

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: McGRAW-EDISON

Report Number: P158095

Luminaire Tested: **VTS-F02-LED-E1-SL2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158095
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33712)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: VTS-F02-LED-E1-SL2
Description: VENTUS LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

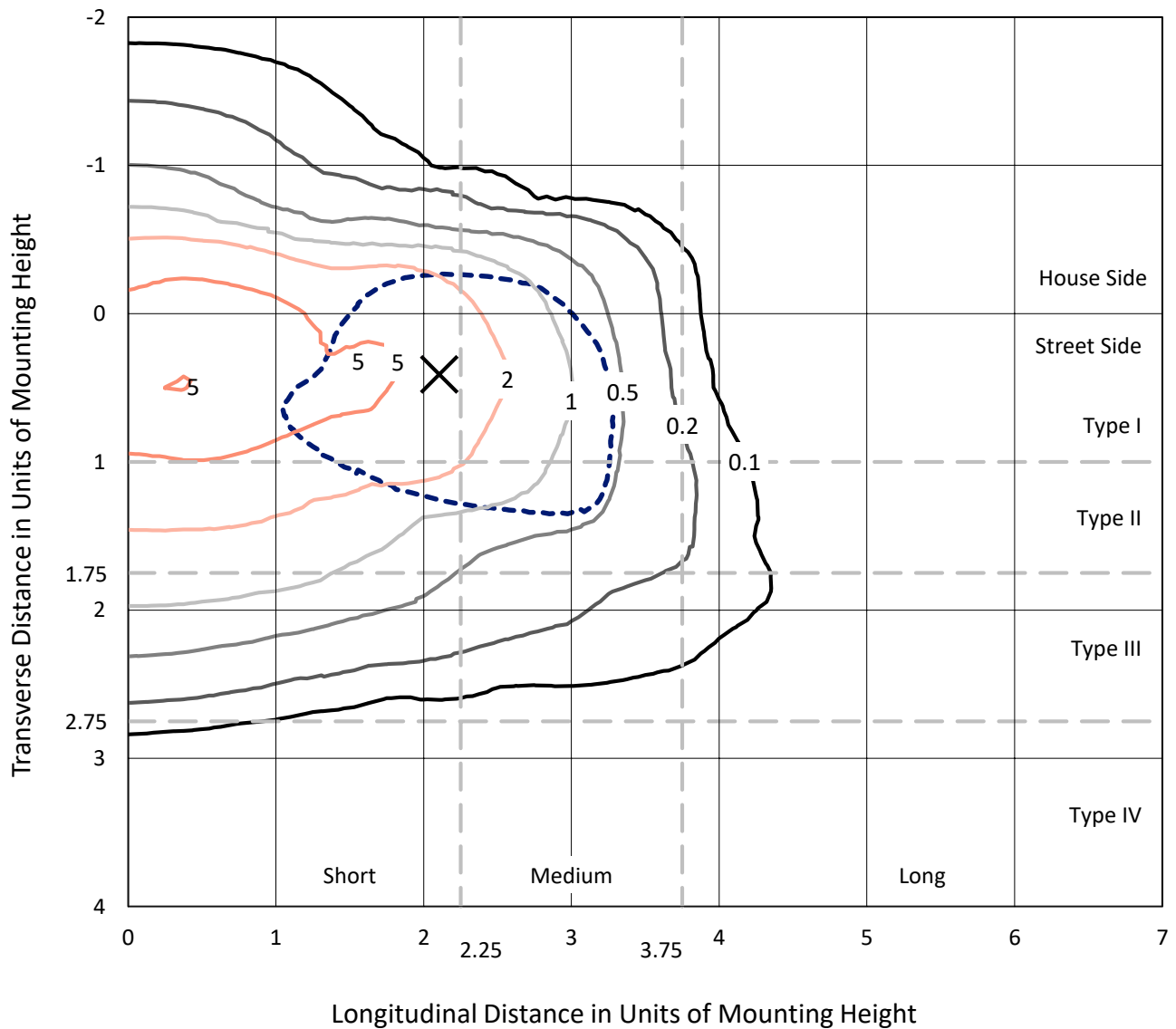
Lumens per Lamp: N/A
Luminaire Lumens: 4967.6 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 55
Input Voltage (V): NR
Input Current (A_{in}): 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

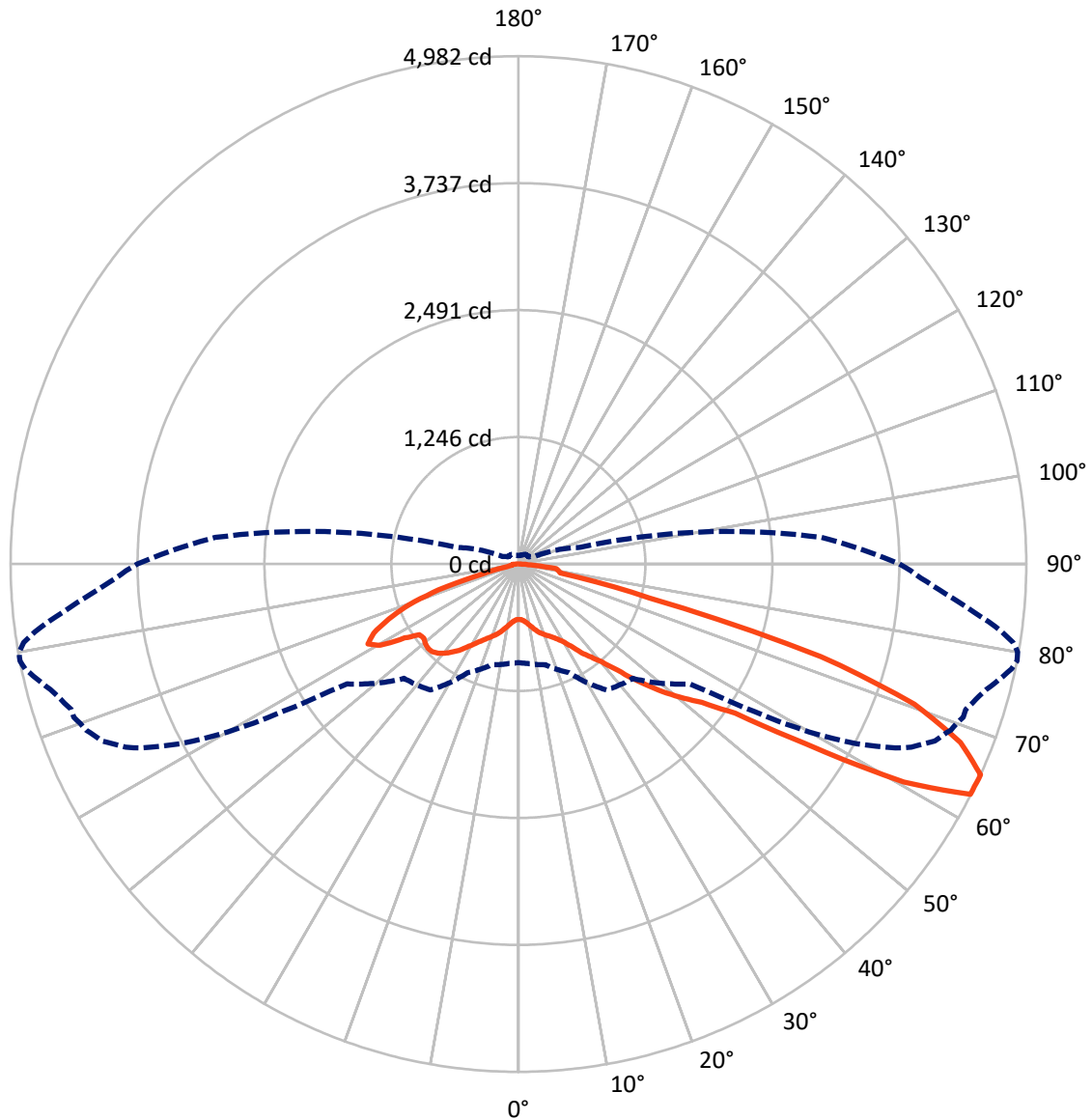
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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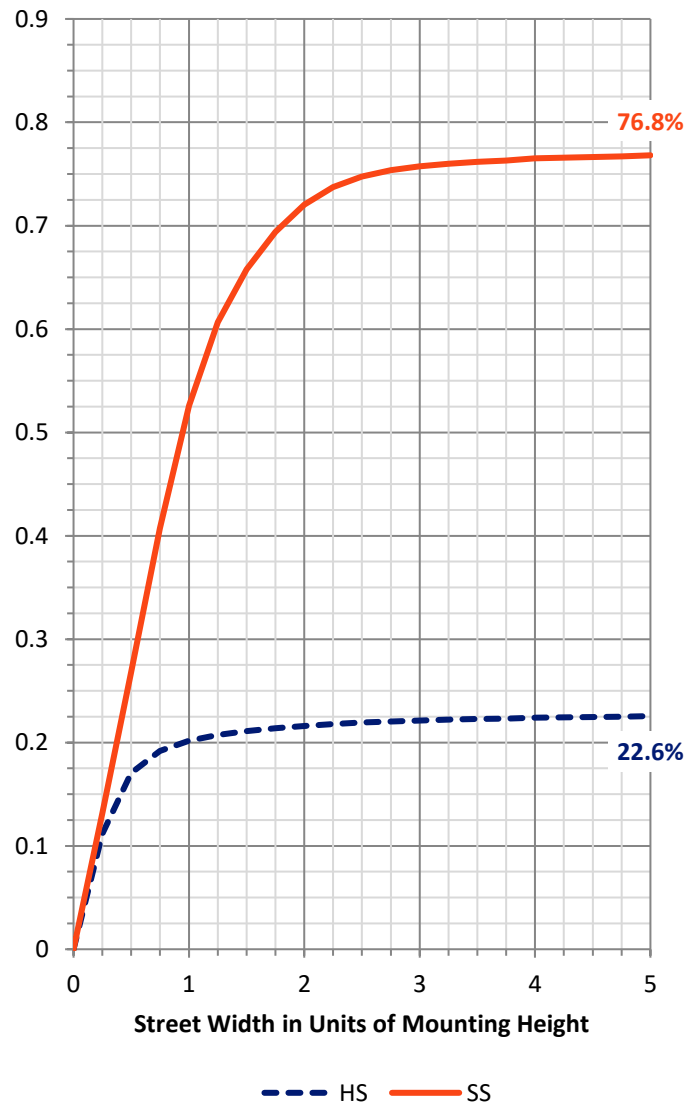
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1141.5	0.0	1141.5
	% Fixture	23.0	0.0	23.0
Street Side	Lumens	3826.2	0.0	3826.2
	% Fixture	77.0	0.0	77.0
Total	Lumens	4967.6	0.0	4967.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.8	1.1
10°-20°	174.6	3.5
20°-30°	301.1	6.1
30°-40°	493.2	9.9
40°-50°	825.9	16.6
50°-60°	1117.1	22.5
60°-70°	1375.7	27.7
70°-80°	532.5	10.7
80°-90°	93.7	1.9
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°	4967.6	100.0
0°-180°	4967.6	100.0



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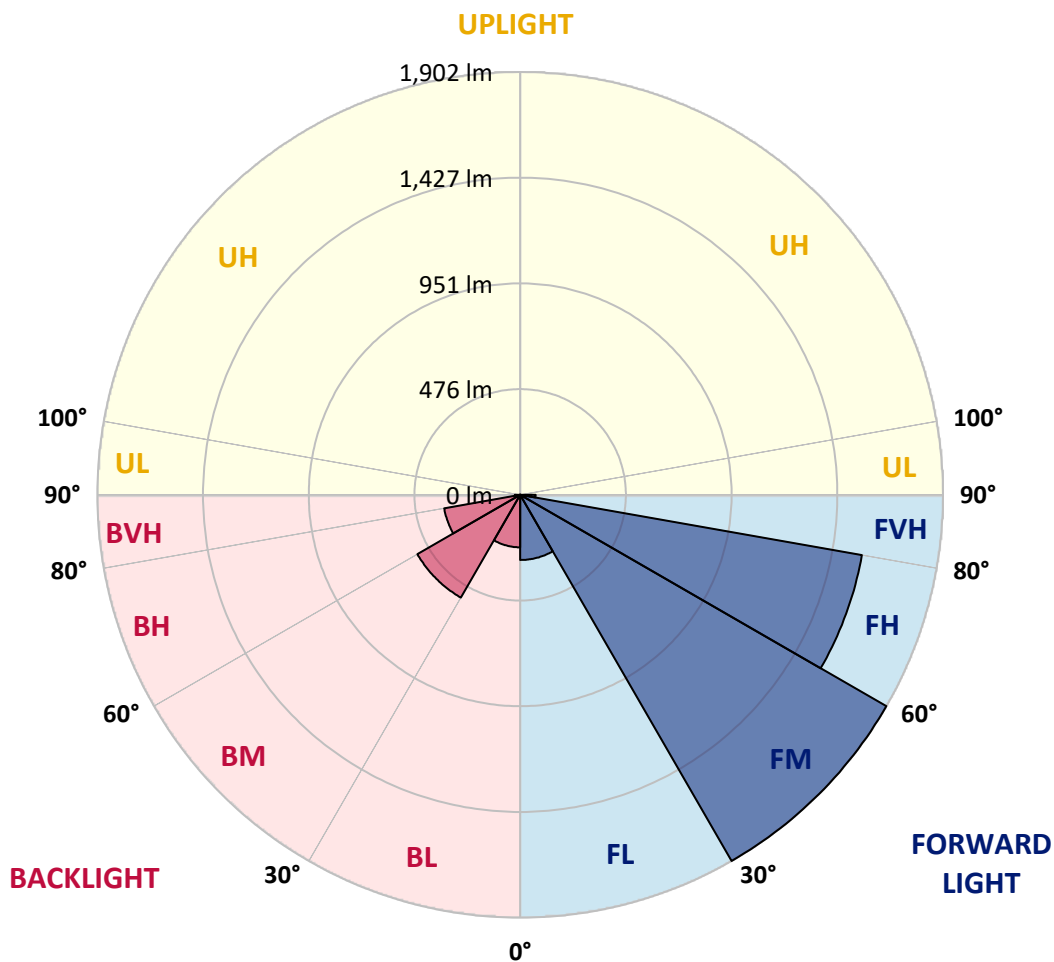
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	293.3	5.9			
FM	(30°-60°)	1902.4	38.3			
FH	(60°-80°)	1561.0	31.4			G1/1800
FVH	(80°-90°)	69.5	1.4			G1/100
BL	(0°-30°)	236.2	4.8	B1/500		
BM	(30°-60°)	533.8	10.7	B1/1000		
BH	(60°-80°)	347.3	7.0	B1/500		G1/500
BVH	(80°-90°)	24.2	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5
2.5°	544.5	542.9	544.5	545.8	546.8	548.1	547.8	547.5	547.2	547.5	547.5
