

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: P596375

Luminaire Tested: **MSA-SA3D-722-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596375
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-SA3D-722-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: 10674 lumens
Efficiency: N/A
Efficacy: 55.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

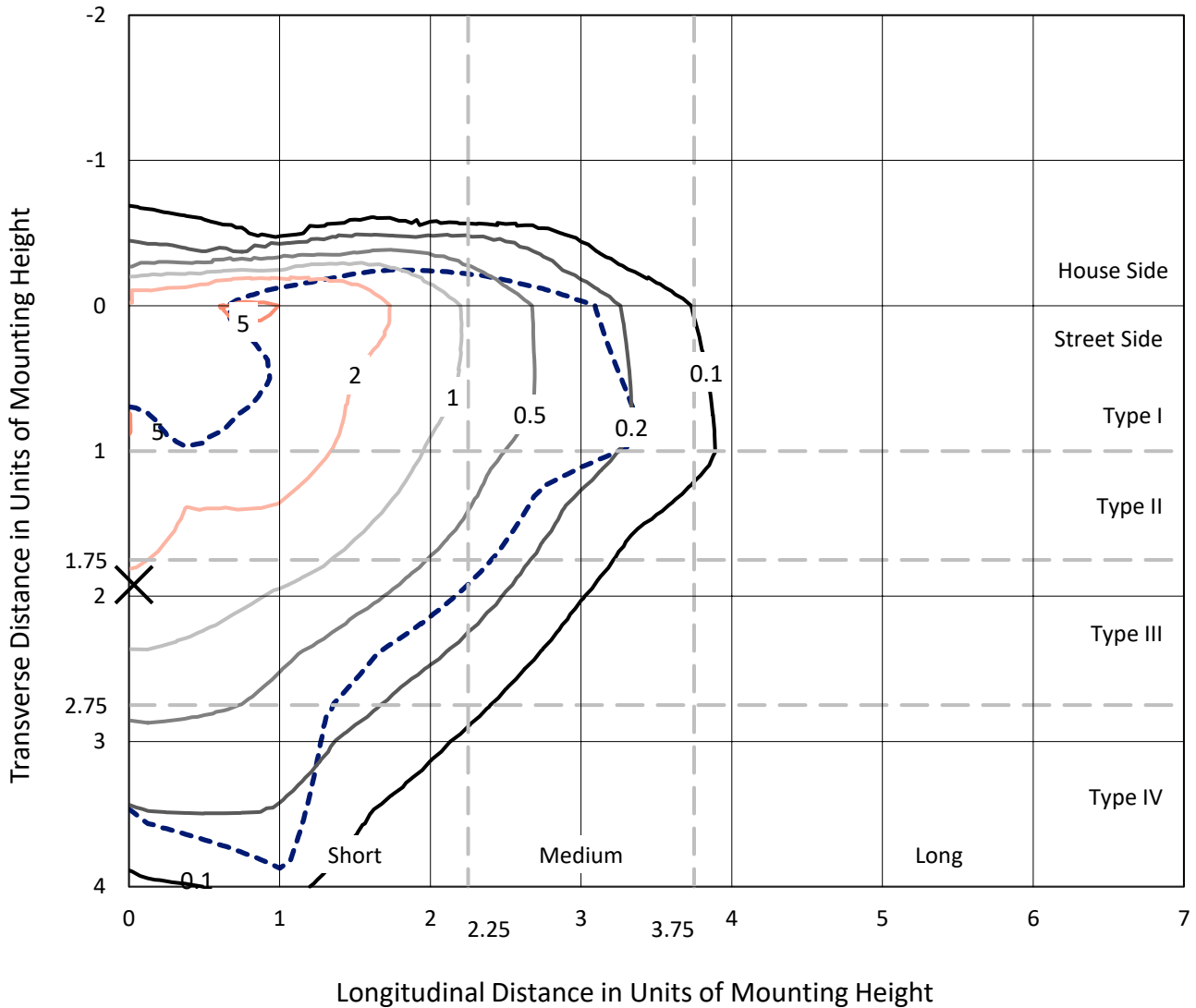
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

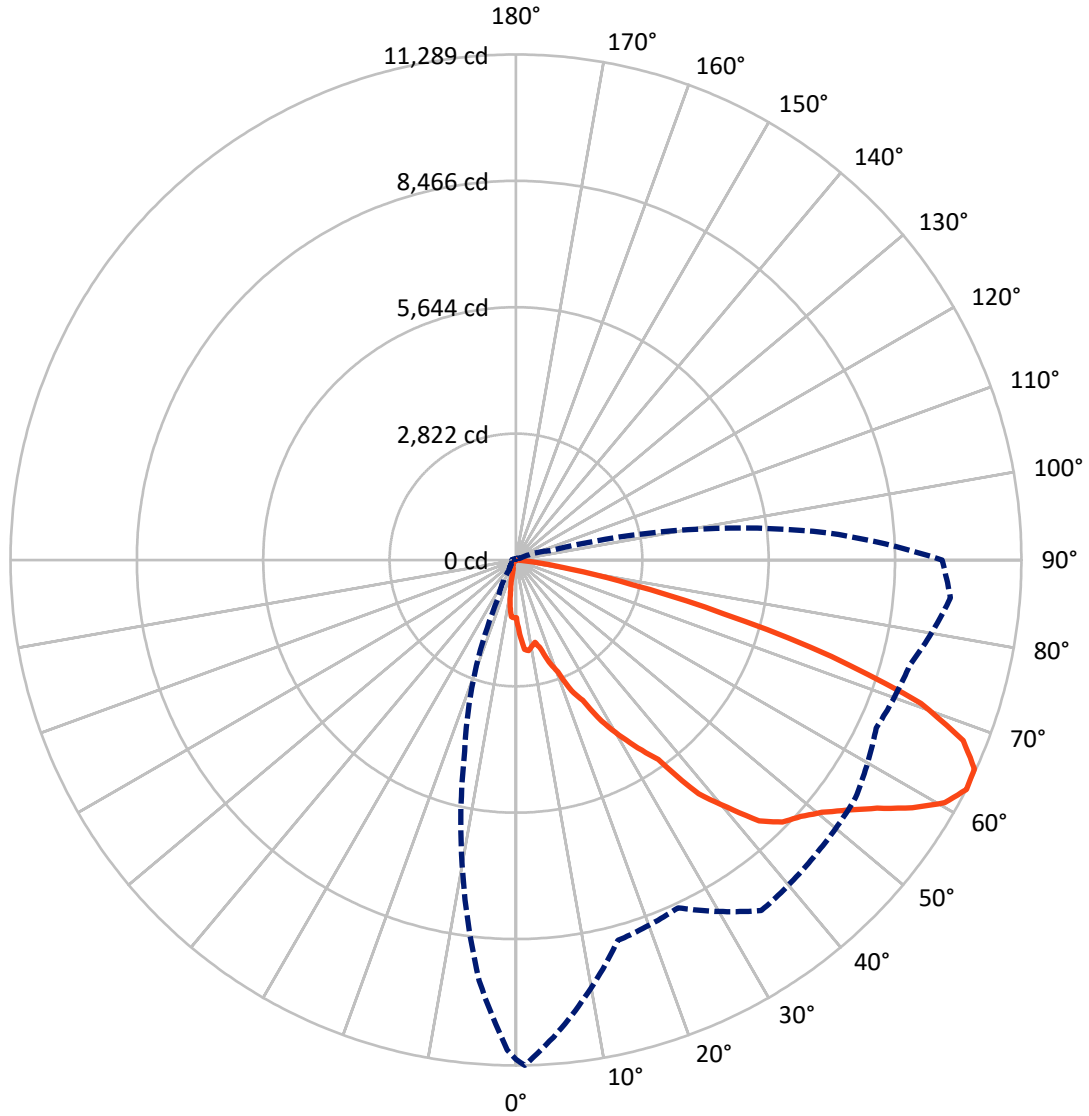
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 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	1220.6	0.0	1220.6
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	9453.4	0.0	9453.4
	% Fixture	88.6	0.0	88.6
Total	Lumens	10674.0	0.0	10674.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.7	1.3
10°-20°	375.3	3.5
20°-30°	606.6	5.7
30°-40°	1016.1	9.5
40°-50°	1661.5	15.6
50°-60°	2459.4	23.0
60°-70°	2823.6	26.5
70°-80°	1396.3	13.1
80°-90°	191.7	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°	10674.0	100.0
0°-180°	10674.0	100.0

Coefficient of Utilization

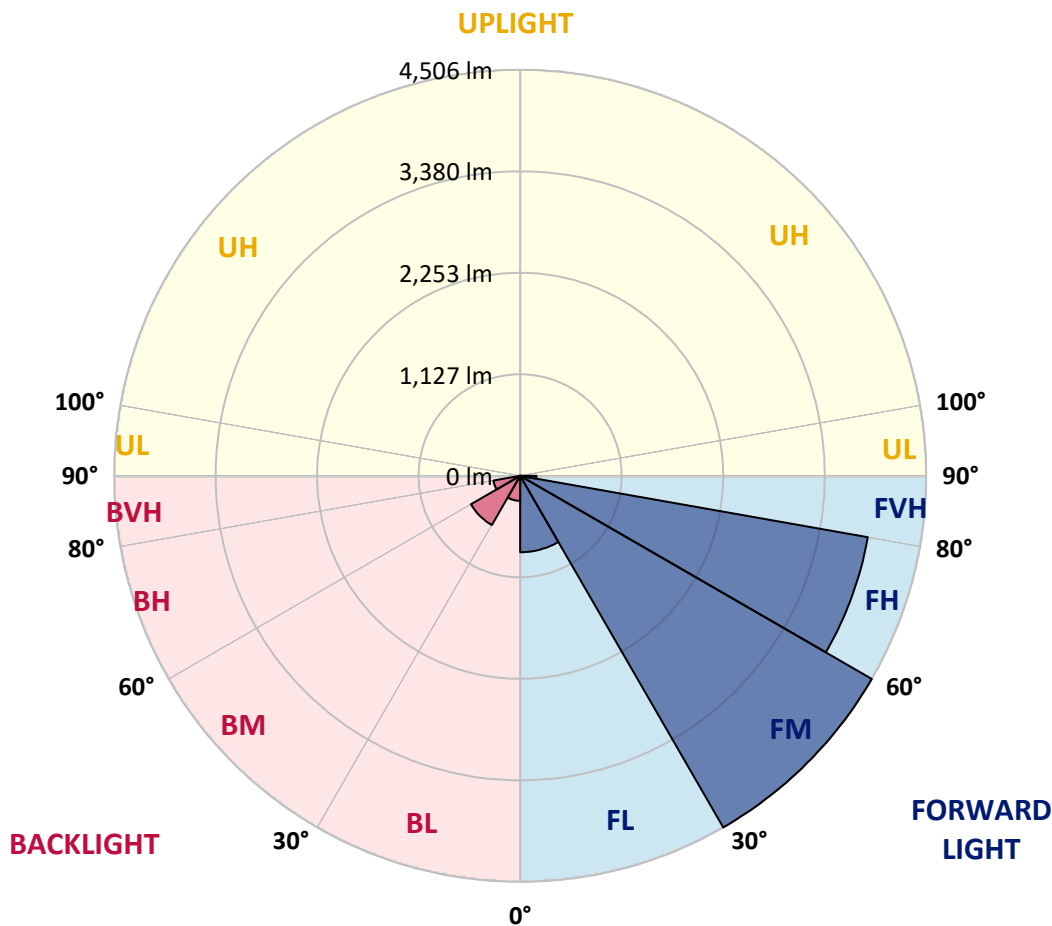


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	847.8	7.9			
FM (30°-60°)	4506.5	42.2			
FH (60°-80°)	3918.0	36.7			G2/5000
FVH (80°-90°)	181.1	1.7			G2/225
BL (0°-30°)	277.7	2.6	B1/500		
BM (30°-60°)	630.5	5.9	B1/1000		
BH (60°-80°)	301.8	2.8	B1/500		G1/500
BVH (80°-90°)	10.6	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9
2.5°	1658.1	1666.0	1628.9	1624.0	1537.7	1645.3	1648.4	1661.1	1582.1	1428.8	1642.9
5°	1984.1	2006.0	1977.4	2104.6	2141.1	2219.5	2075.4	2204.3	2149.6	2164.8	2195.8
