

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: LUMARK

Report Number: P146606

Luminaire Tested: **LDRL-T3-F03-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146606
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-F03-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (21) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7587.6 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

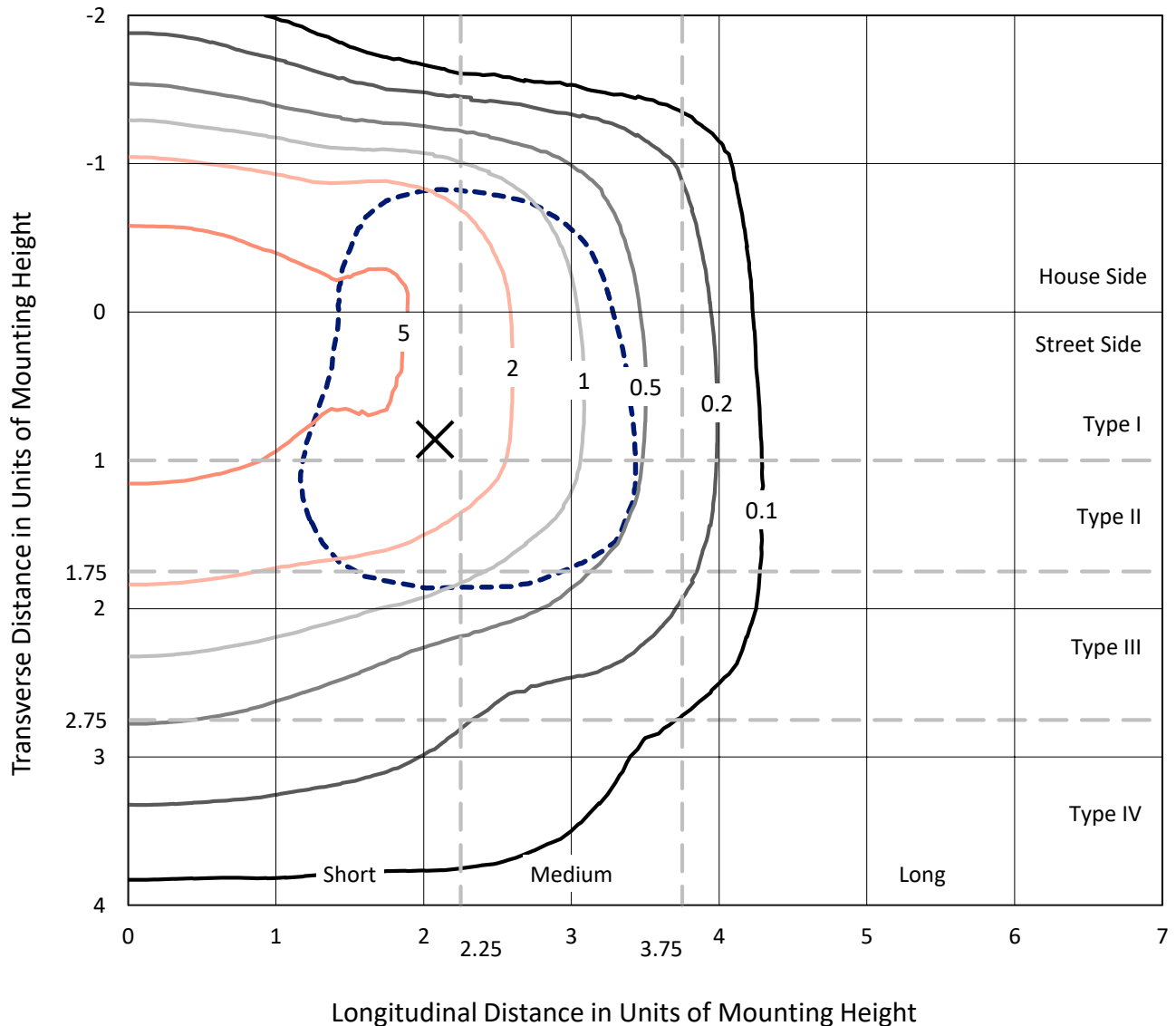
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

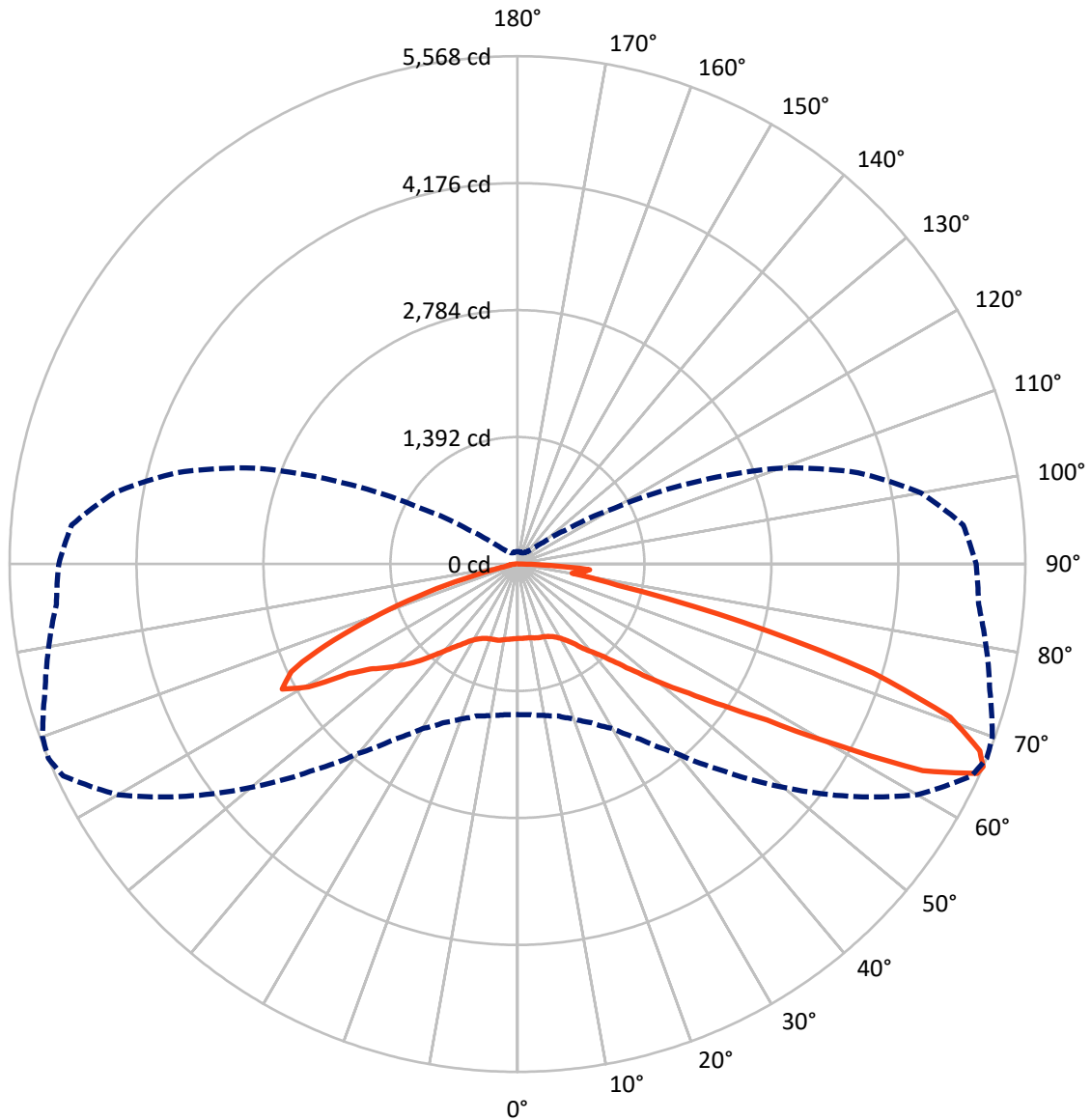
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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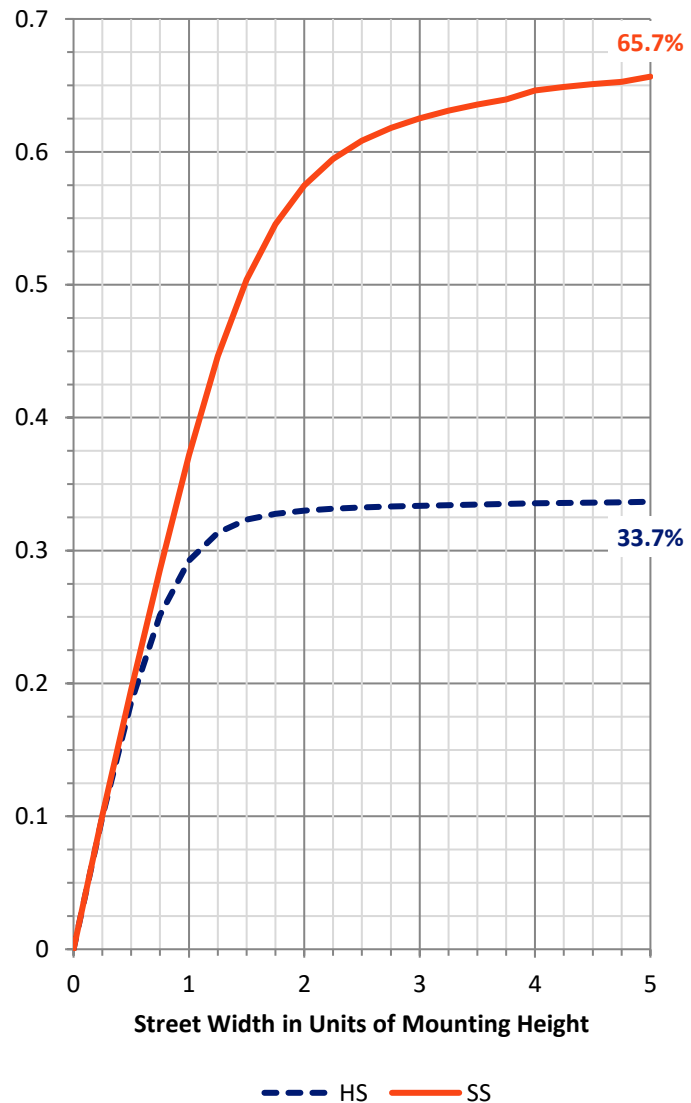
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2577.8	0.0	2577.8
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	5009.9	0.0	5009.9
	% Fixture	66.0	0.0	66.0
Total	Lumens	7587.6	0.0	7587.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.0
10°-20°	232.5	3.1
20°-30°	399.6	5.3
30°-40°	642.8	8.5
40°-50°	1059.5	14.0
50°-60°	1660.8	21.9
60°-70°	2298.4	30.3
70°-80°	1040.1	13.7
80°-90°	175.5	2.3
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°	7587.6	100.0
0°-180°	7587.6	100.0



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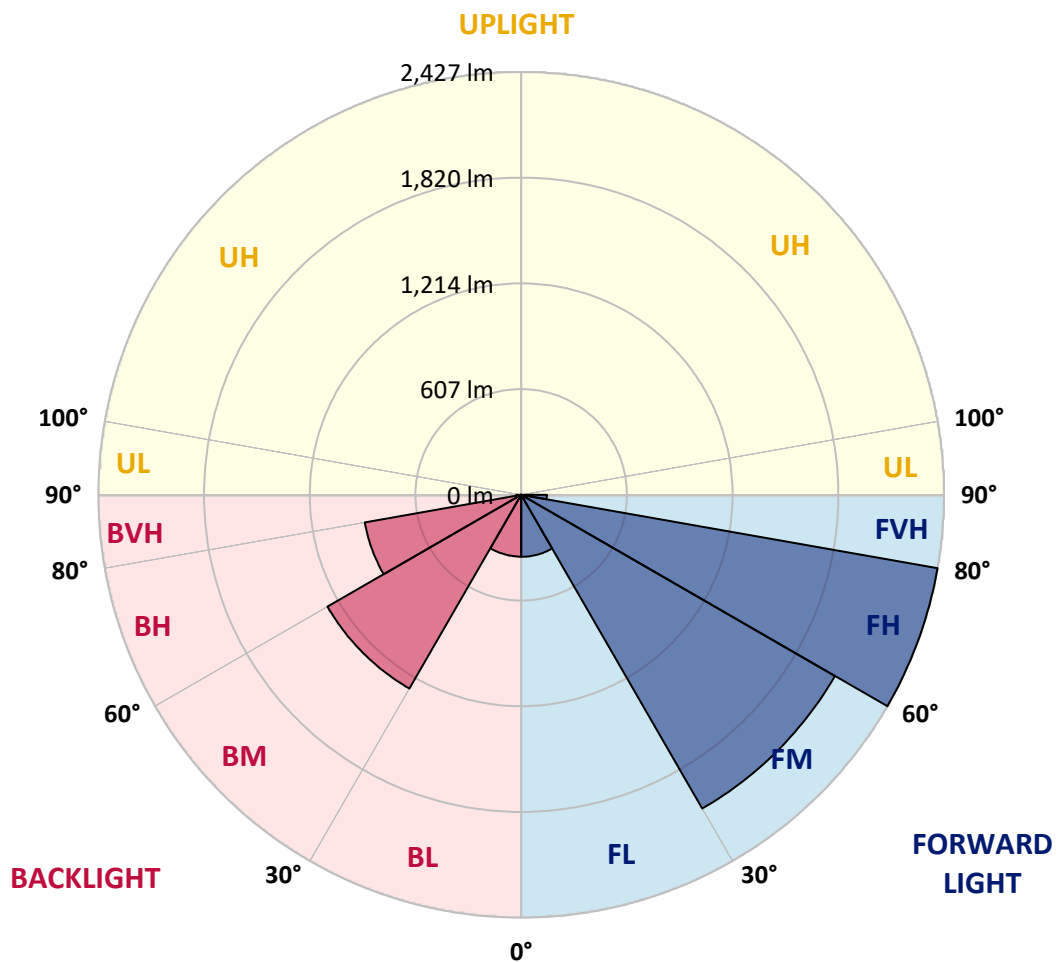
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	355.9	4.7			
FM	(30°-60°)	2079.3	27.4			
FH	(60°-80°)	2427.2	32.0			G2/5000
