

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: P162618

Luminaire Tested: **ECM-E04-LED-E1-SL4-HSS-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162618
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-E04-LED-E1-SL4-HSS-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7940.6 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

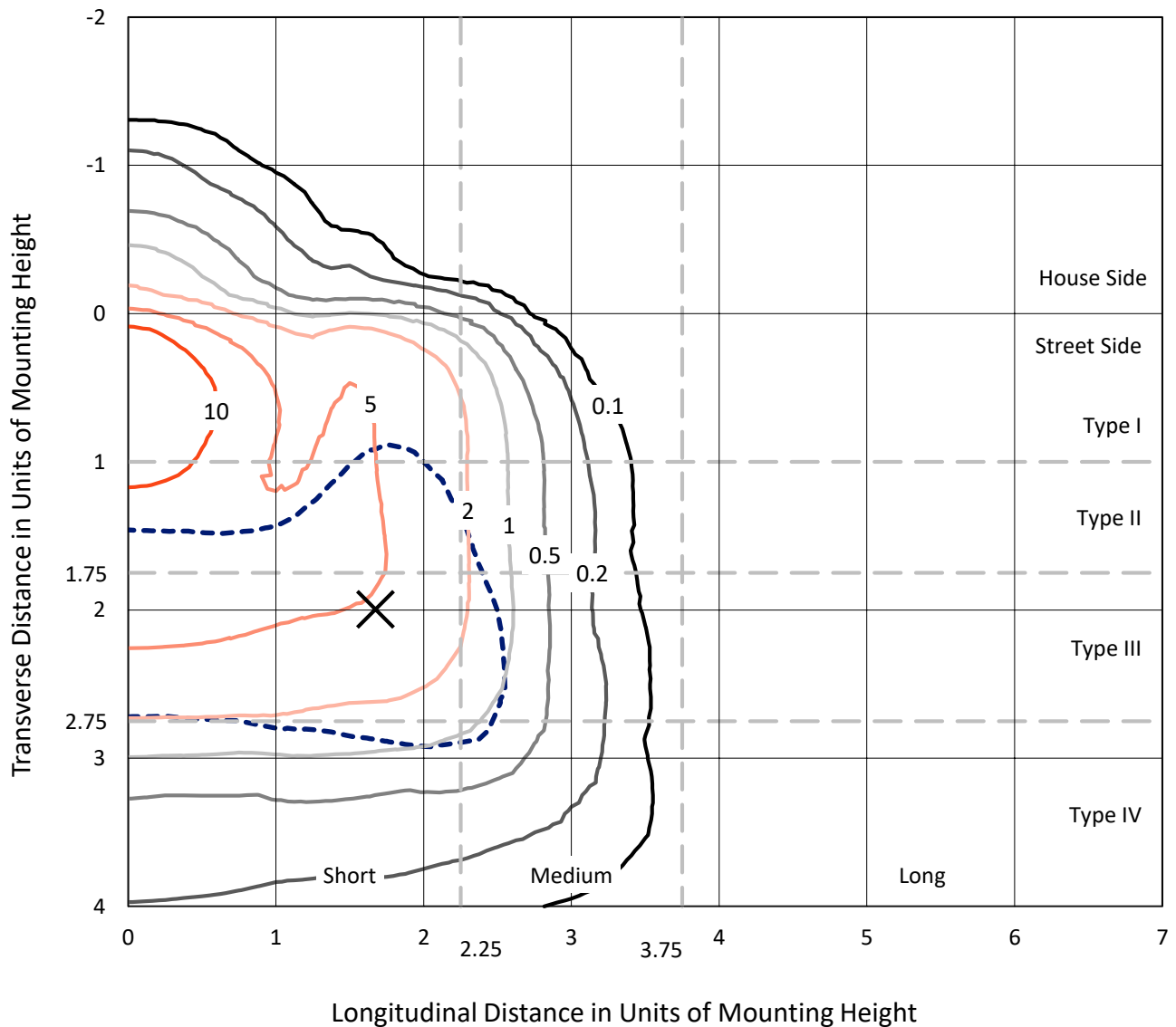
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

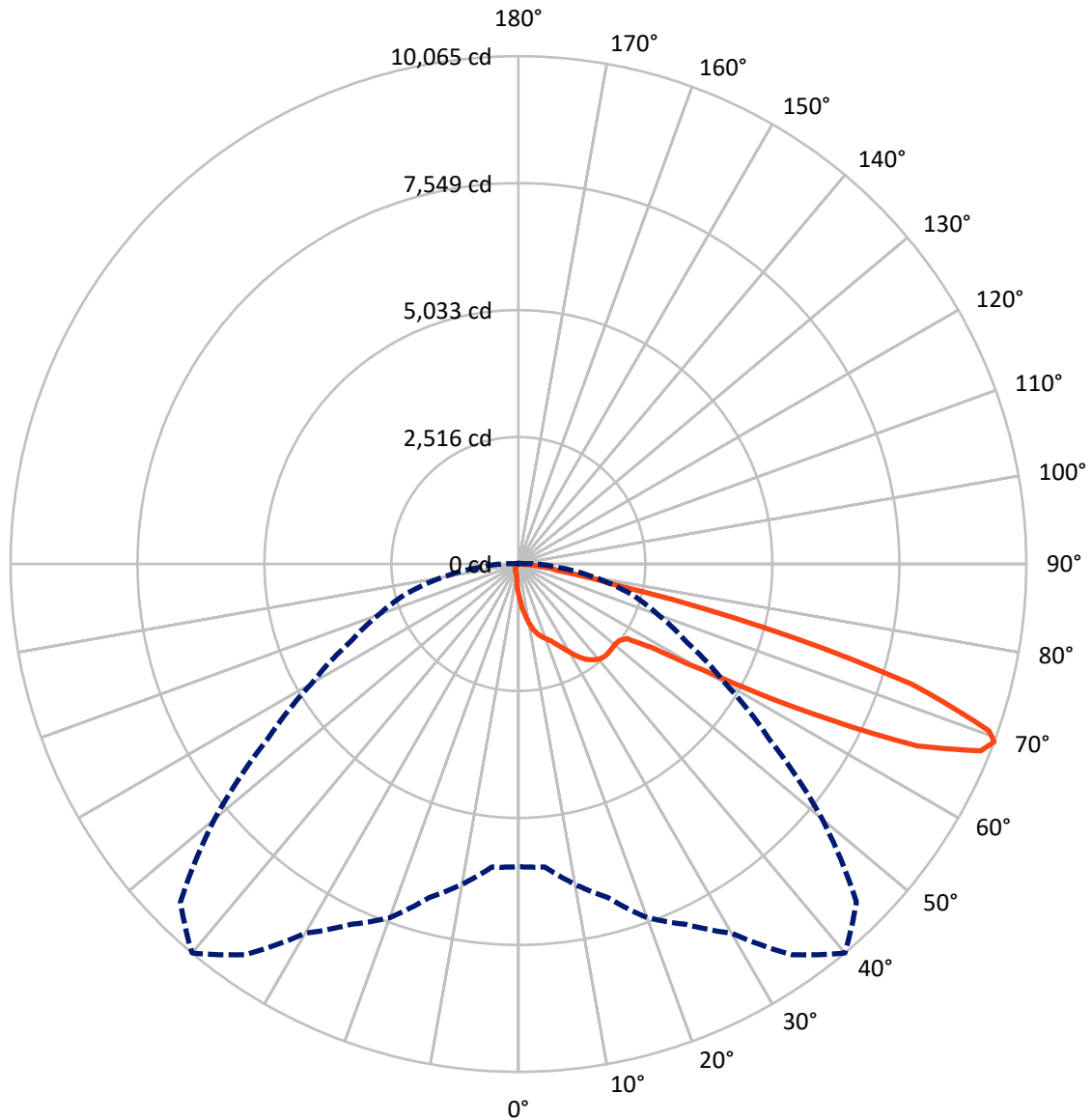
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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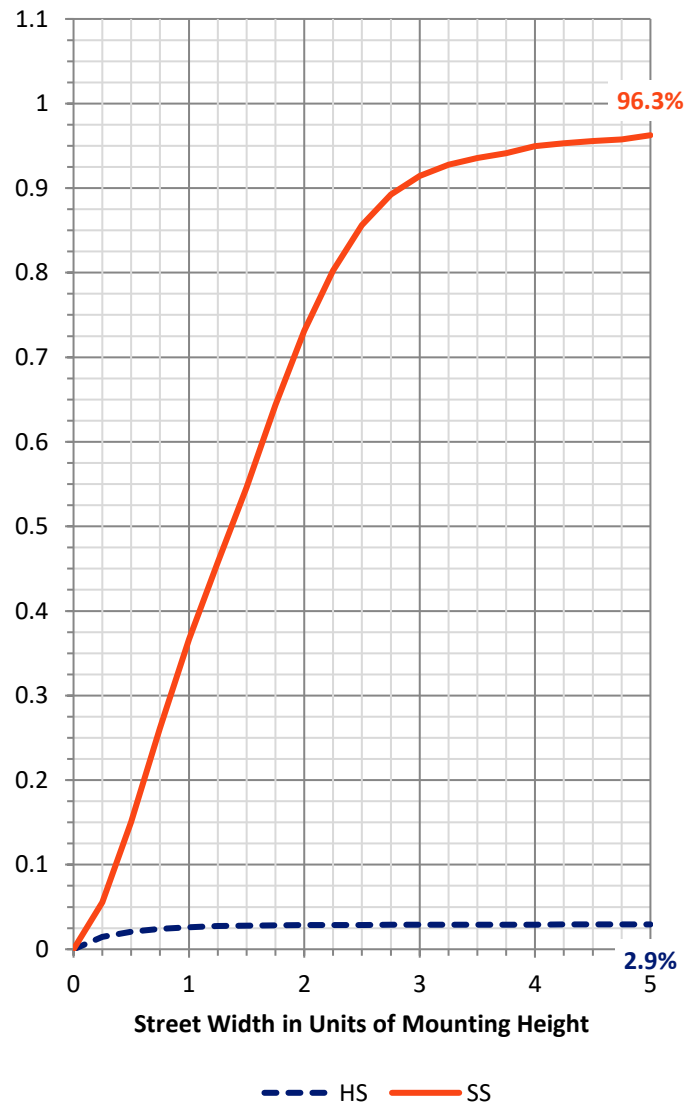
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	236.5	0.0	236.5
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	7704.0	0.0	7704.0
	% Fixture	97.0	0.0	97.0
Total	Lumens	7940.6	0.0	7940.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	0.8
10°-20°	212.5	2.7
20°-30°	406.7	5.1
30°-40°	676.4	8.5
40°-50°	915.3	11.5
50°-60°	1431.4	18.0
60°-70°	2942.9	37.1
70°-80°	1184.2	14.9
80°-90°	109.6	1.4
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°	7940.6	100.0
0°-180°	7940.6	100.0



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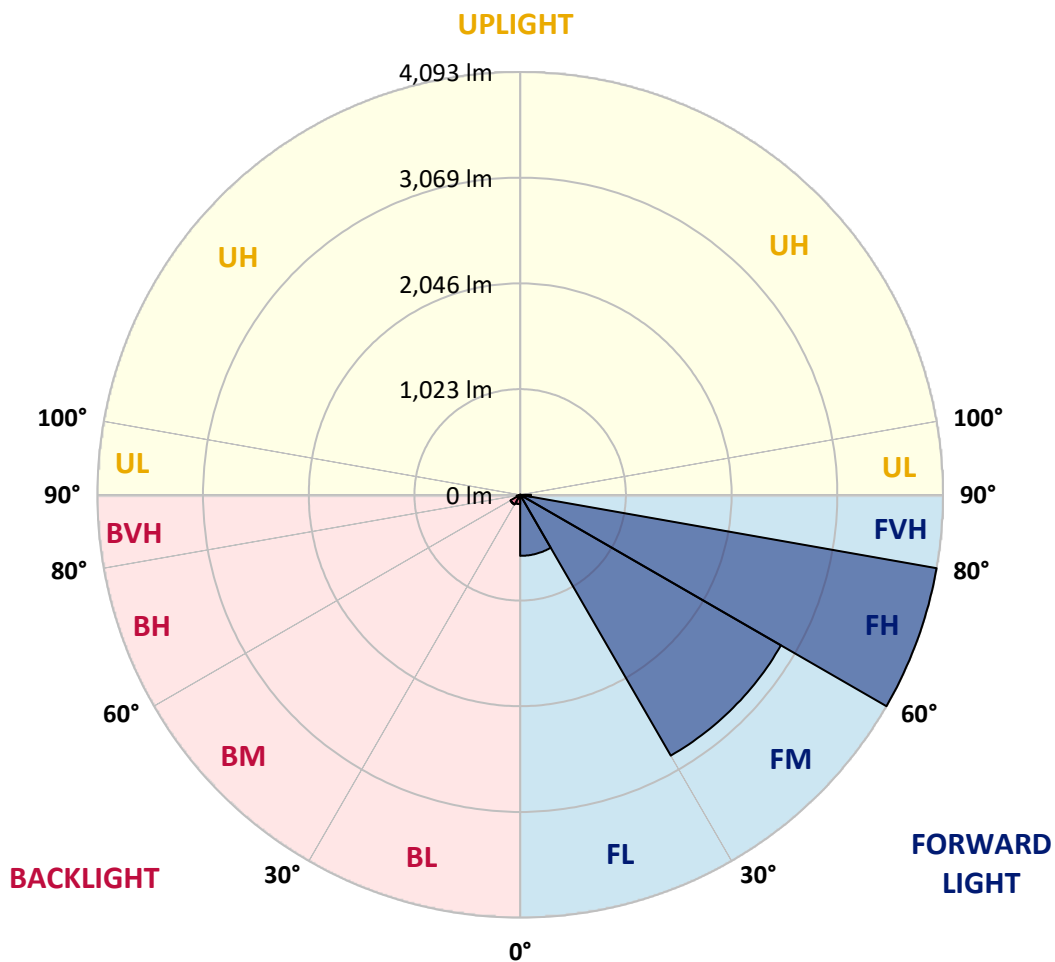
CATALOG NUMBER: ECM-E04-LED-E1-SL4-HSS-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	590.9	7.4			