7.5°	2023.1	2045.6	2105.8	2318.7	2515.1	2465.9	2450.1	2498.7	2494.5	2381.9	2437.9
10°	1942.2	1961.0	2061.4	2448.8	2534.6	2756.0	2810.1	2698.2	2652.6	2406.3	2298.6
12.5°	1854.0	1885.6	2013.3	2478.0	2735.3	2959.2	3137.4	2978.0	2826.6	2564.4	2465.9
15°	2023.1	2040.7	2241.4	2538.9	2763.9	2918.4	3064.4	3011.5	2988.4	2799.8	2465.9
17.5°	2354.6	2395.9	2541.3	2687.9	2865.5	2958.6	2923.9	2907.5	2848.5	3144.7	2799.2
20°	2590.6	2667.8	2858.2	2921.5	2780.3	2867.3	2846.0	2831.4	2785.2	3336.3	3182.4
22.5°	3101.5	3172.7	3176.3	3198.8	2870.4	2731.7	2696.4	2700.7	2910.5	3393.5	3659.3
25°	3449.4	3473.8	3666.0	3505.4	3116.1	2773.0	2638.6	2698.8	3001.1	3804.6	4107.6
27.5°	4018.8	4076.5	4196.4	3652.6	3263.3	2746.9	2532.8	2751.8	3239.6	3940.9	4605.7
30°	4482.9	4538.2	4731.0	3853.9	3391.0	2876.4	2578.4	2858.2	3388.0	4221.3	5053.4
32.5°	4859.4	5002.3	5221.3	4164.7	3386.2	3025.5	2811.4	2822.9	3570.5	4584.4	5496.2
35°	5340.5	5473.7	5627.6	4378.8	3607.6	3073.5	2880.1	3169.6	3841.7	4964.0	6092.3
37.5°	6425.0	6626.3	6322.2	4918.4	3865.5	3507.8	3151.4	3383.1	4125.8	5351.4	6911.6
40°	7086.8	7256.5	6962.7	5193.9	4311.9	3726.8	3635.5	3754.2	4403.8	5551.6	7529.0
42.5°	7738.8	7962.7	7471.8	5608.7	4735.9	4344.8	4095.4	4190.9	4805.8	6034.5	8223.6
45°	8210.9	8349.5	7581.9	5825.9	5318.6	5049.1	4883.1	4740.8	5366.6	6344.7	8671.9
47.5°	8448.1	8558.8	7799.1	5894.6	5665.3	5794.3	6158.0	5860.6	5863.0	6569.2	8913.4
50°	8776.5	8853.8	7920.7	5976.7	6041.8	6955.4	7139.1	6505.9	6429.9	6794.2	8952.9
52.5°	9238.2	9275.9	8156.7	6193.3	6605.7	7864.8	7931.1	7675.0	6997.4	7212.7	9040.5
55°	9851.9	9785.6	8578.2	6648.2	7193.9	8530.8	8619.6	8396.4	7710.9	7630.6	9311.8
57.5°	10513.7	10437.7	9202.9	7289.3	7831.9	9039.9	9092.8	9110.5	8184.7	8000.4	9772.9
