

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: P146933

Luminaire Tested: **LDRC-T4-F04-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146933
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33696)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRC-T4-F04-E-8030
Description: RC LED ROADWAY SMALL CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (28) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8189.7 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

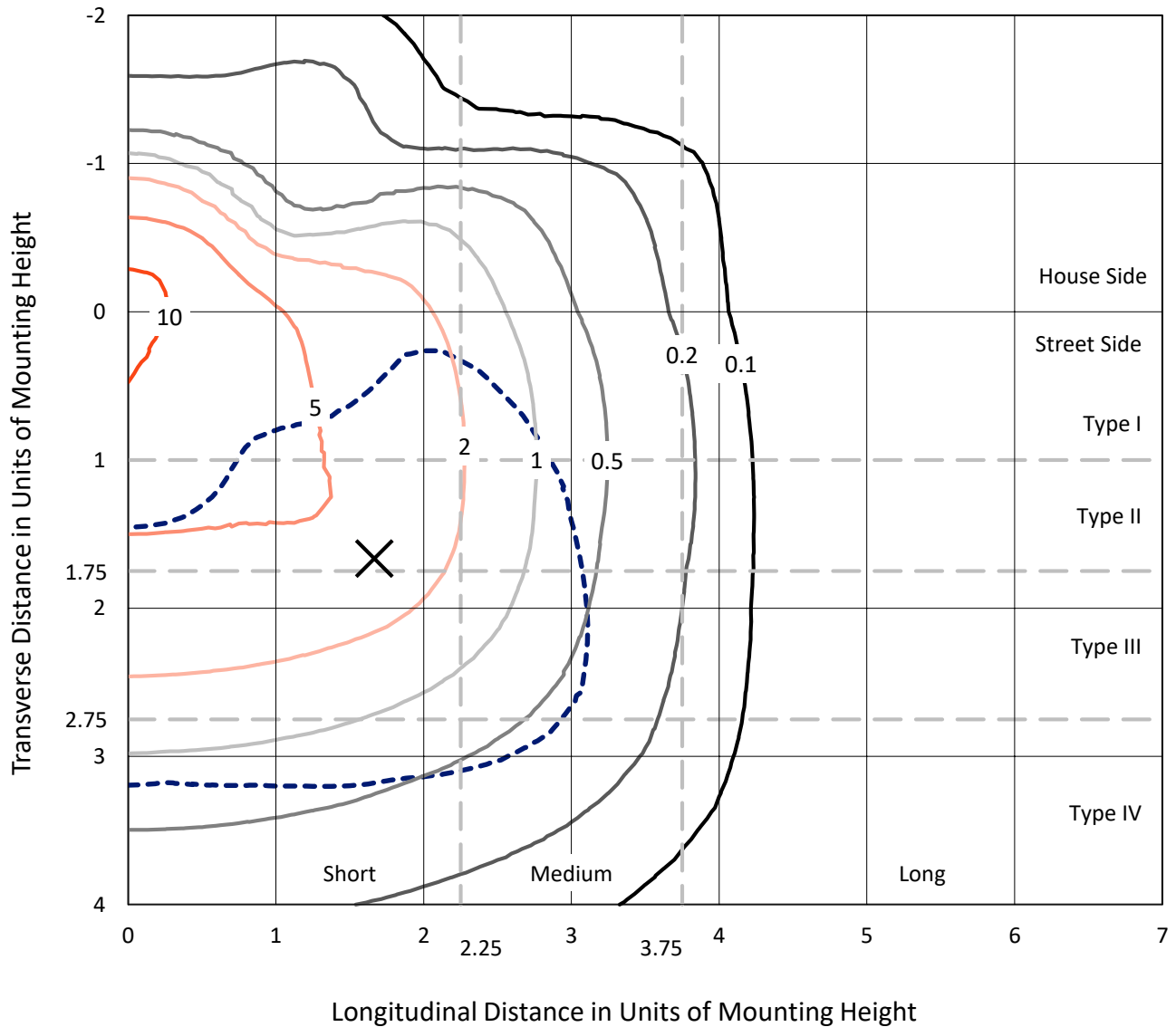
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

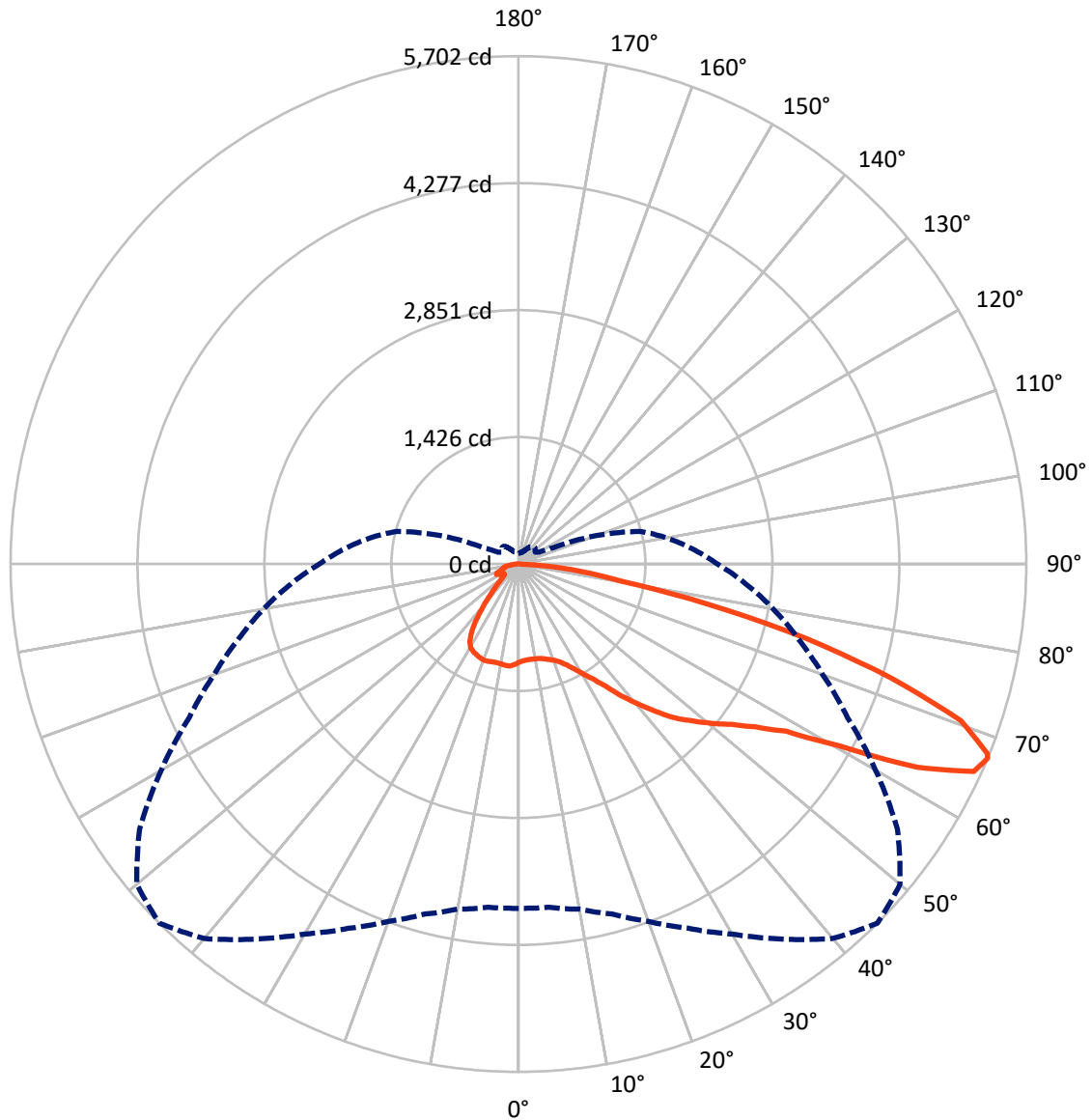
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1659.4	0.0	1659.4
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	6530.3	0.0	6530.3
	% Fixture	79.7	0.0	79.7
Total	Lumens	8189.7	0.0	8189.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	1.3
10°-20°	319.1	3.9
20°-30°	542.3	6.6
30°-40°	815.0	10.0
40°-50°	1059.8	12.9
50°-60°	1455.0	17.8
60°-70°	2295.3	28.0
70°-80°	1386.9	16.9
80°-90°	210.1	2.6
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°	8189.7	100.0
0°-180°	8189.7	100.0



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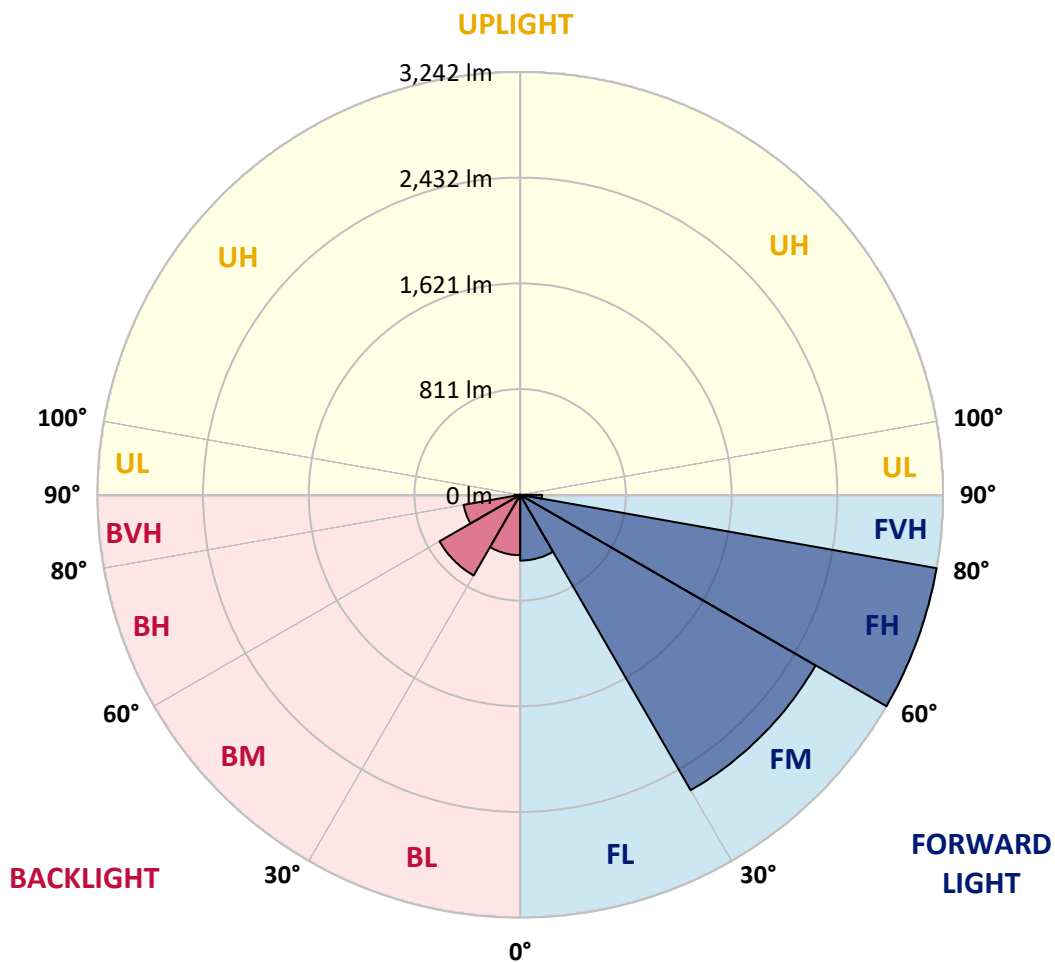
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	504.3	6.2			
FM	(30°-60°)	2615.7	31.9			
FH	(60°-80°)	3242.5	39.6			G2/5000
FVH	(80°-90°)	167.8	2.0			G2/225
BL	(0°-30°)	463.3	5.7	B1/500		
BM	(30°-60°)	714.1	8.7	B1/1000		
BH	(60°-80°)	439.7	5.4	B1/500		G1/500
BVH	(80°-90°)	42.3	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5
2.5°	1078.0	1080.2	1078.5	1078.5	1079.1	1079.7	1080.8	1083.0	1083.6	1086.9	1087.5