FM (30°-60°)	2915.1	36.7			
FH (60°-80°)	4092.6	51.5			G2/5000
FVH (80°-90°)	105.5	1.3			G2/225
BL (0°-30°)	89.9	1.1	B0/110		
BM (30°-60°)	108.0	1.4	B0/220		
BH (60°-80°)	34.5	0.4	B0/110		G0/110
BVH (80°-90°)	4.1	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7
2.5°	800.0	790.9	780.5	780.5	767.4	767.4	759.6	738.8	736.2	724.6	712.8
5°	1021.0	1013.2	1000.2	988.6	978.2	960.0	947.0	922.3	894.9	868.9	845.5
7.5°	1237.1	1233.1	1209.7	1205.9	1188.9	1159.0	1133.0	1096.6	1049.8	1013.2	970.4
10°	1437.4	1428.2	1423.0	1401.0	1376.2	1343.7	1303.4	1259.1	1204.5	1147.3	1086.2
12.5°	1596.1	1590.9	1567.5	1558.3	1532.3	1499.8	1449.0	1391.8	1337.2	1263.1	1191.5
15°	1714.4	1705.3	1689.7	1675.4	1644.2	1615.5	1568.7	1506.3	1440.0	1359.2	1273.5
17.5°	1813.3	1796.4	1792.4	1770.4	1737.8	1704.0	1652.0	1594.7	1516.7	1436.0	1342.4
20°	1945.9	1922.5	1914.7	1882.2	1844.5	1797.7	1737.8	1666.3	1584.3	1495.9	1399.6
22.5°	2102.0	2085.2	2068.2	2039.6	1991.5	1925.1	1838.0	1760.0	1655.9	1558.3	1454.2
25°	2323.2	2308.9	2281.5	2242.5	2182.7	2103.4	1998.0	1883.5	1761.2	1636.4	1514.1
27.5°	2537.8	2524.8	2505.3	2475.4	2407.8	2320.6	2190.5	2044.8	1890.1	1739.2	1603.9
30°	2739.4	2727.7	2708.2	2678.3	2618.5	2532.6	2385.6	2229.5	2037.0	1861.4	1698.8
32.5°	2956.7	2952.7	2930.7	2887.7	2835.7	2719.9	2559.9	2392.1	2197.0	1994.1	1804.2
