

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: P144530

Luminaire Tested: **LDRL-RW-E02-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144530
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-E02-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6007.3 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

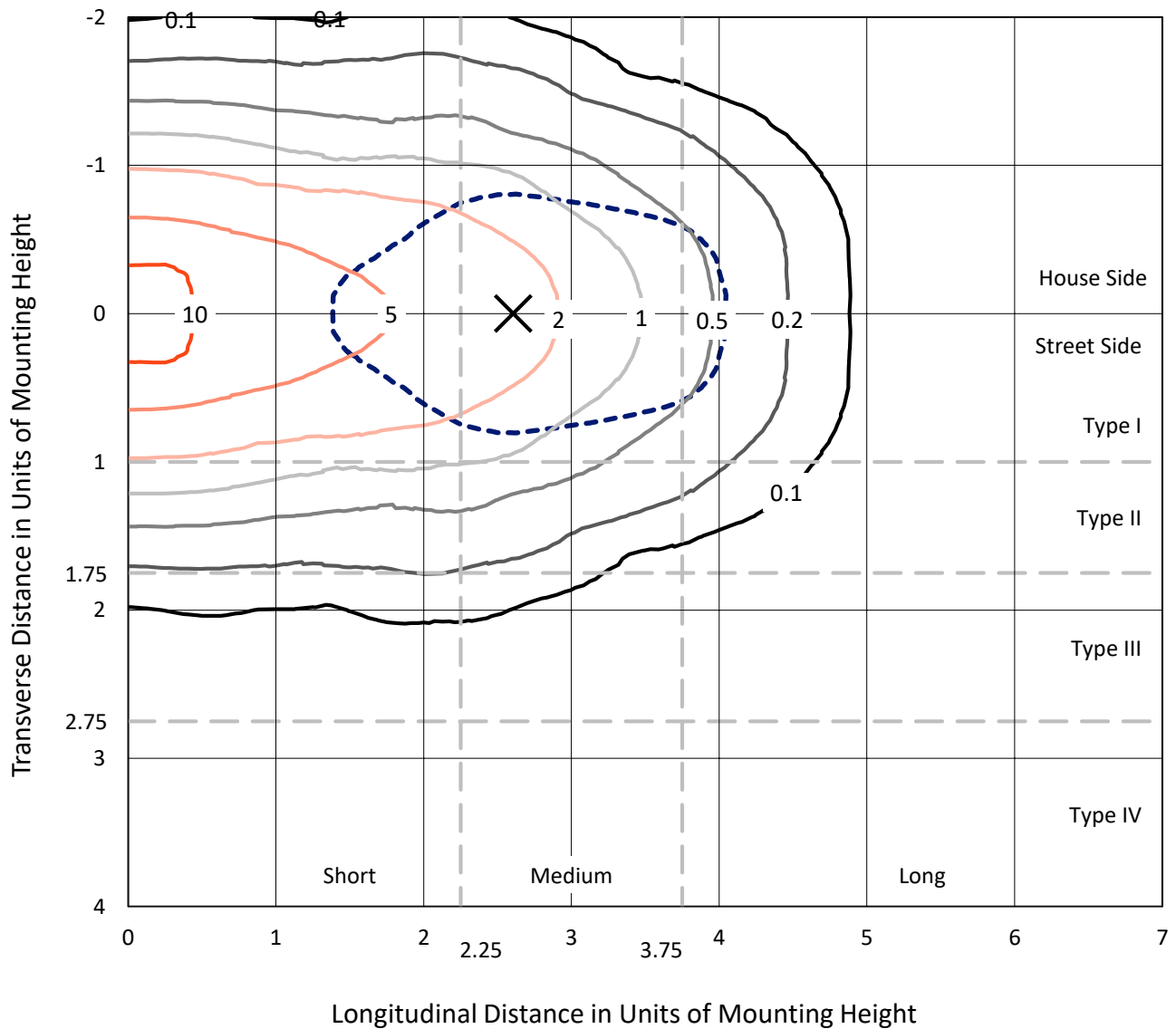
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