60°	10988.2	11002.1	9989.4	8024.7	8228.5	9527.1	9421.3	9260.7	8662.8	8542.4	9997.3
62.5°	11154.2	11288.6	10601.9	8795.4	8570.3	9557.5	9393.3	9257.7	8876.9	9101.3	9740.0
65°	11018.6	11253.4	10744.2	9472.4	8777.1	9176.2	9005.2	8918.3	8870.2	9329.4	9170.7
67.5°	10479.7	10773.4	10336.7	9478.5	8025.3	7813.1	8015.0	8290.5	8131.2	9140.3	8373.3
70°	9272.3	9594.0	9390.9	8922.5	6685.3	6147.0	6369.7	6786.3	6673.8	8129.3	7199.9
72.5°	6956.6	7370.2	7410.4	7703.0	5307.0	4626.4	4658.6	4647.1	4841.1	6555.2	5618.5
75°	4468.9	4790.6	5225.5	6215.8	4031.5	3377.6	3068.7	2993.2	3355.1	5122.1	4022.4
77.5°	2594.2	2632.5	2833.3	4689.7	2887.4	2433.6	2223.2	2330.8	2457.4	3574.7	2666.0
80°	1240.8	1260.3	1343.0	2413.0	2006.0	2106.4	1944.0	2065.0	1687.3	2054.7	1512.7
82.5°	393.5	397.8	411.8	1185.5	1245.7	1395.3	894.1	1198.9	1043.2	1242.1	1007.3
85°	65.7	111.9	138.1	342.4	703.1	470.8	194.0	427.6	582.1	783.4	457.4
87.5°	0.0	0.0	0.0	6.1	57.2	26.8	4.3	24.3	89.4	174.6	20.7
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°	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9
2.5°	1704.9	1746.9	1588.8	1447.0	1482.9	1454.3	1411.2	1337.6	1167.2	1292.5	1284.0
5°	2194.0	2116.1	1902.0	1802.3	1680.6	1495.1	1472.6	1330.3	1267.6	1277.9	1268.8
7.5°	2364.3	2225.0	2035.8	1735.4	1450.1	1182.5	1100.3	1007.3	988.4	1028.6	1054.7
10°	2230.5	2082.7	1917.2	1543.8	1324.2	1130.7	928.2	798.0	727.5	719.0	726.3
12.5°	2291.9	2132.5	1791.9	1506.0	1276.7	1101.6	875.3	678.8	525.5	537.1	506.7
15°	2334.5	2151.4	1762.1	1427.0	1178.8	944.6	672.1	475.7	350.4	313.9	292.0
17.5°	2584.5	2322.9	1724.4	1335.7	1041.9	735.4	422.1	275.5	234.8	222.0	211.7
20°	2905.6	2534.0	1723.8	1239.6	840.0	459.8	263.4	199.5	189.8	197.1	189.2
