

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: P162503

Luminaire Tested: **EMM-F04-LED-E1-SL3-HSS-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162503
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: EMM-F04-LED-E1-SL3-HSS-7050
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5585.5 lumens
Efficiency: N/A
Efficacy: 54.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

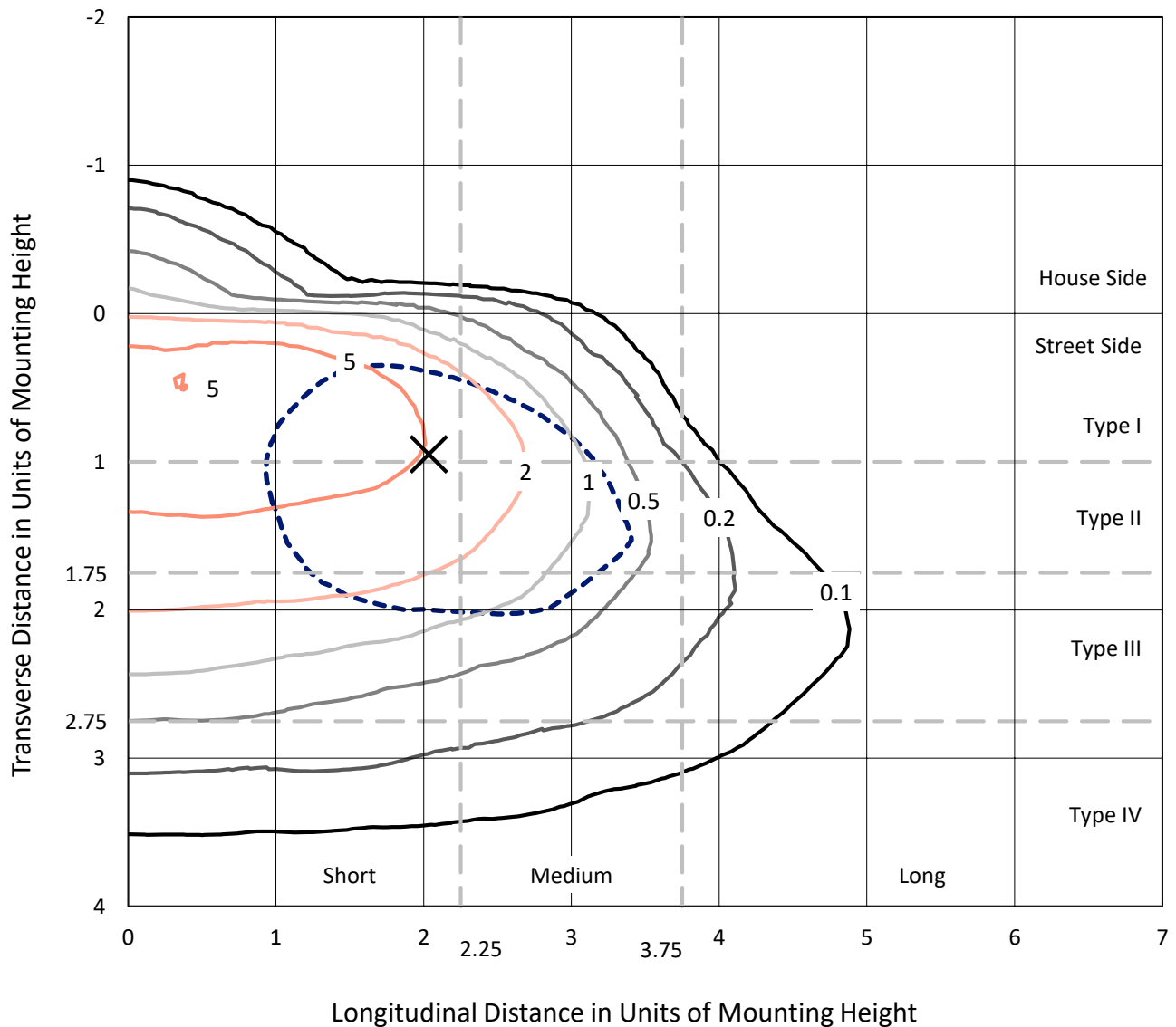
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

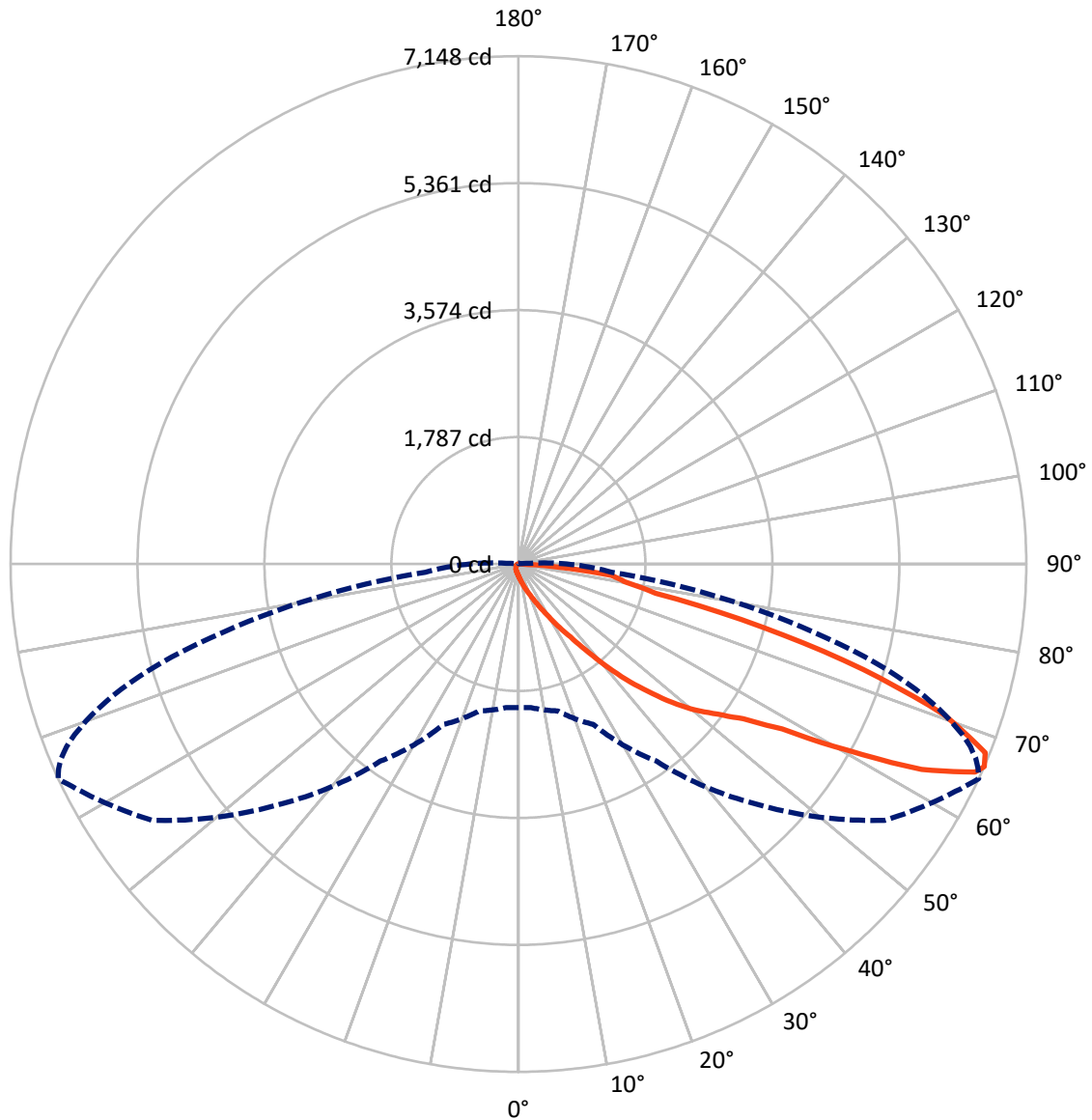
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.2 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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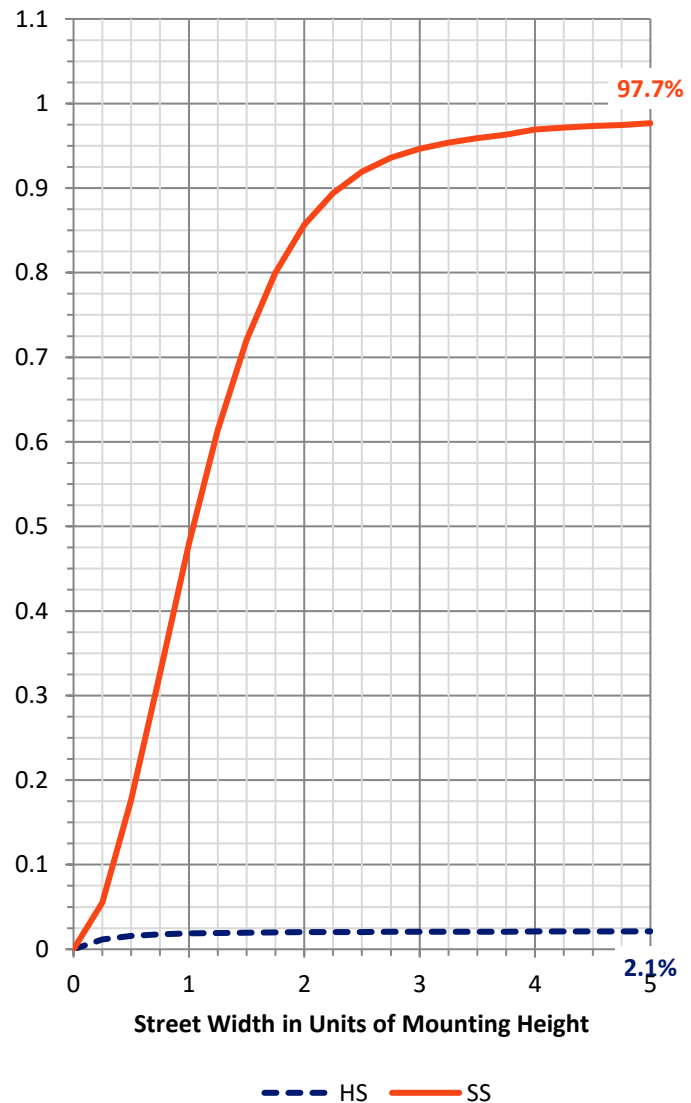
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	121.1	0.0	121.1
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	5464.4	0.0	5464.4
	% Fixture	97.8	0.0	97.8
Total	Lumens	5585.5	0.0	5585.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.9	0.3
10°-20°	80.0	1.4
20°-30°	172.6	3.1
30°-40°	368.6	6.6
40°-50°	815.1	14.6
50°-60°	1381.4	24.7
60°-70°	1843.3	33.0
70°-80°	812.0	14.5
80°-90°	93.5	1.7
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°	5585.5	100.0
0°-180°	5585.5	100.0



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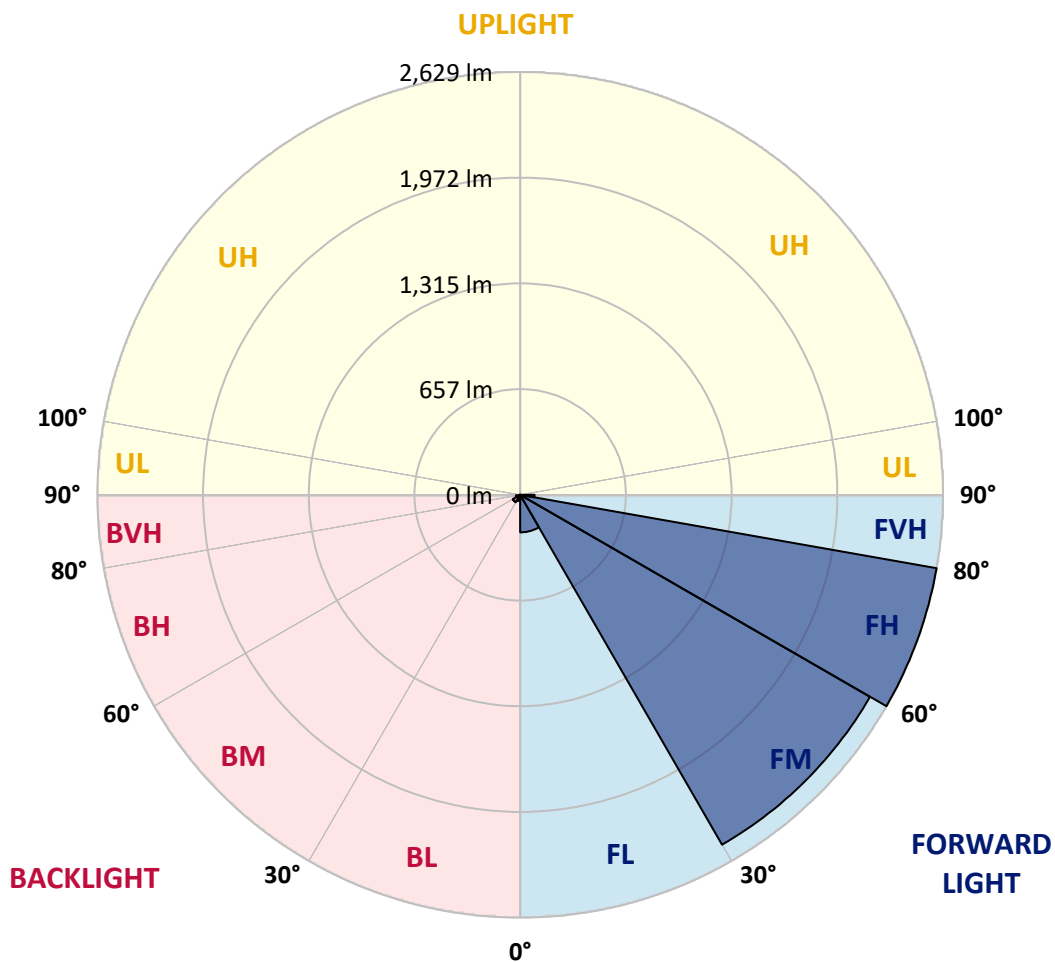