FVH	(80°-90°)	147.5	1.9			G2/225
BL	(0°-30°)	354.7	4.7	B1/500		
BM	(30°-60°)	1283.8	16.9	B2/2500		
BH	(60°-80°)	911.3	12.0	B2/1000		G2/1000
BVH	(80°-90°)	28.0	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8
2.5°	815.7	815.2	814.7	814.7	814.2	814.7	815.2	815.7	815.2	815.7	815.2
5°	814.2	814.2	813.7	813.7	813.7	813.7	814.2	814.7	814.2	815.2	814.2
7.5°	807.6	810.7	809.6	810.7	811.7	812.7	813.2	814.2	815.7	816.8	815.7
10°	799.0	800.5	801.0	802.0	804.0	806.6	808.6	811.2	814.7	815.7	816.8
12.5°	783.2	785.2	786.8	788.8	791.8	795.9	799.5	803.5	809.6	813.7	817.3
15°	771.5	774.1	774.6	777.1	780.2	784.7	789.3	795.4	803.5	810.7	817.8
17.5°	779.1	780.2	779.1	779.1	780.2	782.2	785.7	790.8	799.5	808.1	816.8
20°	802.0	802.0	801.0	800.5	799.5	797.4	796.9	796.4	802.0	808.6	816.2
22.5°	823.9	823.9	823.4	825.4	824.9	824.9	823.4	820.8	818.3	817.3	822.3
25°	837.6	839.6	840.6	843.7	845.7	848.8	849.8	849.3	845.7	839.6	838.1
27.5°	860.0	861.5	862.5	866.1	870.1	873.7	877.2	881.8	881.8	876.2	868.6
30°	903.2	901.1	902.1	903.2	906.7	911.8	916.4	922.5	925.5	923.5	913.3
32.5°	943.3	945.3	946.4	949.4	953.0	960.6	966.2	973.3	979.9	980.9	975.8
35°	1002.3	1001.2	999.7	1010.4	1014.5	1023.1	1029.7	1039.9	1045.0	1049.5	1046.5
37.5°	1095.3	1092.2	1090.2	1093.2	1098.8	1104.4	1114.1	1121.7	1130.3	1141.0	1137.5
40°	1226.9	1233.0	1224.4	1228.4	1233.0	1220.3	1228.9	1236.1	1250.8	1251.3	1250.8