5°	549.1	548.8	550.5	551.8	554.1	555.7	557.7	557.7	557.7	557.4	558.1
7.5°	564.0	563.7	565.3	566.6	568.6	571.9	574.6	575.9	575.6	575.6	575.6
10°	588.4	587.1	587.1	587.1	589.8	592.1	598.0	598.7	600.0	599.3	599.7
12.5°	612.2	612.5	611.5	610.6	610.9	615.5	624.1	625.7	626.1	627.1	627.7
15°	633.7	633.3	631.0	628.7	631.7	639.6	650.8	653.8	653.8	655.8	657.1
17.5°	653.5	652.8	648.5	644.6	647.5	661.1	678.6	680.6	683.5	684.5	685.8
20°	676.9	675.6	670.7	660.1	660.1	678.6	701.7	703.7	706.3	707.0	709.3
22.5°	709.6	706.3	695.8	676.6	671.3	692.8	721.2	722.2	724.2	726.8	728.8
25°	746.6	747.3	730.1	696.7	685.2	707.6	740.0	741.7	745.3	747.3	749.6
27.5°	784.9	785.9	766.7	725.1	705.7	728.1	765.4	767.4	771.7	774.0	777.6
30°	828.5	829.8	811.3	769.4	739.7	758.2	803.1	808.4	812.0	815.0	820.9
32.5°	933.2	925.2	912.4	867.8	820.9	819.6	863.8	869.8	874.7	881.0	886.6
35°	1064.9	1069.9	1076.5	1046.4	1005.2	975.1	978.7	975.4	980.1	989.3	994.9
37.5°	1169.3	1180.2	1208.9	1228.4	1226.7	1220.8	1165.3	1165.3	1168.3	1163.3	1162.7
40°	1251.2	1258.1	1316.9	1392.5	1456.2	1487.6	1443.7	1437.4	1440.7	1415.3	1416.3
42.5°	1293.4	1303.7	1388.2	1520.9	1647.4	1748.1	1734.6	1730.3	1720.4	1714.1	1710.2
45°	1314.9	1327.1	1427.8	1610.1	1794.4	1949.9	2019.9	2019.2	2010.3	2003.1	1999.8
47.5°	1304.0	1314.6	1421.9	1637.2	1871.6	2080.0	2234.9	2244.4	2241.8	2252.4	2256.7
50°	1232.7	1246.2	1353.9	1578.7	1839.3	2131.2	2383.8	2401.6	2425.7	2440.9	2461.1
52.5°	1168.3	1179.5	1276.6	1484.0	1732.9	2089.6	2473.6	2510.3	2543.3	2574.3	2598.4
55°	1100.9	1112.1	1197.3	1385.6	1625.6	1966.7	2514.5	2568.0	2619.6	2672.1	2720.3
57.5°	1075.5	1087.4	1150.8	1309.3	1537.8	1844.9	2534.7	2622.5	2706.4	2795.6	2888.0
60°	1141.5	1152.1	1200.3	1311.3	1470.8	1723.0	2494.1	2632.1	2776.4	2923.3	3065.3