5°	1056.3	1056.8	1056.8	1057.4	1060.7	1063.5	1066.3	1070.2	1073.5	1079.7	1083.6
7.5°	1048.4	1050.7	1050.1	1051.2	1054.6	1057.4	1060.7	1066.3	1074.6	1079.7	1085.2
10°	1061.3	1062.9	1061.3	1061.8	1062.4	1065.2	1066.3	1070.2	1076.9	1081.3	1086.4
12.5°	1090.8	1090.8	1089.1	1088.0	1086.4	1086.9	1084.7	1084.1	1087.5	1088.0	1088.6
15°	1129.8	1134.3	1128.7	1124.3	1122.0	1119.8	1112.5	1109.8	1109.2	1104.2	1099.2
17.5°	1169.4	1170.5	1167.2	1162.2	1158.8	1153.8	1147.7	1142.1	1135.4	1127.6	1117.6
20°	1213.4	1214.0	1209.5	1202.3	1198.4	1192.3	1184.5	1175.0	1166.6	1154.4	1143.2
22.5°	1274.7	1274.2	1265.3	1259.1	1253.6	1246.3	1235.2	1222.4	1209.0	1194.5	1178.9
25°	1345.0	1345.0	1338.8	1328.8	1326.0	1315.4	1303.2	1288.1	1274.2	1253.6	1234.6
27.5°	1425.2	1425.8	1414.7	1409.1	1402.9	1391.8	1383.4	1371.7	1352.8	1332.2	1312.6
30°	1520.6	1517.8	1508.9	1497.1	1494.9	1486.0	1474.3	1465.9	1442.5	1428.0	1406.3
32.5°	1610.9	1615.3	1613.1	1599.7	1601.9	1593.0	1583.0	1576.9	1552.3	1538.4	1518.3
35°	1745.7	1749.6	1753.0	1748.0	1750.8	1745.7	1737.4	1721.2	1701.1	1682.8	1654.9
37.5°	1850.5	1854.4	1856.7	1868.9	1886.8	1904.0	1911.8	1903.5	1904.6	1876.7	1839.4
40°	1936.4	1945.8	1959.2	1982.6	2018.3	2051.2	2069.0	2083.0	2090.2	2064.0	2015.5
42.5°	2022.2	2032.2	2050.6	2088.0	2137.0	2184.4	2221.8	2264.7	2272.5	2265.8	2224.5
45°	2111.9	2123.6	2146.5	2188.9	2246.3	2308.1	2368.3	2429.1	2459.8	2464.8	2414.6
47.5°	2220.1	2236.8	2258.0	2305.9	2361.7	2431.3	2506.6	2584.6	2632.5	2632.5	2574.6
50°	2355.0	2373.9	2391.8	2439.7	2495.4	2567.3	2654.3	2741.2	2806.5	2810.4	2740.1