22.5°	3279.1	2815.0	1815.6	1119.8	602.8	290.1	205.0	177.0	167.3	173.4	174.0
25°	3655.0	3236.5	1890.5	1006.1	419.7	222.6	182.5	163.0	152.1	157.5	154.5
27.5°	4333.8	3585.7	1873.4	860.7	309.0	195.9	169.7	152.7	136.2	144.8	144.2
30°	4777.9	4201.8	1939.7	656.9	245.1	171.5	158.1	139.3	121.7	131.4	130.8
32.5°	5308.9	4466.4	2011.5	504.2	203.8	162.4	142.3	124.1	113.7	119.8	118.6
35°	5905.6	4989.5	1879.5	419.7	177.0	146.6	125.9	111.9	102.8	105.8	105.8
37.5°	6959.7	5426.9	1800.4	341.8	164.8	132.6	118.0	101.0	95.5	95.5	98.5
40°	7558.2	6094.7	1564.4	270.7	168.5	122.3	110.1	92.5	85.2	84.5	87.6
42.5°	8336.8	6479.8	1416.6	219.0	152.7	119.2	101.0	83.9	75.4	74.8	77.9
45°	8798.4	6695.1	1208.6	172.1	136.9	138.7	93.7	77.2	64.5	62.0	67.5
47.5°	9089.8	6980.4	1090.6	136.9	119.2	138.1	91.2	66.9	54.1	51.1	56.0
50°	9237.6	7121.5	1067.5	117.4	103.4	123.5	104.6	56.0	46.2	42.0	46.2
52.5°	9391.5	7350.8	1076.0	108.3	91.2	99.1	99.1	48.1	40.8	35.9	38.9
55°	9702.3	7689.6	1057.1	102.8	83.9	75.4	63.9	42.6	37.1	31.6	34.7
57.5°	10084.3	7932.9	1057.1	97.9	77.9	64.5	51.1	39.5	34.1	27.4	29.8
60°	10011.9	7676.8	1004.8	93.1	73.0	60.2	46.2	36.5	31.6	24.9	26.8
62.5°	9515.0	6980.4	813.8	85.8	68.7	57.2	42.0	34.7	29.8	21.9	23.7
65°	8931.0	6240.7	565.7	77.9	63.9	51.7	37.7	32.8	27.4	19.5	20.7
67.5°	8227.9	5359.3	313.9	69.9	59.0	45.0	34.7	32.2	26.2	17.6	18.9
70°	7007.7	4046.1	168.5	63.9	55.4	41.4	32.8	32.2	26.2	17.0	17.6
72.5°	5260.8	2548.0	98.5	58.4	50.5	38.3	31.0	32.8	25.5	16.4	16.4
75°	3579.6	1546.8	70.6	49.9	45.0	32.2	29.8	31.6	26.2	16.4	15.2
77.5°	2433.6	1087.0	57.8	45.0	40.8	28.6	30.4	31.6	26.2	13.4	10.3
80°	1519.4	560.8	43.8	35.9	35.3	24.9	30.4	27.4	17.0	3.0	0.0