62.5°	1121.4	1127.0	1187.1	1359.1	1556.3	1602.8	2318.1	2500.3	2710.0	2925.3	3142.9
65°	967.5	978.4	1023.7	1174.9	1508.4	1586.7	2049.9	2233.2	2480.5	2735.1	3026.7
67.5°	694.1	678.9	713.9	846.3	1170.3	1584.0	1748.1	1883.8	2077.7	2272.8	2511.9
70°	315.4	308.1	335.5	440.2	706.0	1251.8	1478.0	1523.9	1595.9	1727.3	1888.8
72.5°	124.5	124.2	142.0	181.9	333.8	805.7	1242.9	1269.3	1294.8	1351.9	1421.6
75°	81.6	81.6	86.8	98.1	164.4	389.0	1051.4	1075.5	1114.5	1130.6	1160.4
77.5°	61.4	61.7	64.1	66.7	90.8	204.7	742.0	827.5	893.5	942.7	978.7
80°	43.6	45.6	49.9	51.5	59.1	116.6	419.4	481.1	555.7	635.3	735.4
82.5°	32.7	35.0	42.3	44.2	46.9	66.4	189.2	214.6	250.6	324.9	467.2
85°	15.2	16.8	29.1	31.7	34.0	38.3	96.1	107.3	121.8	133.4	155.5
87.5°	2.3	1.7	5.0	6.9	10.9	11.2	33.0	39.3	42.6	51.2	53.2
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):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5
2.5°	547.5	547.8	548.1	547.5	547.8	547.8	547.2	546.8	546.8	546.8	547.2
5°	558.1	558.7	558.1	558.4	559.7	559.4	558.7	558.4	559.7	560.0	559.0
7.5°	576.9	577.2	575.9	577.5	578.2	578.5	578.5	579.2	579.2	580.2	579.2
10°	601.0	601.0	603.3	603.0	603.3	604.0	604.3	605.6	606.6	606.6	607.3
12.5°	628.7	629.0	631.4	631.7	633.0	633.3	635.3	634.0	637.3	637.3	638.3
15°	657.4	659.8	660.1	663.4	664.1	664.4	667.0	667.0	669.3	669.7	670.3
17.5°	685.8	687.8	689.1	691.8	694.1	695.1	696.1	698.1	699.7	700.4	702.0
20°	710.3	712.3	713.6	716.2	718.2	719.9	720.8	723.2	724.8	725.5	727.8
22.5°	730.8	732.1	734.4	738.0	738.7	740.7	743.6	745.3	745.9	747.9	750.6
25°	752.5	754.5	755.9	759.2	761.8	765.1	767.7	770.4	771.0	773.7	776.0
27.5°	781.6	783.6	783.9	790.5	793.2	797.8	800.8	804.7	806.7	809.0	813.6
30°	824.5	829.2	831.1	838.7	840.1	845.3	850.6	851.9	854.9	855.2	862.8
32.5°	890.2	896.9	899.5	907.4	909.4	914.4	917.3	924.3	924.6	927.9	929.5