35°	3202.5	3172.6	3151.8	3108.8	3020.4	2896.8	2709.5	2526.1	2320.6	2112.4	1900.5
37.5°	3410.6	3382.0	3356.0	3301.3	3193.4	3036.0	2824.0	2622.3	2410.4	2198.3	1982.4
40°	3562.8	3548.5	3517.4	3445.8	3324.7	3137.4	2908.5	2688.7	2475.4	2262.1	2048.7
42.5°	3675.9	3653.9	3618.7	3544.6	3401.5	3188.2	2942.3	2716.0	2505.3	2301.1	2091.6
45°	3717.6	3699.5	3666.9	3586.2	3431.4	3202.5	2941.1	2708.2	2506.6	2312.8	2120.2
47.5°	3692.9	3674.7	3646.1	3570.6	3418.4	3185.6	2917.7	2686.1	2493.6	2316.7	2146.3
50°	3610.9	3600.5	3578.4	3514.8	3378.1	3153.0	2896.8	2674.4	2491.0	2336.2	2182.7
52.5°	3603.1	3596.7	3569.3	3505.6	3366.4	3142.6	2894.2	2680.9	2513.1	2360.9	2208.7
55°	4403.1	4310.7	4103.9	3928.3	3639.5	3296.1	3025.6	2786.2	2606.7	2458.4	2351.8
57.5°	6258.0	6120.1	5848.3	5514.0	4850.6	4199.0	3677.3	3300.1	3114.0	3046.4	3086.8
60°	7126.9	7102.2	7059.3	6900.6	6561.1	6000.5	5376.1	4700.9	4430.4	4407.1	4489.0
62.5°	7539.3	7523.7	7536.7	7517.1	7411.8	7247.9	7068.4	6777.1	6509.1	6336.1	5969.2
65°	7729.2	7739.6	7813.7	7872.3	7885.3	7928.2	8059.6	8422.5	8687.8	8241.7	7223.2
67.5°	7246.6	7307.8	7478.1	7691.4	7941.2	8183.1	8573.5	9338.2	9883.3	9359.0	7912.6
69°	5999.2	6029.1	6445.3	6847.3	7457.3	7884.0	8449.8	9452.8	10065.4	9473.6	7857.9
70°	4723.1	4750.5	5196.6	5742.9	6774.5	7323.4	8063.5	9258.9	9894.9	9321.3	7577.0