42.5°	1398.2	1402.8	1400.7	1403.3	1395.1	1391.1	1387.5	1391.1	1409.4	1406.8	1394.6
45°	1569.5	1576.1	1574.5	1575.6	1591.3	1584.7	1590.3	1591.3	1610.1	1605.0	1595.9
47.5°	1715.8	1727.0	1729.6	1738.7	1760.1	1777.3	1801.2	1819.0	1828.2	1834.3	1841.4
50°	1831.7	1839.8	1854.1	1877.0	1908.0	1937.9	1991.8	2026.9	2058.9	2081.3	2104.1
52.5°	1908.5	1917.6	1939.5	1974.0	2018.8	2073.6	2136.7	2209.9	2277.4	2317.1	2351.1
55°	1940.0	1949.1	1976.1	2021.3	2080.8	2150.9	2241.4	2344.5	2434.5	2525.5	2577.8
57.5°	1921.7	1931.8	1962.8	2013.7	2085.3	2177.3	2289.6	2416.2	2547.8	2685.6	2790.8
60°	1867.8	1877.0	1912.0	1964.9	2046.7	2150.4	2285.1	2443.6	2628.6	2833.0	3032.7
62.5°	1793.6	1807.3	1838.3	1892.2	1973.5	2086.9	2240.3	2446.7	2712.0	3041.3	3430.1
65°	1699.1	1709.2	1736.7	1779.4	1868.8	1987.2	2149.4	2402.0	2748.6	3215.7	3770.7
66°	1650.3	1659.9	1685.3	1725.5	1807.3	1921.2	2083.3	2342.0	2707.9	3214.7	3806.8
67.5°	1564.4	1569.0	1587.3	1626.9	1680.3	1782.4	1932.9	2175.3	2535.6	3079.0	3706.1
70°	1312.3	1318.9	1336.7	1357.0	1376.8	1413.4	1518.6	1678.7	1966.9	2487.9	3086.1
72.5°	907.7	917.9	937.2	974.8	1005.8	1052.1	1093.2	1146.6	1242.2	1604.0	2207.8
75°	656.1	659.7	688.2	754.2	816.8	909.3	991.1	1017.0	984.5	978.9	1297.0
77.5°	391.3	396.4	437.6	504.2	569.2	694.8	862.5	992.1	1063.8	1038.3	981.9
80°	164.7	171.8	196.2	213.5	267.3	372.5	538.2	741.5	930.6	1047.0	1020.6
82.5°	52.9	61.5	72.7	87.9	103.7	138.8	215.0	321.7	508.2	757.8	931.6