35°	997.9	996.2	1006.5	1008.5	1014.4	1018.7	1021.7	1021.7	1027.9	1028.3	1030.3
37.5°	1144.8	1141.5	1144.2	1132.3	1135.3	1130.0	1129.0	1130.3	1127.7	1128.3	1128.0
40°	1379.9	1365.1	1349.6	1312.9	1305.0	1289.8	1277.9	1268.3	1259.1	1249.2	1242.6
42.5°	1674.8	1653.4	1630.2	1571.5	1544.1	1514.7	1485.9	1469.4	1436.4	1416.3	1405.4
45°	1983.9	1958.8	1926.4	1877.6	1838.6	1807.2	1754.7	1730.0	1678.8	1653.4	1619.0
47.5°	2237.2	2237.5	2211.4	2161.9	2120.3	2099.5	2066.8	2018.9	1960.8	1928.1	1867.0
50°	2458.7	2458.4	2456.8	2427.0	2398.0	2375.2	2346.5	2303.2	2255.7	2218.7	2148.7
52.5°	2622.5	2644.3	2653.6	2653.2	2649.6	2639.0	2617.2	2579.9	2531.7	2510.9	2455.1
55°	2757.9	2805.5	2830.2	2884.4	2889.3	2906.8	2887.7	2888.0	2859.6	2861.6	2843.8
57.5°	2963.0	3049.8	3099.7	3219.5	3279.6	3352.3	3339.4	3400.2	3422.3	3450.4	3487.7
60°	3195.8	3357.9	3476.1	3714.5	3811.6	3929.2	3993.9	4062.9	4113.1	4164.6	4202.6
62.5°	3362.2	3575.2	3769.3	4109.1	4235.3	4359.1	4440.7	4524.2	4580.7	4617.7	4645.1
65°	3294.2	3529.6	3759.1	4115.4	4252.8	4342.6	4439.7	4487.9	4544.3	4575.1	4614.4
67.5°	2799.2	3035.3	3281.3	3701.7	3845.3	3969.5	4045.1	4107.5	4153.1	4192.0	4237.3
70°	2081.6	2339.9	2594.1	3055.1	3236.4	3415.7	3504.8	3582.1	3629.7	3669.0	3718.8
72.5°	1498.2	1660.0	1818.8	2334.9	2516.2	2748.0	2840.5	2926.3	2988.1	2986.1	3038.9
75°	1192.7	1258.4	1329.1	1595.6	1725.7	1921.2	1973.0	2021.2	1992.2	1936.4	1933.0
77.5°	992.9	1020.0	1043.8	1127.3	1146.5	1193.0	1167.3	1140.5	1054.4	981.7	943.4
80°	806.0	859.5	894.5	954.0	978.4	992.3	995.9	986.7	955.0	911.0	841.0
82.5°	599.3	701.0	770.4	887.3	930.2	939.1	956.3	945.7	924.9	889.3	839.1
85°	175.7	198.8	227.8	309.1	362.2	407.5	453.7	476.5	490.7	470.9	419.0
87.5°	61.7	69.7	77.9	107.3	114.3	138.0	135.4	159.8	160.8	167.7	160.5