72.5°	2130.6	2091.6	2249.1	2541.7	3662.9	4534.4	5828.8	7501.5	8163.7	7467.7	5668.8
75°	1488.1	1471.2	1488.1	1489.4	1663.7	2146.3	2708.2	4066.3	5028.7	4339.3	2708.2
77.5°	1152.5	1140.8	1129.1	1116.1	1136.9	1273.5	1328.1	1442.6	1873.1	1771.6	1032.8
80°	911.9	901.5	930.1	920.9	920.9	936.5	926.1	883.3	802.6	744.0	666.0
82.5°	424.0	426.6	426.6	463.1	558.1	651.6	681.6	638.6	567.1	482.5	389.0
85°	40.4	45.6	76.8	118.3	235.5	265.4	266.7	221.1	221.1	174.3	140.5
87.5°	0.0	1.4	1.4	1.4	11.8	32.6	27.4	7.8	4.0	4.0	6.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7
2.5°	692.0	688.2	672.4	656.8	642.6	627.0	612.7	598.3	582.7	571.1	556.7
5°	809.1	780.5	748.0	716.8	685.6	653.0	619.2	589.3	558.1	529.5	502.1
7.5°	927.5	871.5	827.3	771.4	720.6	669.8	623.1	574.9	530.7	489.1	450.1
10°	1027.6	960.0	891.1	819.5	746.6	679.0	614.0	556.7	498.1	447.5	399.4
12.5°	1109.6	1023.6	939.1	849.3	767.4	681.6	601.0	532.1	463.1	405.8	356.4
15°	1183.7	1084.8	983.4	879.3	775.3	677.6	587.9	502.1	431.9	366.8	310.8
17.5°	1243.5	1130.4	1015.8	898.9	787.0	672.4	571.1	481.3	399.4	331.6	277.0
20°	1295.6	1177.1	1053.6	922.3	794.8	671.2	556.7	455.3	370.8	299.2	245.9
22.5°	1343.7	1225.3	1092.6	952.2	806.5	669.8	543.7	435.8	346.0	274.4	221.1
25°	1398.4	1273.5	1134.3	983.4	827.3	675.0	535.9	420.2	323.8	251.1	201.7
27.5°	1459.5	1328.1	1183.7	1022.4	854.5	685.6	533.3	403.2	304.4	228.9	186.1