52.5°	2543.9	2546.7	2557.3	2601.3	2649.8	2730.1	2812.6	2913.5	2988.7	2992.1	2911.2
55°	2773.6	2773.6	2785.8	2822.6	2867.8	2934.1	3019.4	3131.4	3210.6	3227.8	3124.2
57.5°	3075.7	3086.8	3092.9	3135.9	3166.5	3236.8	3308.1	3430.2	3531.1	3542.2	3436.9
60°	3567.3	3546.1	3580.1	3618.0	3689.9	3741.2	3862.7	3985.3	4114.1	4144.7	4031.6
62.5°	4051.7	4074.5	4116.3	4184.9	4308.1	4422.9	4596.8	4783.0	4983.1	5024.3	4937.9
65°	4081.8	4095.7	4153.7	4271.8	4440.2	4644.7	4884.4	5164.8	5463.0	5617.4	5472.4
67°	3865.5	3869.4	3935.2	4069.5	4271.3	4513.7	4797.4	5139.7	5489.7	5702.1	5594.0
67.5°	3796.9	3804.2	3868.8	4006.0	4210.0	4458.0	4747.3	5099.0	5457.4	5679.2	5581.7
70°	3394.5	3394.5	3464.2	3602.4	3793.6	4035.5	4338.2	4693.2	5082.8	5269.6	5186.5
72.5°	2889.5	2871.1	2949.7	3054.5	3210.6	3421.8	3665.4	3945.8	4238.9	4374.9	4342.1
75°	2100.2	2134.8	2175.5	2253.0	2388.4	2555.1	2697.8	2948.0	3178.2	3328.7	3289.1
77.5°	1146.0	1159.4	1272.0	1318.2	1436.9	1560.7	1717.3	1892.9	2074.0	2168.8	2130.3
80°	681.1	707.3	774.2	829.4	893.5	987.7	1101.4	1139.9	1175.5	1173.3	1103.6
82.5°	430.3	462.1	534.5	581.9	615.4	670.0	731.9	780.3	790.9	738.5	657.7
85°	69.7	115.4	301.5	354.5	375.7	405.2	450.9	471.6	440.3	384.6	398.5
87.5°	27.3	32.9	92.0	116.5	123.2	64.7	112.0	131.5	66.9	34.0	76.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5
2.5°	1090.8	1093.6	1096.4	1099.7	1100.8	1103.6	1108.6	1108.1	1112.0	1113.7	1116.4
5°	1088.6	1094.7	1099.2	1105.3	1107.5	1113.7	1120.4	1122.6	1127.6	1131.5	1134.8
7.5°	1093.0	1099.7	1105.3	1112.5	1117.6	1122.6	1127.6	1133.7	1138.2	1141.0	1143.2
10°	1094.7	1102.0	1108.6	1114.8	1120.4	1124.3	1129.8	1134.8	1139.3	1141.0	1141.5