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):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5
2.5°	546.8	546.8	546.8	547.2	547.2	547.2	546.5	546.2	546.5	547.2	547.2
5°	559.7	560.0	560.7	559.4	559.7	560.7	560.0	559.7	560.0	560.7	560.0
7.5°	580.5	580.8	580.2	581.5	581.5	582.2	583.2	582.2	582.5	582.8	583.2
10°	607.6	607.9	608.6	609.6	609.9	610.6	611.2	612.2	612.2	611.5	613.2
12.5°	639.9	639.6	640.3	641.6	642.3	643.2	645.2	645.2	646.6	646.2	647.9
15°	671.6	673.3	673.6	675.9	676.9	678.6	680.9	682.2	682.2	684.2	684.9
17.5°	703.3	704.7	706.0	708.0	709.3	710.3	712.9	714.6	714.2	717.9	717.9
20°	727.8	730.4	732.1	733.4	735.7	737.4	739.3	741.3	742.6	745.0	745.6
22.5°	751.6	753.2	755.5	757.2	759.8	761.8	764.1	765.8	768.1	771.0	772.0
25°	778.0	780.6	783.3	785.6	787.6	789.9	793.8	797.5	800.8	803.4	804.4
27.5°	814.6	817.6	821.6	823.2	826.2	828.2	834.1	838.7	840.4	845.0	846.3
30°	864.2	867.5	871.4	873.4	878.7	881.3	887.6	892.6	894.2	899.8	900.8
32.5°	935.8	937.8	945.7	945.4	952.7	960.3	963.9	967.8	975.1	978.1	979.1
35°	1035.2	1039.8	1045.4	1045.1	1054.4	1058.7	1065.9	1070.2	1075.5	1075.2	1080.8
37.5°	1131.3	1133.0	1134.9	1139.2	1145.8	1151.8	1154.4	1158.7	1162.7	1168.6	1175.9
40°	1236.0	1239.9	1240.3	1242.6	1245.9	1253.5	1258.4	1263.1	1276.6	1285.2	1289.5
42.5°	1392.8	1391.8	1385.2	1389.5	1391.5	1403.1	1406.7	1420.9	1436.1	1454.2	1459.2
45°	1594.6	1581.4	1577.4	1575.8	1586.3	1592.3	1607.1	1633.5	1649.4	1666.6	1674.8
47.5°	1842.9	1801.6	1782.1	1777.9	1788.7	1814.2	1819.1	1845.2	1866.0	1878.6	1886.8
50°	2091.5	2059.2	2018.2	2004.4	2001.4	2024.8	2030.5	2052.3	2073.4	2077.0	2072.7
52.5°	2403.9	2351.1	2283.4	2259.0	2239.5	2241.1	2245.8	2255.0	2268.5	2262.9	2251.4
55°	2803.5	2743.4	2710.0	2663.8	2634.4	2629.1	2609.0	2581.3	2580.3	2583.9	2549.2
57.5°	3468.9	3443.8	3458.0	3453.0	3423.9	3441.4	3350.6	3324.9	3304.4	3268.7	3236.7