30°	1545.3	1393.2	1233.1	1061.4	879.3	697.2	530.7	392.8	284.8	212.1	170.3
32.5°	1620.7	1456.9	1287.8	1101.8	906.7	709.0	529.5	378.6	266.7	195.1	158.7
35°	1700.1	1515.4	1334.6	1140.8	930.1	722.0	528.1	368.2	249.7	178.3	146.9
37.5°	1769.0	1564.9	1371.0	1174.5	956.1	733.6	529.5	359.0	234.1	163.9	136.5
40°	1827.6	1615.5	1411.4	1205.9	983.4	751.8	530.7	350.0	218.5	150.9	127.5
42.5°	1879.6	1663.7	1454.2	1240.9	1014.6	772.7	538.5	342.0	205.5	139.1	118.3
45°	1919.9	1707.8	1501.1	1290.4	1065.4	806.5	552.9	336.8	192.5	128.7	110.5
47.5°	1961.5	1773.0	1580.5	1368.4	1139.5	859.9	577.5	335.6	182.1	120.9	104.1
50°	2018.8	1838.0	1650.7	1447.8	1207.1	914.5	607.5	336.8	169.1	113.1	97.5
52.5°	2060.4	1904.3	1741.8	1585.7	1368.4	1081.0	723.2	360.4	162.5	106.7	89.8
55°	2306.3	2278.9	2282.9	2308.9	2141.1	1839.3	1209.7	520.3	191.3	120.9	88.5
57.5°	3251.9	3348.3	3404.1	3402.8	3125.8	2592.5	1624.7	668.6	213.3	140.5	105.3
60°	4495.4	4422.7	4319.9	4066.3	3698.1	2959.3	1817.2	719.4	184.7	111.9	96.3
62.5°	5594.6	5168.0	4789.4	4378.5	3895.8	3086.8	1856.2	715.4	161.3	84.6	67.6
65°	6280.2	5512.6	4901.4	4386.3	3817.8	2980.1	1756.0	656.8	136.5	69.0	56.0
67.5°	6444.1	5326.7	4461.6	3804.8	3189.5	2319.3	1289.1	494.3	106.7	57.2	49.4
69°	6086.3	4734.9	3696.9	2951.5	2320.6	1538.7	797.4	312.2	82.0	52.0	45.6