12.5°	1095.3	1100.3	1107.0	1113.7	1118.7	1123.7	1127.6	1133.2	1136.5	1137.1	1136.0
15°	1099.7	1100.3	1104.7	1112.5	1117.6	1122.6	1125.4	1128.2	1130.4	1128.7	1127.0
17.5°	1113.1	1109.2	1109.2	1113.1	1115.9	1118.1	1118.7	1118.1	1115.9	1112.5	1109.8
20°	1134.8	1127.0	1120.9	1118.7	1114.2	1108.6	1101.4	1094.7	1086.4	1082.4	1081.9
22.5°	1168.8	1157.1	1146.0	1134.8	1120.4	1104.2	1087.5	1073.0	1061.3	1055.1	1055.7
25°	1226.8	1209.5	1196.7	1177.2	1153.8	1130.9	1109.2	1089.7	1075.8	1064.6	1066.8
27.5°	1304.8	1285.3	1274.2	1251.9	1225.1	1196.2	1170.5	1143.8	1123.7	1109.8	1112.5
30°	1396.3	1390.7	1372.3	1350.0	1324.9	1292.0	1253.6	1213.4	1177.2	1154.4	1149.9
32.5°	1506.6	1500.5	1480.4	1461.5	1429.1	1392.9	1342.7	1279.2	1222.4	1178.9	1159.9
35°	1642.6	1627.6	1603.0	1584.7	1548.4	1501.6	1436.9	1351.1	1264.7	1199.5	1152.1
37.5°	1812.1	1774.7	1734.0	1686.1	1632.6	1575.7	1501.0	1400.7	1293.7	1201.2	1117.0
40°	1973.7	1913.5	1846.1	1770.3	1705.1	1636.5	1559.0	1444.2	1313.2	1189.5	1064.1
42.5°	2153.7	2060.1	1968.7	1864.5	1778.6	1697.2	1608.6	1474.8	1317.1	1157.7	995.5
45°	2327.1	2206.7	2084.1	1955.3	1846.1	1755.8	1654.9	1501.0	1316.0	1124.3	927.5
47.5°	2481.5	2337.7	2186.1	2041.2	1914.1	1814.9	1704.5	1536.7	1331.0	1114.8	882.3
50°	2625.9	2459.8	2281.9	2120.9	1982.6	1881.2	1767.5	1593.0	1377.3	1136.5	875.7
52.5°	2774.7	2594.1	2390.6	2217.3	2072.9	1955.3	1840.5	1664.9	1442.0	1181.1	890.7
55°	2968.7	2761.3	2544.5	2352.2	2186.6	2060.1	1927.4	1751.9	1511.6	1232.9	919.1
57.5°	3257.4	3014.9	2768.5	2561.8	2370.6	2212.8	2067.4	1866.1	1627.0	1311.0	981.6
60°	3775.7	3507.1	3221.7	2951.4	2731.2	2546.7	2361.7	2111.9	1839.9	1488.2	1124.8