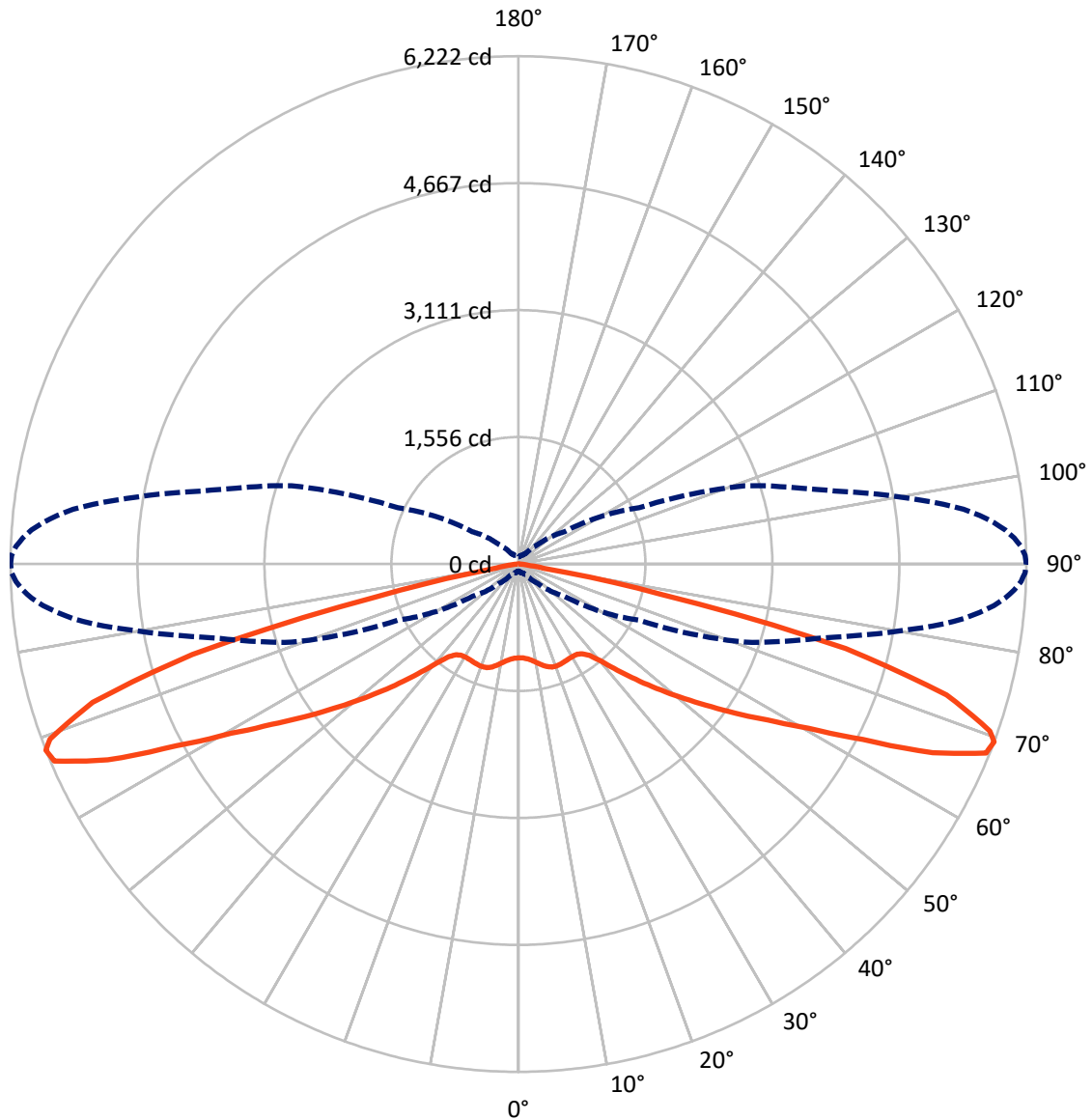
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.8 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3003.7	0.0	3003.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3003.7	0.0	3003.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	6007.3	0.0	6007.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.6	1.9
10°-20°	354.5	5.9
20°-30°	574.1	9.6
30°-40°	715.2	11.9
40°-50°	890.3	14.8
50°-60°	1092.5	18.2
60°-70°	1347.4	22.4
70°-80°	837.6	13.9
80°-90°	83.2	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°	6007.3	100.0
0°-180°	6007.3	100.0