70°	5598.6	4118.2	3011.3	2368.7	1718.4	1081.0	558.1	219.9	66.4	48.2	41.6
72.5°	3601.9	2163.2	1480.3	1030.2	709.0	430.6	218.5	98.9	50.8	40.4	33.8
75°	1397.0	800.0	580.1	441.0	344.8	239.3	132.7	63.8	43.0	33.8	26.0
77.5°	688.2	526.9	430.6	295.2	171.7	106.7	71.6	49.4	35.2	24.8	17.0
80°	543.7	361.6	215.9	133.9	101.5	76.8	54.6	40.4	26.0	15.6	11.8
82.5°	278.4	152.1	111.9	91.1	75.4	59.8	44.2	28.6	17.0	10.4	9.2
85°	87.2	63.8	57.2	56.0	52.0	43.0	31.2	18.2	10.4	6.6	6.6
87.5°	6.6	9.2	11.8	9.2	10.4	9.2	11.8	7.8	5.2	5.2	4.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7	599.7
2.5°	546.3	530.7	516.5	507.3	490.3	483.9	477.3	474.7	463.1	465.7	455.3
5°	477.3	450.1	429.3	408.4	389.0	374.6	363.0	348.6	336.8	331.6	321.2
7.5°	415.0	379.8	352.6	330.4	307.0	288.8	273.2	262.8	252.3	241.9	236.7
10°	360.4	322.6	291.4	269.3	247.1	231.5	219.9	212.1	205.5	201.7	200.3
12.5°	309.6	273.2	244.5	225.1	208.1	200.3	195.1	191.3	189.9	188.7	188.7
15°	270.6	234.1	212.1	197.7	189.9	186.1	184.7	182.1	179.5	178.3	178.3
17.5°	234.1	206.9	191.3	183.5	179.5	176.9	174.3	171.7	169.1	167.7	167.7
20°	209.5	187.3	179.5	174.3	170.3	167.7	163.9	161.3	159.9	158.7	157.3
22.5°	189.9	175.7	170.3	166.5	161.3	157.3	154.7	152.1	149.5	148.3	146.9
25°	175.7	166.5	162.5	157.3	152.1	148.3	144.3	140.5	137.9	136.5	133.9
27.5°	165.1	158.7	153.5	146.9	141.7	137.9	133.9	130.1	127.5	124.9	123.5