62.5°	4622.4	4250.6	3856.0	3500.4	3197.7	2948.0	2687.2	2387.3	2070.1	1703.4	1341.6
65°	5131.3	4618.5	4116.3	3703.8	3346.0	3026.1	2710.6	2388.4	2081.3	1760.8	1439.2
67°	5194.3	4631.9	4076.2	3637.0	3253.5	2905.1	2562.9	2233.5	1958.7	1690.0	1412.4
67.5°	5175.4	4605.1	4038.3	3594.6	3207.2	2870.0	2533.3	2196.1	1928.6	1659.9	1392.4
70°	4801.9	4244.0	3683.2	3251.8	2880.6	2535.6	2217.3	1879.5	1672.7	1480.4	1249.1
72.5°	3985.3	3550.0	3080.1	2720.6	2400.1	2101.4	1821.5	1538.9	1372.8	1236.8	1074.1
75°	2955.3	2556.2	2158.8	1942.5	1693.9	1454.8	1238.5	1029.5	965.4	933.1	837.2
77.5°	1824.9	1466.5	1167.2	971.5	772.5	605.3	481.6	391.8	408.6	475.5	506.1
80°	908.5	671.1	519.5	413.0	333.9	269.8	197.9	144.9	173.3	205.7	233.0
82.5°	546.8	432.0	341.7	289.3	235.2	181.7	128.8	98.1	108.7	146.0	160.5
85°	339.4	272.0	217.4	181.7	150.5	111.5	73.0	72.5	76.9	97.0	110.9
87.5°	99.8	67.4	53.5	55.7	61.9	51.3	38.5	32.9	40.7	55.7	62.4
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5
2.5°	1117.0	1120.9	1122.6	1123.1	1123.7	1127.0	1127.0	1130.4	1131.5	1131.5	1132.6
5°	1138.2	1142.1	1143.8	1144.3	1145.4	1147.1	1146.5	1148.8	1149.9	1149.3	1149.3
7.5°	1146.0	1147.1	1147.1	1148.8	1150.4	1148.8	1147.7	1148.8	1148.2	1148.8	1148.8
10°	1143.2	1142.1	1142.1	1141.0	1142.6	1139.3	1139.3	1140.4	1139.9	1141.0	1142.6
12.5°	1136.5	1136.0	1134.3	1133.7	1136.0	1133.7	1134.3	1136.0	1137.1	1139.3	1142.1
15°	1127.0	1125.4	1125.4	1127.6	1133.2	1134.8	1137.1	1139.9	1140.4	1141.5	1142.6
17.5°	1110.9	1113.7	1120.4	1128.2	1138.7	1142.6	1143.8	1142.1	1136.5	1132.1	1127.6
20°	1088.6	1100.8	1118.1	1134.8	1147.7	1147.1	1139.9	1129.3	1115.9	1106.4	1100.3