85°	19.3	19.8	27.4	38.1	42.2	48.8	62.5	96.6	171.8	284.1	528.6
87.5°	7.6	9.1	10.7	14.7	15.2	15.8	17.8	22.9	22.4	19.3	100.1
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°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8
2.5°	815.7	816.8	816.2	816.8	816.8	815.7	815.7	817.8	816.2	817.3	817.3
5°	815.2	816.2	815.7	816.8	816.8	816.2	816.2	819.3	818.8	820.3	821.3
7.5°	817.3	817.8	817.3	817.3	818.8	818.3	818.8	819.8	822.3	824.9	826.9
10°	819.8	820.8	822.3	822.8	824.9	824.4	825.9	827.4	830.0	832.5	835.0
12.5°	823.4	826.4	831.0	832.0	834.0	835.6	838.1	839.6	841.7	845.7	848.8
15°	826.4	832.0	837.6	839.6	841.7	843.7	846.2	847.8	851.3	854.9	858.4
17.5°	827.4	834.0	841.1	843.7	845.7	849.3	852.3	855.4	859.4	864.0	868.1
20°	827.9	837.1	846.2	849.3	853.9	858.9	864.0	866.6	872.1	877.7	881.3
22.5°	832.5	843.7	856.4	862.0	866.6	875.7	882.3	886.4	893.0	897.6	899.1
25°	845.2	856.9	872.1	880.8	888.4	901.6	909.8	917.4	920.9	927.0	925.5
27.5°	868.1	877.2	897.1	908.7	918.4	935.7	951.4	958.6	964.1	967.2	963.6
30°	907.2	910.8	932.6	946.9	963.1	990.1	1007.3	1016.5	1023.6	1024.1	1015.0
32.5°	965.7	960.1	979.4	999.7	1021.1	1053.6	1077.0	1086.6	1092.2	1092.7	1072.4
35°	1045.0	1035.3	1051.6	1071.4	1097.8	1140.5	1170.0	1181.2	1189.8	1185.7	1155.7
37.5°	1145.1	1144.6	1152.2	1177.6	1207.6	1262.5	1293.5	1299.6	1299.1	1286.9	1241.6
40°	1256.4	1247.2	1248.3	1266.5	1301.1	1373.3	1416.5	1426.6	1423.1	1405.3	1346.3
