	83.2	87.5	90.9	107.8	214.8	522.2	2049.8	3739.6
75°	73.0	70.5	69.6	73.0	76.4	78.1	90.9	147.7	308.2	1072.4	2243.4
77.5°	61.1	57.7	58.6	62.8	65.4	66.2	76.4	106.1	181.7	485.7	1039.3
80°	45.0	45.0	48.4	51.8	51.8	51.8	61.1	77.3	110.4	223.3	431.4
82.5°	31.4	32.3	33.1	38.2	39.1	35.7	46.7	56.0	68.8	97.6	149.4
85°	17.8	18.7	19.5	22.9	23.8	21.2	30.6	35.7	39.9	48.4	78.1
87.5°	6.8	7.6	10.2	11.9	12.7	9.3	14.4	17.0	17.0	20.4	34.8
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7	288.7
2.5°	306.5	312.5	323.5	326.1	316.7	306.5	283.6	298.0	304.0	292.9	296.3
5°	379.6	392.3	405.9	389.7	379.6	372.8	361.7	362.6	356.6	337.1	304.8
7.5°	461.9	447.5	457.7	468.7	452.6	453.4	463.6	442.4	426.3	393.1	332.9
10°	500.1	500.1	502.7	502.7	495.9	495.9	495.0	461.1	441.5	427.1	410.1
12.5°	502.7	501.8	512.0	504.4	506.1	507.8	512.0	527.3	522.2	503.5	518.8
15°	573.2	569.8	573.2	572.3	574.9	582.5	579.1	575.7	576.6	590.1	613.1
17.5°	639.4	641.1	637.7	643.6	643.6	648.7	660.6	648.7	638.5	664.0	681.8
20°	715.8	709.9	696.3	706.5	709.0	709.9	729.4	715.0	700.5	709.9	731.1
22.5°	793.1	792.2	793.9	794.8	798.2	785.4	759.1	754.9	764.2	751.5	754.0
25°	840.6	841.5	845.7	846.6	832.1	845.7	855.1	827.1	827.1	824.5	807.5
27.5°	898.4	885.6	890.7	897.5	891.6	895.0	883.9	843.2	886.5	892.4	824.5
30°	937.4	931.5	925.5	932.3	938.3	953.6	922.2	917.9	921.3	952.7	863.6
32.5°	1019.8	1028.3	1017.3	1006.2	1017.3	1013.9	1000.3	994.3	1036.8	995.2	890.7
35°	1096.2	1099.6	1100.5	1098.8	1105.6	1093.7	1093.7	1115.8	1128.5	1083.5	899.2
37.5°	1280.5	1268.6	1244.0	1232.1	1253.3	1271.1	1218.5	1244.8	1239.7	1163.3	962.9
40°	1412.9	1440.1	1447.8	1444.4	1447.8	1396.8	1407.9	1427.4	1404.5	1277.9	940.8
42.5°	1606.6	1623.5	1617.6	1609.9	1613.3	1604.0	1570.9	1643.1	1560.7	1406.2	974.8
45°	1783.2	1821.4	1823.9	1797.6	1818.8	1785.7	1799.3	1824.8	1741.6	1502.1	965.5
47.5°	1993.8	2072.7	2043.0	2043.0	2064.2	1992.9	2025.2	2059.1	1838.4	1566.6	914.5
50°	2305.4	2347.8	2346.1	2338.5	2347.8	2309.6	2304.5	2300.3	1987.0	1627.8	883.1
52.5°	2657.8	2715.5	2693.4	2701.9	2714.7	2642.5	2699.4	2544.0	2172.9	1650.7	811.8
55°	3107.8	3147.7	3125.6	3082.3	3140.1	3094.2	3112.9	2809.8	2302.0	1585.3	692.9
57.5°	3643.6	3664.0	3627.5	3623.2	3661.4	3612.2	3580.8	3108.7	2369.1	1536.1	553.6
60°	4269.4	4333.1	4310.2	4273.7	4308.5	4265.2	4027.4	3362.5	2355.5	1306.0	428.8
62.5°	5020.0	5084.6	5059.1	5034.5	5056.6	4943.6	4446.9	3562.9	2294.3	1035.1	313.3