82.5°	1062.6	208.6	25.5	27.4	27.4	17.6	23.7	19.5	9.7	0.0	0.0
85°	445.9	35.9	14.0	19.5	17.0	10.3	18.9	14.6	6.1	0.0	0.0
87.5°	7.9	0.0	5.5	11.6	12.2	6.1	9.7	6.1	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°	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9
2.5°	1324.2	1266.4	1144.7	1203.1	1197.0	1223.8	1226.2	1164.2	1298.0	1380.7	1392.9
5°	1270.0	1231.1	1224.4	1191.0	1182.5	1231.7	1205.0	1203.1	1267.6	1361.9	1362.5
7.5°	1055.3	1025.5	1039.5	1000.6	900.2	906.3	915.4	953.7	1009.1	1071.1	1093.6
10°	724.4	801.7	745.1	740.2	729.9	697.7	672.1	692.2	764.0	821.1	842.4
12.5°	517.0	529.2	563.9	551.1	568.7	541.3	531.0	593.7	663.6	722.0	764.0
15°	302.3	323.0	343.7	387.5	405.1	399.6	431.3	483.6	540.1	566.9	618.6
17.5°	212.9	214.7	219.0	266.4	297.4	309.6	328.5	368.0	391.1	403.3	424.6
20°	186.1	180.7	173.4	200.1	229.3	244.5	239.0	270.1	288.9	301.1	316.3
22.5°	168.5	159.4	155.1	164.2	186.7	200.1	202.5	220.8	249.4	257.9	262.8
25°	152.1	146.0	142.9	147.8	160.0	172.7	175.2	198.9	224.4	228.1	237.8
27.5°	141.1	129.6	130.8	134.4	139.9	155.7	160.6	174.0	211.1	215.3	218.4
30°	129.6	117.4	121.0	124.7	122.3	141.7	149.0	164.2	200.1	206.8	210.5
32.5°	118.0	108.9	108.3	111.9	116.2	126.5	142.3	160.0	192.8	201.9	211.1
35°	105.2	97.9	99.1	99.8	105.2	118.6	130.2	139.3	161.8	166.7	169.7
37.5°	96.1	90.0	88.8	94.9	100.4	110.7	115.0	119.2	149.0	160.0	160.6
40°	85.2	81.5	81.5	85.8	97.9	96.7	102.2	115.6	144.2	155.7	156.9
42.5°	77.2	72.4	73.6	77.9	86.4	80.3	91.2	110.7	142.3	153.9	153.3
45°	65.1	63.9	66.3	69.9	73.6	68.1	85.2	105.8	136.2	151.5	147.2
47.5°	54.1	54.1	57.2	60.8	59.0	60.8	77.2	99.1	132.6	146.6	143.5
50°	44.4	45.0	48.1	54.1	48.7	53.5	69.3	92.5	126.5	141.7	139.3