CATALOG NUMBER: EMM-F04-LED-E1-SL3-HSS-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	233.3	4.2			
FM	(30°-60°)	2512.0	45.0			
FH	(60°-80°)	2629.3	47.1			G2/5000
FVH	(80°-90°)	89.8	1.6			G1/100
BL	(0°-30°)	38.2	0.7	B0/110		
BM	(30°-60°)	53.2	1.0	B0/220		
BH	(60°-80°)	26.0	0.5	B0/110		G0/110
BVH	(80°-90°)	3.7	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6
2.5°	212.7	211.5	207.3	207.3	200.8	196.5	191.1	185.8	185.8	184.7	183.6
5°	281.3	274.9	273.8	262.0	252.3	238.4	225.5	208.3	206.1	204.0	203.0
7.5°	357.6	356.6	346.8	332.8	313.5	287.8	262.0	234.1	229.8	227.7	223.4
10°	456.4	451.0	438.1	414.5	385.5	351.1	309.2	265.2	259.9	255.6	253.4
12.5°	550.8	541.2	533.7	503.6	467.1	416.6	366.2	302.8	298.5	293.2	284.6
15°	638.9	630.3	617.5	591.7	550.8	487.5	428.5	351.1	340.4	332.8	326.4
17.5°	707.7	702.3	687.3	658.2	614.2	558.4	487.5	400.5	391.9	382.3	370.5
20°	773.1	765.6	742.0	702.3	655.1	612.0	557.3	465.0	453.1	441.4	428.5
22.5°	835.4	827.9	789.2	723.7	673.3	655.1	635.6	537.9	519.8	510.1	497.2
25°	922.4	906.3	846.2	742.0	674.4	688.3	721.6	632.5	615.3	601.3	581.0
27.5°	1039.4	1018.0	923.5	768.8	678.7	724.9	820.4	747.3	729.2	713.0	690.4
30°	1171.6	1157.6	1044.8	833.3	709.8	778.5	931.0	893.4	871.9	852.6	825.7
32.5°	1304.7	1285.4	1173.7	955.7	793.5	882.7	1069.6	1063.1	1035.1	1016.9	987.9
35°	1421.7	1412.0	1329.3	1156.5	984.6	1065.3	1254.2	1261.7	1237.1	1217.8	1185.5