65°	5639.9	5931.2	5969.4	5970.2	5863.2	5601.7	4781.4	3641.1	1971.7	722.6	229.3
67.5°	6047.5	6652.9	6841.4	6773.5	6528.1	5931.2	4916.5	3488.2	1522.5	456.8	171.5
69°	6000.8	6794.7	7067.3	7029.1	6684.3	5926.1	4811.2	3230.9	1163.3	363.4	145.2
70°	5785.1	6678.4	7001.9	7018.9	6585.0	5698.5	4623.5	2935.4	940.8	309.9	133.3
72.5°	4616.7	5503.2	5787.7	5898.9	5468.4	4563.2	3791.4	2071.0	545.1	216.5	107.8
75°	2859.9	3337.1	3573.1	3637.7	3377.0	2842.0	2301.1	1152.3	332.0	152.8	90.9
77.5°	1282.2	1420.6	1556.5	1556.5	1454.6	1297.5	1054.6	557.0	188.5	108.7	76.4
80°	429.7	445.8	433.9	438.2	421.2	405.0	423.7	240.3	116.3	81.5	62.0
82.5°	292.1	366.8	389.7	389.7	366.0	288.7	163.0	110.4	71.3	58.6	47.6
85°	237.8	290.4	311.6	321.0	302.3	243.7	85.8	53.5	42.5	37.4	32.3
87.5°	79.8	74.7	70.5	68.8	72.2	75.6	42.5	22.9	19.5	17.8	17.0
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):

	135°	145°	155°	165°	175°	180°
0°	288.7	288.7	288.7	288.7	288.7	288.7
2.5°	302.3	292.1	296.3	300.6	331.2	354.1
5°	300.6	315.0	347.3	388.1	406.7	452.6
7.5°	309.1	361.7	422.0	464.5	481.5	495.9
10°	413.5	422.9	443.2	484.0	518.0	523.9
12.5°	534.1	531.6	517.1	535.8	518.8	530.7
15°	628.4	600.3	580.8	578.3	572.3	572.3
17.5°	680.2	655.5	628.4	621.6	603.7	618.2
20°	741.3	698.8	630.9	624.1	618.2	604.6
22.5°	729.4	686.9	616.5	608.0	639.4	637.7
25°	743.8	686.9	619.9	610.5	625.0	625.0
27.5°	708.2	661.5	613.1	557.0	601.2	611.4
30°	698.8	646.2	590.1	540.0	585.0	575.7
32.5°	748.1	608.0	552.8	537.5	570.6	563.8
35°	709.9	601.2	543.4	515.4	554.5	547.7
37.5°	726.0	592.7	527.3	503.5	535.0	545.1
40°	722.6	552.8	508.6	478.1	509.5	514.6
42.5°	665.7	522.2	477.2	446.6	462.8	479.8
45°	648.7	503.5	446.6	404.2	405.0	424.6
47.5°	617.3	461.1	390.6	351.5	351.5	367.7
50°	564.7	404.2	326.9	291.3	290.4	303.1
52.5°	486.6	349.0	276.0	236.9	234.4	247.1
55°	398.2	281.1	217.4	191.9	186.8	191.9
57.5°	309.9	219.1	171.5	151.1	150.3	154.5
60°	240.3	171.5	136.7	124.8	126.5	133.3
62.5°	181.7	136.7	116.3	112.1	114.6	121.4
65°	144.4	118.0	106.1	103.6	106.1	112.9
67.5°	117.2	107.0	98.5	95.1	96.8	103.6
69°	107.8	101.0	94.3	90.0	91.7	96.8
70°	102.7	97.6	90.9	86.6	88.3	93.4
72.5°	90.0	87.5	82.4	78.1	79.0	83.2
75°	79.0	77.3	73.9	68.8	68.8	73.9
77.5°	66.2	67.1	63.7	58.6	57.7	60.3
80°	52.6	54.3	52.6	47.6	45.9	45.9
82.5°	38.2	41.6	39.9	34.8	34.0	34.0
85°	23.8	26.3	25.5	22.1	22.1	19.5
87.5°	11.0	14.4	13.6	11.9	11.0	7.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)