52.5°	37.7	38.3	40.1	44.4	42.0	48.7	63.9	85.8	120.4	133.2	132.0
55°	32.8	34.1	34.1	36.5	37.7	45.6	57.8	79.1	111.3	125.3	122.9
57.5°	29.2	30.4	29.8	31.6	32.8	40.1	51.7	71.8	102.2	113.7	110.1
60°	26.2	27.4	26.8	29.2	28.6	34.7	45.0	63.9	92.5	101.6	98.5
62.5°	23.1	24.3	24.3	25.5	26.2	29.2	38.9	56.6	82.7	90.0	87.6
65°	20.7	21.9	22.5	21.9	23.1	24.9	32.8	51.1	71.8	79.1	75.4
67.5°	18.9	20.1	21.3	18.9	20.1	20.7	28.0	45.6	63.3	69.3	66.3
70°	18.2	18.9	18.9	16.4	15.8	16.4	24.3	38.9	55.4	61.4	57.2
72.5°	17.0	17.6	17.0	13.4	11.6	12.8	20.7	32.8	46.8	51.7	48.1
75°	15.8	16.4	15.8	10.9	7.3	9.1	17.0	28.6	40.1	42.6	40.8
77.5°	13.4	14.6	14.6	7.9	2.4	5.5	12.8	23.1	33.5	33.5	34.1
80°	1.2	3.6	6.1	4.3	0.0	0.6	4.3	12.2	21.3	20.7	22.5
82.5°	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	7.3	5.5	6.1
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°	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9
2.5°	1364.3	1345.5	1369.2	1441.6	1412.4	1417.8	1398.4	1518.2	1653.8	1658.1
5°	1363.7	1346.7	1382.0	1378.9	1462.2	1552.9	1640.5	1782.2	1982.9	1984.1
7.5°	1083.3	1184.3	1210.4	1202.5	1309.6	1434.3	1569.3	1840.6	2005.4	2023.1
10°	976.9	1020.7	1074.2	1093.6	1138.0	1256.7	1409.3	1716.5	1901.4	1942.2
12.5°	846.7	986.6	1057.8	1195.8	1221.4	1238.4	1479.3	1746.3	1858.8	1854.0
15°	701.3	823.0	935.5	1104.0	1173.3	1352.2	1541.9	1891.7	1958.6	2023.1
17.5°	496.3	588.2	760.9	937.9	1149.6	1344.2	1714.7	2151.4	2277.9	2354.6
20°	332.1	376.5	532.8	767.0	1035.3	1228.7	1785.2	2386.2	2524.3	2590.6
22.5°	269.5	290.7	371.6	562.0	884.4	1223.2	1813.8	2642.3	3013.3	3101.5
25°	237.2	251.8	295.0	416.0	734.2	1198.9	1972.0	2930.6	3378.3	3449.4
27.5°	207.4	229.3	261.6	343.1	629.5	1181.8	2052.3	3414.8	3948.8	4018.8