30°	156.1	149.5	143.1	137.9	131.3	127.5	122.3	118.3	117.1	114.5	111.9
32.5°	146.9	140.5	133.9	127.5	120.9	115.7	113.1	107.9	105.3	104.1	101.5
35°	136.5	130.1	122.3	117.1	110.5	105.3	101.5	97.5	94.9	92.3	91.1
37.5°	127.5	119.7	111.9	105.3	100.1	94.9	91.1	87.2	84.6	82.0	80.6
40°	117.1	109.3	101.5	94.9	89.8	85.9	82.0	78.0	75.4	74.2	74.2
42.5°	107.9	98.9	91.1	85.9	82.0	76.8	72.8	69.0	67.6	66.4	67.6
45°	98.9	89.8	83.2	78.0	74.2	69.0	65.0	62.4	61.2	62.4	63.8
47.5°	91.1	82.0	75.4	71.6	67.6	63.8	59.8	57.2	57.2	59.8	62.4
50°	83.2	74.2	69.0	66.4	62.4	58.6	53.4	52.0	53.4	56.0	58.6
52.5°	75.4	65.0	61.2	59.8	56.0	52.0	48.2	46.8	48.2	50.8	49.4
55°	67.6	57.2	56.0	54.6	50.8	45.6	41.6	41.6	41.6	40.4	37.8
57.5°	65.0	50.8	49.4	48.2	44.2	39.0	36.4	33.8	32.6	28.6	27.4
60°	67.6	45.6	45.6	43.0	39.0	33.8	30.0	26.0	23.4	20.8	20.8
62.5°	54.6	41.6	40.4	37.8	32.6	27.4	23.4	19.6	18.2	17.0	17.0
65°	44.2	37.8	35.2	31.2	27.4	22.2	18.2	15.6	14.4	14.4	15.6
67.5°	40.4	33.8	30.0	26.0	22.2	17.0	14.4	13.0	13.0	14.4	14.4
69°	37.8	31.2	27.4	23.4	19.6	15.6	13.0	13.0	13.0	13.0	14.4
70°	35.2	30.0	26.0	22.2	17.0	13.0	11.8	11.8	13.0	13.0	14.4
72.5°	27.4	23.4	22.2	18.2	13.0	11.8	10.4	11.8	11.8	13.0	13.0
75°	20.8	17.0	17.0	14.4	10.4	9.2	9.2	10.4	10.4	11.8	11.8
77.5°	14.4	11.8	11.8	10.4	9.2	7.8	7.8	9.2	10.4	10.4	11.8