37.5°	1501.2	1501.2	1485.1	1372.4	1288.6	1348.8	1525.9	1527.0	1502.3	1458.2	1442.2
40°	1542.0	1553.8	1611.8	1633.3	1629.0	1706.3	1882.4	1863.1	1842.7	1820.1	1766.4
42.5°	1625.8	1636.6	1760.0	1908.2	2004.9	2106.8	2228.1	2221.7	2197.1	2156.2	2106.8
45°	1767.6	1781.5	1928.6	2163.8	2362.4	2507.3	2584.7	2554.7	2529.9	2491.3	2465.4
47.5°	1947.9	1974.7	2141.2	2432.2	2671.7	2911.1	2991.6	2912.2	2890.7	2860.6	2818.7
50°	2140.2	2165.9	2343.1	2676.0	2946.6	3232.2	3366.4	3232.2	3201.0	3191.4	3144.1
52.5°	2306.5	2328.0	2498.8	2863.9	3157.0	3492.1	3687.5	3510.3	3487.8	3455.5	3421.2
55°	2405.4	2422.5	2582.6	2954.0	3299.9	3726.1	3997.9	3842.1	3808.8	3795.9	3746.6
57.5°	2438.7	2455.8	2599.7	2965.9	3377.1	3939.8	4374.8	4380.2	4340.4	4294.2	4279.2
60°	2438.7	2458.0	2579.3	2936.9	3452.3	4167.5	4877.3	5325.1	5239.2	5230.6	5175.9
62.5°	2337.7	2356.0	2478.4	2847.8	3553.3	4474.6	5577.4	6367.7	6343.0	6287.2	6197.0
65°	2118.6	2129.4	2249.6	2620.2	3514.6	4757.1	6184.1	7061.4	7021.7	6912.1	6796.3
66°	2019.9	2028.5	2141.2	2490.2	3387.9	4795.7	6291.5	7148.4	7082.9	6990.5	6859.6
67.5°	1877.0	1892.0	1971.5	2248.6	3084.0	4661.4	6223.9	7087.2	7030.3	6918.6	6787.7
70°	1253.1	1242.4	1522.7	1725.7	2349.6	3798.1	5583.9	6363.5	6364.6	6312.0	6259.3
72.5°	594.9	601.3	683.0	1062.0	1537.7	2537.4	4444.5	5079.2	5152.1	5057.7	4992.2
75°	427.4	437.1	486.4	649.7	917.0	1522.7	2881.1	3552.2	3554.3	3386.8	3237.5