30°	198.3	225.1	256.1	312.6	556.6	1116.2	2180.0	3851.5	4358.2	4482.9
32.5°	214.1	223.2	238.4	286.5	500.0	1046.8	2404.4	4373.4	4697.0	4859.4
35°	169.7	186.1	212.9	262.8	476.3	1043.2	2531.6	4709.1	5240.1	5340.5
37.5°	166.1	181.3	215.9	256.1	504.9	1071.1	2720.1	5397.1	6219.4	6425.0
40°	161.2	180.7	213.5	253.0	504.9	1098.5	2840.6	5947.5	6878.2	7086.8
42.5°	159.4	184.3	212.9	265.8	489.0	1113.7	3022.4	6496.8	7574.0	7738.8
45°	158.1	188.0	214.7	281.0	485.4	1163.6	3125.2	6763.8	8021.7	8210.9
47.5°	155.1	188.0	239.7	271.9	465.3	1158.7	3258.4	7159.8	8288.7	8448.1
50°	152.7	189.2	271.3	254.9	468.4	1128.9	3439.1	7531.4	8662.8	8776.5
52.5°	147.2	193.4	266.4	231.1	459.2	1125.9	3708.5	8060.0	9154.9	9238.2
55°	135.0	188.0	240.9	201.9	427.0	1091.2	4065.6	8747.3	9837.3	9851.9
57.5°	124.1	174.6	201.3	185.5	357.7	1095.5	4373.4	9379.9	10445.6	10513.7
60°	113.1	181.3	156.3	172.7	296.2	1017.6	4522.4	9622.0	10888.4	10988.2
62.5°	102.8	167.3	133.2	158.8	264.0	945.2	4419.0	9427.4	10945.0	11154.2
65°	91.2	116.2	112.5	142.3	267.0	843.7	4073.5	8857.4	10730.3	11018.6
67.5°	78.5	91.2	99.1	122.9	285.9	756.7	3481.1	7942.6	10153.0	10479.7
70°	68.7	82.1	86.4	107.7	297.4	699.5	2746.9	6673.2	8970.6	9272.3
72.5°	57.2	76.0	77.2	94.3	286.5	642.9	1957.4	4790.6	6811.9	6956.6
75°	49.3	63.3	69.9	79.1	240.9	479.9	1078.4	2965.3	4307.1	4468.9
77.5°	44.4	48.1	52.9	54.7	102.2	250.0	371.0	1828.4	2411.7	2594.2
80°	34.1	37.7	36.5	37.7	56.0	86.4	141.1	857.0	1139.3	1240.8
82.5°	10.9	18.2	20.1	17.0	36.5	42.6	40.8	296.2	370.4	393.5
85°	2.4	6.7	3.0	0.0	12.2	21.9	3.0	45.0	88.8	65.7
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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