22.5°	1069.6	1093.6	1120.4	1140.4	1148.8	1138.2	1121.5	1105.3	1089.7	1075.8	1063.5
25°	1083.0	1105.9	1128.7	1141.0	1140.4	1122.0	1099.7	1081.9	1060.7	1041.2	1020.6
27.5°	1126.5	1140.4	1147.1	1143.2	1131.5	1107.0	1082.4	1057.4	1030.1	1006.6	982.7
30°	1156.0	1156.0	1149.3	1133.7	1113.1	1085.8	1055.7	1023.4	991.0	963.7	936.4
32.5°	1146.5	1124.8	1105.3	1084.1	1060.7	1031.2	996.6	961.5	924.7	892.9	869.5
35°	1105.3	1058.5	1017.8	987.7	963.2	928.1	887.9	847.8	817.7	796.0	782.6
37.5°	1031.7	957.0	898.0	861.2	823.3	787.0	740.8	722.4	695.6	682.2	677.2
40°	942.5	833.3	759.2	711.8	671.7	626.5	595.3	583.6	573.6	570.8	568.5
42.5°	840.0	703.4	615.4	566.3	517.8	484.9	471.0	463.7	462.1	462.1	464.9
45°	733.5	571.3	469.9	430.3	390.2	372.9	369.5	366.2	366.8	365.1	366.2
47.5°	651.0	458.7	354.5	318.3	297.6	292.1	288.2	287.1	287.1	284.3	280.9
50°	608.1	383.5	278.1	249.7	238.0	234.1	234.1	231.9	227.4	224.6	217.4
52.5°	597.0	344.5	240.8	216.3	206.2	202.9	199.5	196.2	189.5	183.4	175.0
55°	605.9	332.2	229.1	206.2	195.1	191.2	188.4	182.8	173.3	164.4	155.0
57.5°	643.2	340.0	233.5	209.0	199.0	196.2	193.4	185.1	173.3	160.5	149.9
60°	745.2	376.8	252.5	224.1	215.7	216.3	212.4	201.8	185.1	166.7	151.1
62.5°	876.8	428.1	277.0	245.3	244.1	249.7	249.7	231.3	204.0	176.1	155.0
65°	952.0	444.2	280.4	248.0	257.5	273.7	272.6	248.0	210.7	176.1	153.3
67°	933.1	427.0	266.4	231.9	243.0	261.4	259.2	235.8	200.7	168.9	148.8
67.5°	918.0	421.4	263.1	228.0	239.1	254.2	254.2	230.8	196.2	166.7	147.2
70°	808.2	372.3	246.4	212.9	212.9	216.8	214.0	197.3	173.9	153.3	140.5
72.5°	673.9	325.5	233.0	202.3	191.7	189.5	185.6	173.9	158.9	144.4	133.2