80°	10.4	9.2	7.8	9.2	7.8	6.6	7.8	9.2	9.2	10.4	10.4
82.5°	7.8	7.8	7.8	7.8	6.6	6.6	7.8	7.8	9.2	10.4	10.4
85°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	7.8	7.8	9.2	9.2
87.5°	4.0	4.0	4.0	5.2	5.2	6.6	6.6	6.6	6.6	7.8	7.8
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):

	165°	170°	175°	180°
0°	599.7	599.7	599.7	599.7
2.5°	452.7	451.3	446.2	447.5
5°	317.4	309.6	314.8	313.4
7.5°	232.9	231.5	230.3	232.9
10°	199.1	199.1	197.7	199.1
12.5°	187.3	187.3	187.3	187.3
15°	178.3	178.3	176.9	176.9
17.5°	167.7	167.7	167.7	166.5
20°	157.3	156.1	156.1	156.1
22.5°	145.7	144.3	144.3	144.3
25°	133.9	132.7	132.7	132.7
27.5°	122.3	120.9	119.7	119.7
30°	110.5	109.3	107.9	107.9
32.5°	98.9	97.5	96.3	96.3
35°	88.5	88.5	87.2	85.9
37.5°	79.4	79.4	79.4	79.4
40°	72.8	74.2	74.2	74.2
42.5°	69.0	70.2	71.6	72.8
45°	66.4	69.0	70.2	70.2
47.5°	65.0	66.4	67.6	67.6
50°	59.8	58.6	58.6	58.6
52.5°	48.2	45.6	44.2	43.0
55°	35.2	33.8	31.2	31.2
57.5°	24.8	24.8	23.4	23.4
60°	19.6	19.6	18.2	19.6
62.5°	17.0	17.0	17.0	17.0
65°	15.6	15.6	15.6	15.6
67.5°	15.6	15.6	15.6	15.6
69°	14.4	14.4	14.4	14.4
70°	14.4	14.4	14.4	14.4
72.5°	13.0	13.0	13.0	13.0
75°	11.8	13.0	13.0	13.0
77.5°	11.8	11.8	11.8	11.8
80°	10.4	10.4	11.8	11.8
82.5°	10.4	10.4	10.4	10.4
85°	9.2	9.2	10.4	10.4
87.5°	7.8	7.8	9.2	9.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)