77.5°	124.6	129.9	182.5	400.5	687.3	1027.7	1654.7	1974.7	1928.6	1808.3	1695.6
80°	51.5	51.5	53.6	127.7	275.9	698.0	1157.6	1520.6	1515.1	1468.9	1402.4
82.5°	19.3	20.4	25.8	52.6	65.5	171.8	772.1	1319.7	1316.5	1251.0	1203.8
85°	2.1	2.1	6.4	22.6	24.7	32.2	154.6	582.0	578.8	582.0	510.1
87.5°	0.0	0.0	1.1	2.1	3.3	4.3	6.4	22.6	24.7	23.6	21.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6
2.5°	183.6	181.5	181.5	180.4	180.4	180.4	179.4	178.2	178.2	177.2	176.1
5°	200.8	198.7	197.5	195.4	194.4	193.2	191.1	190.1	187.9	186.8	185.8
7.5°	221.3	217.0	215.8	212.7	209.4	207.3	205.1	201.8	199.7	195.4	194.4
10°	247.0	241.6	237.3	233.0	229.8	224.4	221.3	217.0	212.7	209.4	206.1
12.5°	280.2	272.8	266.3	262.0	254.5	248.0	241.6	238.4	229.8	225.5	220.1
15°	316.8	308.2	300.7	292.1	286.8	275.9	267.3	257.7	253.4	245.9	237.3
17.5°	364.0	350.0	338.3	329.7	319.0	308.2	298.5	288.9	275.9	267.3	256.6
20°	414.5	402.6	386.6	371.6	358.7	345.7	331.8	319.0	307.1	293.2	280.2
22.5°	478.9	461.7	442.4	427.4	410.2	396.2	376.9	359.7	340.4	322.1	307.1
25°	560.5	537.9	519.8	498.3	477.9	456.4	432.8	411.2	386.6	369.4	343.6
27.5°	661.5	640.1	615.3	587.4	567.0	534.8	503.6	476.7	447.8	420.9	391.9
30°	790.4	759.2	733.5	706.6	665.8	634.6	598.1	561.6	521.9	495.0	451.0
32.5°	945.0	911.7	873.1	834.3	796.8	752.8	707.7	662.5	618.5	569.1	524.1
35°	1134.0	1094.2	1050.1	1008.4	950.3	903.1	846.2	783.9	734.5	677.5	620.6