60°	4236.3	4262.0	4291.4	4359.1	4356.1	4424.2	4361.1	4345.2	4326.1	4216.1	4162.3
62.5°	4692.9	4703.2	4746.4	4809.5	4871.6	4936.6	4966.0	4976.3	4936.3	4846.5	4734.2
65°	4613.4	4658.6	4700.5	4755.0	4818.8	4883.8	4945.9	4982.2	4973.0	4913.5	4790.0
67.5°	4251.8	4299.3	4360.8	4417.9	4486.6	4543.0	4611.1	4677.8	4679.7	4650.0	4564.2
70°	3724.1	3779.3	3842.7	3874.7	3949.0	4000.2	4056.6	4122.7	4144.1	4147.8	4047.7
72.5°	3027.7	3050.8	3081.8	3065.0	3079.9	3112.6	3097.4	3102.7	3021.1	3036.3	2912.8
75°	1843.9	1822.8	1729.0	1643.5	1539.1	1458.9	1478.0	1324.8	1173.9	1166.3	1057.3
77.5°	935.2	901.5	843.4	782.9	694.4	593.1	508.5	417.4	340.4	296.5	254.6
80°	796.5	772.7	740.7	696.7	632.4	557.4	469.2	399.9	335.5	268.5	215.0
82.5°	762.1	689.5	642.9	606.3	536.6	467.2	419.0	371.5	325.9	284.6	225.5
85°	378.1	334.5	283.0	251.0	193.2	151.2	141.7	116.6	108.6	83.9	70.7
87.5°	127.1	104.0	77.6	65.4	52.2	42.6	41.9	37.3	37.0	33.7	31.0
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):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5	543.5
2.5°	546.8	547.5	547.5	546.8	547.2	546.5	546.8	547.2	546.2	545.8	544.8
5°	560.4	560.0	560.0	560.4	561.4	561.7	560.0	560.7	561.0	559.4	555.7
7.5°	582.8	582.8	583.8	583.5	585.5	584.8	584.5	584.5	584.5	581.2	575.2
10°	613.2	613.2	614.2	615.5	615.8	615.2	615.2	615.5	617.2	610.6	601.3
12.5°	647.2	648.9	648.5	648.5	652.5	651.5	650.2	651.5	653.2	643.9	630.7
15°	685.2	686.2	686.8	689.1	688.5	690.8	691.5	690.8	692.5	680.6	658.4
17.5°	719.5	721.5	722.2	724.8	724.8	725.1	727.8	726.8	727.1	713.6	681.9
20°	747.9	749.9	750.9	753.9	754.5	755.9	756.8	757.5	759.2	743.0	701.0
22.5°	776.3	778.0	779.6	781.6	784.2	785.9	787.2	787.9	790.9	772.0	719.2
25°	808.0	811.7	813.3	816.6	819.3	821.9	823.9	824.2	829.2	805.7	734.1
27.5°	850.3	855.2	857.9	863.2	865.8	868.5	867.8	871.8	878.7	844.3	745.6