42.5°	1396.7	1392.6	1378.9	1388.5	1420.5	1508.5	1560.8	1571.0	1574.0	1544.6	1474.9
45°	1593.3	1589.8	1559.3	1561.3	1584.7	1677.2	1731.6	1748.4	1748.9	1720.9	1630.5
47.5°	1831.7	1828.7	1793.1	1782.9	1794.6	1877.0	1944.5	1948.1	1949.1	1910.5	1816.5
50°	2102.1	2093.5	2066.5	2055.9	2042.1	2133.1	2187.5	2187.0	2181.4	2138.7	2033.0
52.5°	2363.3	2382.7	2372.5	2351.7	2352.2	2417.7	2469.1	2440.6	2444.2	2403.5	2282.0
55°	2642.4	2691.7	2728.8	2736.4	2732.8	2766.4	2794.8	2744.0	2725.2	2718.6	2589.5
57.5°	2938.7	3064.7	3179.1	3226.8	3208.6	3270.1	3295.5	3242.6	3243.6	3295.5	3184.2
60°	3334.6	3652.8	3940.9	4030.4	4072.1	4173.7	4128.5	4125.4	4205.2	4272.3	4066.0
62.5°	3935.3	4462.4	4922.4	4988.9	5022.5	5045.4	5025.0	4969.6	5052.0	5060.1	4741.9
65°	4390.7	5009.3	5454.0	5537.3	5531.2	5414.8	5302.0	5191.2	5190.2	5108.9	4699.2
66°	4440.0	5061.1	5494.6	5568.3	5541.4	5362.0	5218.7	5074.8	5028.6	4906.6	4490.9
67.5°	4332.3	4970.6	5401.1	5467.2	5409.8	5136.8	4941.7	4747.0	4677.4	4507.6	4083.8
70°	3703.6	4361.3	4937.1	5032.6	4964.5	4602.2	4313.0	4099.0	3909.4	3742.2	3392.5
72.5°	2871.6	3363.6	3973.0	4072.6	4078.2	3794.6	3468.8	3263.4	3042.9	2875.1	2612.9
75°	1883.6	2255.6	2590.5	2557.0	2566.6	2343.5	2149.4	1978.6	1778.9	1646.7	1521.7
77.5°	1100.9	1234.0	1203.5	1120.2	1050.0	825.4	590.6	405.6	353.7	369.0	416.3
80°	957.0	882.3	690.7	607.4	552.5	375.1	201.8	142.3	125.0	126.6	134.2