37.5°	1384.1	1318.6	1280.0	1235.9	1157.6	1093.2	1029.8	967.5	880.5	820.4	739.9
40°	1697.8	1659.0	1595.7	1524.8	1453.9	1369.1	1283.3	1200.5	1099.6	1015.8	922.4
42.5°	2066.1	2009.2	1944.7	1842.7	1770.7	1670.9	1573.2	1463.6	1340.1	1232.8	1123.2
45°	2411.8	2344.1	2294.8	2192.8	2117.6	1999.4	1881.3	1765.3	1622.5	1484.1	1357.4
47.5°	2785.5	2729.6	2648.1	2565.4	2489.2	2356.0	2228.1	2087.5	1937.2	1772.9	1608.5
50°	3114.1	3070.0	3014.2	2914.4	2829.6	2717.9	2567.5	2413.9	2223.9	2060.7	1873.8
52.5°	3393.3	3358.9	3280.6	3209.6	3133.4	3028.1	2893.9	2746.8	2541.7	2362.4	2149.8
55°	3723.0	3698.2	3629.5	3585.5	3517.8	3416.9	3291.3	3154.8	2938.0	2742.5	2502.0
57.5°	4263.0	4243.7	4183.7	4165.4	4098.8	4010.7	3856.1	3710.1	3456.6	3213.9	2939.0
60°	5157.6	5118.9	5030.8	4985.8	4845.0	4726.9	4526.2	4325.4	4019.3	3710.1	3379.3
62.5°	6115.4	6007.0	5839.4	5695.5	5495.8	5290.7	5022.3	4715.2	4356.5	3989.3	3609.1
65°	6631.9	6447.3	6235.7	6007.0	5748.1	5446.5	5108.2	4739.9	4354.3	3966.7	3565.1
66°	6691.0	6482.6	6258.2	6003.7	5716.0	5394.9	5051.3	4664.7	4264.2	3886.2	3484.5
67.5°	6616.9	6398.9	6161.6	5879.2	5567.8	5234.9	4874.1	4472.4	4087.0	3703.6	3312.7
70°	6098.3	5881.3	5669.8	5372.4	5040.6	4705.4	4364.0	3915.2	3550.0	3197.9	2849.9
72.5°	4869.8	4722.6	4513.2	4258.8	3935.5	3542.6	3258.0	2856.3	2539.5	2198.1	1928.6