75°	522.3	288.2	222.4	191.2	177.2	172.2	168.3	159.4	147.7	135.4	126.0
77.5°	365.6	246.9	208.5	181.7	166.7	162.8	156.6	146.6	137.1	126.5	117.6
80°	226.9	204.0	181.7	163.9	148.3	142.7	134.9	126.0	118.2	112.0	105.3
82.5°	161.6	149.9	135.4	126.0	109.8	93.1	99.8	100.3	95.3	91.4	89.7
85°	108.1	97.5	90.3	81.9	72.5	65.2	66.9	71.9	72.5	70.8	70.8
87.5°	59.1	50.2	48.5	50.2	43.5	41.2	41.8	46.3	46.8	46.8	47.4
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):

	165°	170°	175°	180°
0°	1102.5	1102.5	1102.5	1102.5
2.5°	1133.2	1134.8	1134.3	1135.4
5°	1150.4	1151.6	1151.0	1151.6
7.5°	1147.7	1149.9	1151.0	1149.3
10°	1143.2	1146.5	1148.8	1148.8
12.5°	1144.3	1149.9	1153.2	1153.2
15°	1143.2	1147.7	1148.8	1148.8
17.5°	1125.9	1125.9	1126.5	1124.3
20°	1095.8	1092.5	1091.4	1087.5
22.5°	1052.9	1045.1	1040.1	1037.3
25°	1003.9	991.6	983.8	979.3
27.5°	963.2	952.6	944.8	940.3
30°	918.0	905.8	901.3	898.0
32.5°	852.8	841.1	837.8	835.0
35°	768.1	764.2	755.3	749.1
37.5°	670.0	665.0	661.6	659.4
40°	567.4	568.0	565.2	560.2
42.5°	464.9	470.4	464.9	463.7
45°	365.1	371.2	371.2	372.9
47.5°	281.5	280.4	282.6	283.2
50°	212.9	209.6	208.5	206.8
52.5°	168.9	165.0	162.8	160.0
55°	148.8	144.4	142.1	141.6
57.5°	142.1	136.6	133.2	132.7
60°	140.5	132.7	128.2	127.1
62.5°	140.5	131.0	126.0	124.3
65°	138.8	129.3	124.9	123.2
67°	136.6	128.2	123.7	122.6
67.5°	135.4	127.6	123.7	122.1
70°	132.7	126.0	121.5	119.8
72.5°	126.5	121.0	116.5	115.4
75°	119.8	114.8	112.0	110.9
77.5°	112.0	107.6	104.2	101.4
80°	100.3	95.3	90.3	89.2
82.5°	85.3	79.7	75.8	75.2
85°	68.6	64.1	59.6	59.6
87.5°	47.9	45.1	42.4	39.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)