82.5°	1030.2	1068.8	877.2	722.2	629.7	441.7	237.4	118.4	85.4	99.6	109.8
85°	799.5	1017.5	938.2	792.9	666.8	469.6	242.4	75.2	50.8	68.1	85.9
87.5°	227.7	360.3	288.2	254.6	205.3	140.3	57.9	30.0	27.4	35.6	49.3
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8
2.5°	817.8	817.8	819.3	819.8	820.3	820.3	821.3	821.3	821.8	823.9	823.4
5°	822.8	824.4	826.4	827.4	828.9	829.5	831.0	831.0	832.5	834.0	833.5
7.5°	828.9	830.5	832.0	833.5	835.0	837.1	836.6	836.1	835.6	834.5	833.5
10°	837.6	839.1	840.6	840.1	839.1	838.1	834.0	829.5	827.4	823.4	820.3
12.5°	851.8	853.3	851.8	847.8	842.2	835.6	826.9	819.3	814.7	808.6	805.1
15°	862.5	864.0	861.0	853.9	844.7	836.1	824.4	814.7	806.6	800.0	794.9
17.5°	870.6	869.6	863.0	854.9	845.2	838.1	827.4	816.8	807.1	797.9	790.8
20°	882.3	876.7	867.1	856.9	847.2	841.1	832.5	822.8	812.7	799.5	790.3
22.5°	897.6	887.4	874.7	864.5	855.4	849.3	840.6	831.5	821.8	806.6	793.9
25°	919.4	903.2	888.4	877.7	869.6	863.5	852.8	843.2	832.5	817.3	801.0
27.5°	949.9	926.5	911.3	900.6	892.5	885.4	871.6	860.0	846.2	831.0	811.7
30°	989.6	961.1	944.3	935.2	926.5	916.4	901.6	884.3	866.6	846.2	825.4
32.5°	1038.9	1006.8	991.1	981.9	970.7	957.0	937.7	914.8	888.4	861.5	835.6
35°	1109.0	1072.4	1055.1	1039.4	1023.1	1002.8	973.8	940.8	905.7	870.6	838.6
37.5°	1178.6	1144.6	1123.2	1107.0	1081.5	1048.5	1008.4	962.6	915.9	871.1	832.5
40°	1277.2	1237.6	1212.7	1183.7	1142.5	1091.2	1032.8	971.3	913.3	859.4	813.7