75°	3043.3	2836.0	2577.1	2252.9	2005.9	1686.9	1520.6	1215.6	1035.1	877.3	724.9
77.5°	1556.0	1400.3	1218.8	1036.3	861.2	687.3	531.5	375.9	253.4	176.1	131.0
80°	1285.4	1148.0	997.6	831.2	676.5	525.1	378.0	257.7	164.3	107.4	83.8
82.5°	1062.0	946.0	811.8	657.2	522.9	412.4	286.8	186.8	116.0	75.2	59.1
85°	452.1	410.2	316.8	251.3	189.0	139.6	97.7	65.5	46.2	37.6	34.3
87.5°	19.3	21.5	20.4	16.2	11.9	11.9	10.7	8.6	8.6	8.6	8.6
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6
2.5°	176.1	175.1	173.9	173.9	172.9	171.8	165.3	160.0	153.6	149.3	145.0
5°	183.6	182.5	180.4	179.4	177.2	176.1	162.2	150.3	140.6	133.2	127.7
7.5°	191.1	190.1	186.8	183.6	182.5	180.4	157.9	142.9	129.9	121.3	116.0
10°	200.8	197.5	194.4	190.1	186.8	183.6	153.6	134.2	120.3	112.7	107.4
12.5°	214.8	209.4	204.0	198.7	194.4	189.0	151.5	126.7	112.7	104.1	98.8
15°	230.9	223.4	217.0	210.4	203.0	197.5	147.2	120.3	106.3	97.7	91.3
17.5°	245.9	237.3	227.7	218.0	210.4	203.0	142.9	113.8	99.8	91.3	84.8
20°	267.3	254.5	242.7	230.9	220.1	210.4	136.3	107.4	94.5	84.8	78.4
22.5°	291.1	275.9	260.9	244.9	230.9	218.0	131.0	102.0	89.1	79.5	71.9
25°	321.1	302.8	282.4	262.0	245.9	228.7	125.6	96.7	83.8	74.1	66.5
27.5°	363.0	337.1	314.7	288.9	264.2	244.9	121.3	92.4	78.4	68.7	61.2
30°	419.8	382.3	346.8	319.0	289.9	262.0	117.0	87.0	74.1	63.4	54.8
32.5°	483.2	439.2	398.4	356.6	320.0	287.8	112.7	82.7	68.7	57.9	50.5