30°	905.8	912.0	913.7	919.0	923.3	925.9	928.9	932.2	936.8	887.3	751.2
32.5°	983.0	992.6	994.9	997.9	1004.2	1008.8	1010.8	1016.1	1017.4	927.9	749.6
35°	1089.0	1084.7	1096.0	1098.6	1107.5	1111.2	1113.5	1120.4	1115.1	972.1	738.7
37.5°	1184.8	1183.5	1194.4	1200.3	1211.9	1209.2	1214.8	1219.5	1200.6	1003.5	718.5
40°	1301.7	1300.0	1315.2	1317.2	1335.0	1331.1	1333.4	1337.0	1295.1	1025.3	681.9
42.5°	1464.8	1465.5	1481.7	1483.6	1485.9	1493.2	1481.3	1482.0	1395.5	1031.2	621.5
45°	1679.8	1691.3	1681.4	1681.8	1681.1	1667.2	1652.4	1634.9	1499.8	1010.8	543.5
47.5°	1888.1	1880.2	1867.7	1856.1	1846.5	1824.7	1802.9	1773.2	1590.0	962.2	456.7
50°	2066.5	2048.6	2037.4	2005.4	1982.6	1954.2	1923.8	1889.8	1663.9	892.2	375.4
52.5°	2232.2	2213.7	2171.8	2138.4	2105.7	2068.1	2032.8	1992.8	1729.3	812.3	313.4
55°	2507.6	2491.4	2449.5	2388.4	2348.1	2296.3	2249.7	2195.6	1861.7	747.6	272.4
57.5°	3148.6	3134.7	3046.5	3007.9	2954.7	2824.6	2805.5	2720.9	2216.7	740.0	248.3
60°	4051.0	3991.6	3918.3	3812.6	3688.1	3645.2	3549.4	3436.8	2788.0	760.8	228.8
62.5°	4605.1	4469.7	4362.1	4240.2	4125.6	4027.2	3922.6	3811.3	3080.2	733.4	204.7
65°	4646.7	4487.6	4345.2	4202.3	4073.5	3951.0	3849.3	3738.0	2985.1	630.4	173.4
67.5°	4417.5	4249.8	4094.6	3932.5	3802.4	3691.7	3562.3	3455.3	2717.0	490.7	144.3
70°	3945.0	3797.7	3664.0	3489.3	3381.4	3246.6	3164.4	3030.7	2368.3	334.5	119.2
72.5°	2841.5	2730.5	2686.9	2565.1	2423.7	2344.5	2306.5	2176.7	1750.1	207.7	97.4
75°	959.9	987.3	924.6	828.5	875.4	803.1	832.5	770.7	740.3	119.2	81.9
77.5°	213.0	200.1	184.9	171.7	170.7	160.5	170.1	160.8	172.0	75.9	72.3
80°	168.1	132.7	112.9	103.0	97.7	94.8	92.5	89.8	81.9	64.7	66.7
82.5°	181.6	137.0	100.4	80.2	68.7	64.4	63.4	60.8	60.1	62.7	67.4
85°	58.1	48.5	41.3	39.0	36.0	34.3	33.7	32.7	39.6	68.4	64.7
87.5°	30.4	26.7	23.8	22.8	19.8	18.5	18.2	18.5	27.7	68.4	46.9