42.5°	1398.2	1352.9	1315.8	1263.5	1199.5	1125.3	1044.4	966.2	895.5	833.5	783.2
45°	1551.2	1492.2	1430.2	1347.9	1249.8	1146.1	1043.9	948.4	865.0	794.9	745.1
47.5°	1729.6	1646.7	1542.5	1417.0	1282.8	1151.2	1027.7	916.4	819.3	742.0	684.6
50°	1913.0	1793.1	1645.2	1470.4	1299.6	1138.5	991.6	864.0	759.3	671.4	609.4
52.5°	2139.2	1953.2	1738.2	1506.4	1292.5	1100.9	931.6	790.3	678.5	592.6	521.5
55°	2408.6	2137.2	1826.6	1526.3	1261.0	1033.3	840.6	693.8	576.4	498.1	434.0
57.5°	2854.3	2425.3	1977.6	1555.7	1199.0	932.6	729.8	577.9	467.6	401.0	349.7
60°	3622.8	3016.4	2296.8	1628.4	1113.1	789.3	589.1	452.8	361.9	308.5	272.4
62.5°	4159.0	3374.7	2468.5	1603.5	967.2	621.6	435.6	323.8	263.8	228.7	204.3
65°	4054.8	3233.5	2261.7	1362.1	757.8	439.6	289.7	219.1	185.0	163.1	150.9
66°	3867.7	3077.4	2104.1	1222.8	657.2	366.4	238.9	181.4	159.1	143.3	135.2
67.5°	3526.7	2754.2	1821.0	981.4	492.0	270.4	181.4	141.3	129.1	121.0	115.4
70°	2919.9	2177.8	1253.8	579.9	260.2	151.5	115.4	104.2	98.6	95.0	94.5
72.5°	2238.8	1562.3	725.3	280.6	139.3	100.6	88.4	84.4	82.3	81.3	81.3
75°	1382.9	881.3	324.3	140.8	96.1	82.3	76.7	74.7	74.2	74.2	74.2
77.5°	486.4	307.0	145.4	103.2	84.4	74.2	69.6	68.6	69.6	69.6	69.6
80°	134.2	118.4	105.2	91.5	76.2	68.6	64.5	64.0	66.1	66.6	64.5
82.5°	104.7	98.6	90.0	81.8	69.6	62.5	60.5	61.5	62.5	61.0	57.9
85°	89.5	85.4	63.0	63.0	56.4	54.4	53.9	54.9	54.4	50.3	46.3
87.5°	50.8	44.7	34.1	37.1	39.6	40.7	34.1	36.6	36.1	32.0	30.0