35°	561.6	505.8	451.0	402.6	358.7	315.7	108.4	78.4	64.4	52.6	45.1
37.5°	674.4	604.6	532.6	470.3	413.4	356.6	105.3	74.1	59.1	47.2	39.8
40°	829.0	738.8	650.8	566.0	491.8	420.9	101.0	69.8	54.8	42.9	35.5
42.5°	996.5	886.9	771.0	675.4	573.4	484.3	96.7	65.5	50.5	38.6	31.2
45°	1204.9	1068.4	927.8	797.8	673.3	558.4	92.4	61.2	45.1	34.3	26.9
47.5°	1432.5	1258.5	1099.6	936.4	788.2	650.8	87.0	57.9	40.8	30.0	23.6
50°	1666.6	1482.9	1282.1	1096.3	920.3	743.1	81.7	52.6	36.5	26.9	19.3
52.5°	1918.9	1702.1	1497.0	1266.0	1061.0	864.5	76.2	48.3	33.3	23.6	16.2
55°	2240.0	1997.3	1756.7	1498.0	1251.0	1005.1	70.9	42.9	29.0	20.4	12.9
57.5°	2643.8	2356.0	2060.7	1768.6	1468.9	1189.7	66.5	37.6	24.7	17.2	10.7
60°	3025.0	2688.8	2331.3	1995.1	1656.9	1331.5	60.1	33.3	21.5	14.0	10.7
62.5°	3222.5	2839.2	2453.7	2083.2	1722.4	1382.0	53.6	27.9	18.3	11.9	9.7
65°	3174.2	2783.4	2409.6	2035.9	1682.6	1349.8	47.2	24.7	16.2	10.7	9.7
66°	3104.4	2717.9	2342.0	1986.6	1649.4	1315.5	44.0	23.6	15.0	10.7	8.6
67.5°	2951.9	2578.3	2219.6	1888.9	1558.2	1249.9	39.8	21.5	14.0	9.7	8.6
70°	2521.3	2182.0	1895.3	1601.1	1331.5	1053.4	32.2	18.3	11.9	8.6	8.6
72.5°	1668.7	1437.9	1246.7	1072.7	896.7	695.8	26.9	15.0	9.7	8.6	7.6
75°	629.2	569.1	488.6	439.2	383.3	336.1	21.5	9.7	7.6	7.6	7.6
77.5°	111.7	103.1	91.3	83.8	77.4	70.9	17.2	6.4	6.4	7.6	7.6
80°	75.2	69.8	63.4	57.9	53.6	48.3	11.9	5.4	6.4	6.4	7.6
82.5°	53.6	50.5	47.2	42.9	39.8	35.5	7.6	5.4	6.4	6.4	6.4