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):

	125°	135°	145°	155°	165°	175°	180°
0°	543.5	543.5	543.5	543.5	543.5	543.5	543.5
2.5°	543.9	543.5	542.9	542.5	542.2	540.6	541.9
5°	554.1	550.8	547.8	544.2	542.2	540.6	540.6
7.5°	569.6	560.4	552.8	544.5	538.9	534.6	533.9
10°	589.1	571.3	553.8	538.9	528.3	520.4	519.4
12.5°	607.6	580.5	552.8	528.3	511.8	500.6	499.9
15°	624.8	585.5	545.2	509.2	484.4	469.6	467.9
17.5°	638.3	582.5	528.0	482.4	448.8	431.3	430.3
20°	641.3	570.6	503.6	449.4	413.8	395.3	391.0
22.5°	638.6	549.1	473.2	413.1	372.1	353.7	351.3
25°	630.7	523.1	435.5	370.8	332.9	314.0	309.4
27.5°	616.5	492.3	394.9	329.9	292.2	274.1	269.5
30°	595.4	455.4	351.7	291.6	252.6	238.1	233.5
32.5°	566.0	410.5	309.1	252.3	219.9	208.4	206.4
35°	525.4	358.9	264.5	219.9	196.1	189.2	188.2
37.5°	473.5	307.4	227.2	196.8	179.6	175.3	174.7
40°	405.8	254.6	200.8	180.3	167.7	164.1	163.5
42.5°	336.2	215.0	181.3	167.1	156.8	153.5	152.6
45°	275.1	188.2	166.8	156.2	146.6	143.0	142.7
47.5°	229.5	172.7	154.9	146.3	136.7	132.4	132.7
50°	196.1	158.5	145.0	137.7	126.8	122.8	123.2
52.5°	173.4	144.3	135.7	127.5	118.2	114.3	114.3
55°	155.5	132.7	126.8	117.9	110.6	107.0	106.7
57.5°	141.0	123.5	118.2	111.0	103.7	99.4	99.4
60°	132.1	116.9	112.6	106.0	97.4	92.8	92.5
62.5°	126.8	114.9	111.3	102.0	92.5	87.8	86.8
65°	122.8	119.5	114.9	99.7	88.5	83.5	82.6
67.5°	123.2	130.4	123.8	101.0	87.2	79.9	78.6
70°	125.1	139.0	130.1	104.0	92.8	78.3	75.3
72.5°	115.2	125.8	117.2	99.1	90.5	75.3	71.7
75°	96.1	91.8	84.2	80.6	81.2	68.4	67.0
77.5°	77.9	68.4	61.1	64.1	68.4	58.4	57.1
80°	67.7	55.5	51.8	56.8	62.1	49.9	46.6
82.5°	63.4	46.9	44.6	59.1	65.1	42.9	37.6
85°	55.8	38.3	35.0	69.7	65.1	32.4	30.0
87.5°	37.3	22.8	21.8	51.2	44.6	22.5	18.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)