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):

	160°	165°	170°	175°	180°
0°	816.8	816.8	816.8	816.8	816.8
2.5°	824.4	824.4	825.4	825.4	824.9
5°	834.5	834.5	836.1	835.0	835.6
7.5°	832.5	830.5	830.5	829.5	828.9
10°	818.3	814.7	812.7	813.7	812.2
12.5°	802.0	799.0	796.9	796.4	795.9
15°	791.8	788.3	786.8	785.7	785.7
17.5°	786.3	782.2	780.2	778.6	778.1
20°	783.7	778.6	775.6	774.1	773.0
22.5°	784.7	778.6	774.6	772.5	771.5
25°	788.8	781.2	776.1	773.5	772.0
27.5°	795.9	785.7	780.2	776.6	774.6
30°	804.6	790.3	782.2	777.1	775.1
32.5°	810.1	790.8	780.7	773.0	771.0
35°	809.1	785.2	772.0	762.4	760.8
37.5°	799.0	770.5	754.2	741.5	740.0
40°	777.1	748.1	729.3	716.6	713.6
42.5°	746.6	716.6	696.3	684.6	680.5
45°	701.9	665.3	646.5	636.8	631.2
47.5°	638.9	604.3	583.5	575.3	568.2
50°	567.2	529.1	513.8	504.7	496.6
52.5°	482.8	450.3	438.6	430.0	423.4
55°	401.0	378.1	364.4	355.3	355.8
57.5°	322.2	308.5	300.9	291.2	292.2
60°	253.6	241.9	241.9	235.8	233.8
62.5°	193.6	189.1	187.5	185.5	182.0
65°	146.9	146.9	147.4	147.4	145.4
66°	132.1	133.7	135.7	135.7	133.2
67.5°	114.4	116.4	118.4	119.4	119.4
70°	94.5	97.1	98.1	99.1	98.6
72.5°	82.8	84.9	84.9	85.4	84.4
75°	75.2	76.2	76.7	75.7	75.2
77.5°	69.6	70.1	69.6	69.1	68.6
80°	63.0	62.5	61.0	59.0	58.4
82.5°	54.4	52.3	51.3	48.3	47.8
85°	43.7	41.2	39.1	35.1	33.0
87.5°	29.0	28.0	26.4	19.3	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)