85°	32.2	30.0	27.9	25.8	22.6	21.5	5.4	5.4	5.4	6.4	6.4
87.5°	8.6	7.6	8.6	8.6	6.4	7.6	4.3	4.3	4.3	5.4	5.4
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):

	145°	155°	165°	175°	180°
0°	168.6	168.6	168.6	168.6	168.6
2.5°	142.9	142.9	140.6	143.9	143.9
5°	123.4	123.4	122.4	123.4	123.4
7.5°	112.7	111.7	111.7	111.7	112.7
10°	103.1	102.0	102.0	102.0	102.0
12.5°	94.5	93.4	92.4	93.4	93.4
15°	87.0	84.8	84.8	84.8	84.8
17.5°	80.5	78.4	77.4	77.4	77.4
20°	74.1	70.9	70.9	70.9	70.9
22.5°	67.7	64.4	64.4	64.4	64.4
25°	61.2	57.9	57.9	57.9	57.9
27.5°	55.8	52.6	52.6	52.6	52.6
30°	49.4	47.2	47.2	48.3	47.2
32.5°	45.1	41.9	41.9	42.9	42.9
35°	39.8	37.6	37.6	37.6	37.6
37.5°	34.3	32.2	32.2	32.2	32.2
40°	30.0	27.9	26.9	27.9	27.9
42.5°	25.8	23.6	22.6	22.6	22.6
45°	22.6	19.3	18.3	19.3	19.3
47.5°	18.3	16.2	16.2	17.2	17.2
50°	14.0	14.0	15.0	17.2	17.2
52.5°	12.9	12.9	15.0	17.2	17.2
55°	11.9	12.9	15.0	16.2	17.2
57.5°	10.7	12.9	15.0	16.2	16.2
60°	10.7	11.9	14.0	16.2	16.2
62.5°	9.7	10.7	12.9	15.0	15.0
65°	9.7	10.7	12.9	15.0	15.0
66°	9.7	10.7	12.9	15.0	15.0
67.5°	9.7	10.7	12.9	15.0	15.0
70°	9.7	10.7	12.9	14.0	14.0
72.5°	8.6	9.7	11.9	14.0	14.0
75°	8.6	9.7	11.9	14.0	14.0
77.5°	8.6	9.7	11.9	14.0	14.0
80°	8.6	9.7	11.9	12.9	14.0
82.5°	7.6	9.7	10.7	12.9	12.9
85°	7.6	8.6	10.7	11.9	12.9
87.5°	6.4	7.6	8.6	10.7	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)