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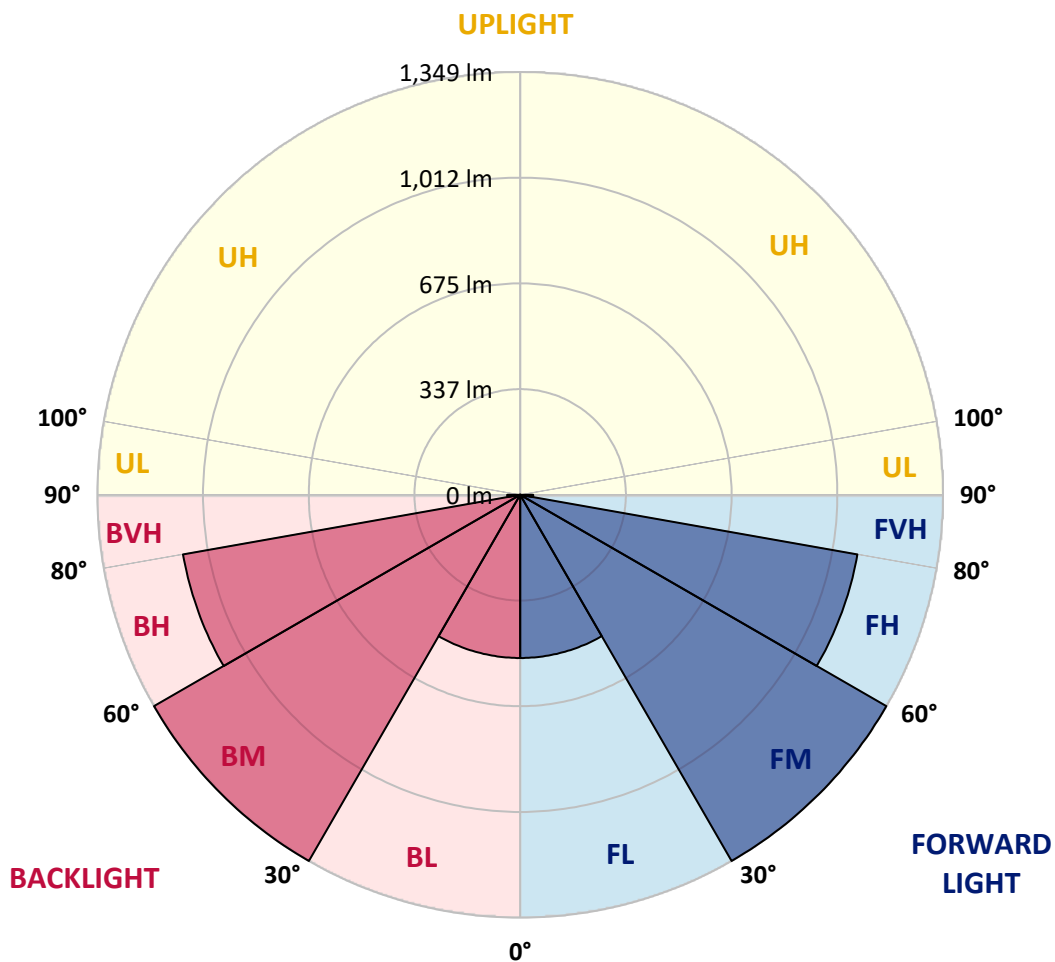
CATALOG NUMBER: LDRL-RW-E02-E

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	520.6	8.7			
FM	(30°-60°)	1349.0	22.5			
FH	(60°-80°)	1092.5	18.2			G1/1800
FVH	(80°-90°)	41.6	0.7			G1/100
BL	(0°-30°)	520.6	8.7	B2/1000		
BM	(30°-60°)	1349.0	22.5	B2/2500		
BH	(60°-80°)	1092.5	18.2	B3/2500		G3/2500
BVH	(80°-90°)	41.6	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4
2.5°	1153.4	1152.2	1154.4	1156.4	1155.8	1156.2	1155.4	1154.4	1154.5	1154.6	1154.6
5°	1162.4	1161.2	1163.2	1165.0	1165.6	1167.0	1167.4	1166.8	1167.1	1167.4	1167.6
7.5°	1173.2	1172.2	1174.8	1177.2	1181.8	1184.2	1186.6	1189.0	1189.2	1189.4	1189.6
10°	1183.4	1182.8	1187.0	1192.2	1199.6	1205.2	1212.0	1218.6	1219.1	1219.6	1220.2
12.5°	1190.0	1190.0	1196.4	1205.8	1218.6	1230.0	1241.6	1252.8	1253.8	1254.9	1255.9
15°	1189.6	1190.4	1200.2	1217.4	1239.4	1259.6	1273.8	1286.0	1287.0	1288.0	1289.0
17.5°	1181.4	1181.6	1195.6	1223.0	1257.4	1287.4	1305.8	1312.4	1312.8	1313.1	1313.5
20°	1158.4	1160.0	1179.8	1219.6	1271.4	1312.8	1330.2	1327.4	1326.8	1326.2	1325.6
22.5°	1119.0	1121.0	1147.4	1200.8	1274.0	1329.2	1347.2	1334.6	1332.7	1330.8	1328.8
25°	1064.2	1067.6	1096.2	1164.6	1256.4	1334.0	1358.2	1338.0	1335.0	1332.0	1329.0
27.5°	1000.8	1002.4	1036.2	1108.0	1215.4	1318.0	1363.2	1345.0	1341.2	1337.5	1333.7
30°	927.4	931.6	966.8	1041.8	1157.6	1280.8	1361.2	1358.6	1354.4	1350.2	1346.0
32.5°	854.4	858.0	892.6	973.4	1091.0	1229.0	1351.2	1379.2	1375.7	1372.2	1368.6
35°	780.8	785.2	820.8	907.6	1024.8	1170.2	1335.4	1408.6	1407.1	1405.6	1404.0
37.5°	716.2	719.0	754.0	844.2	966.8	1116.4	1314.8	1448.0	1451.4	1454.9	1458.3
40°	650.4	653.2	689.8	782.2	913.4	1070.4	1295.8	1497.6	1507.0	1516.4	1525.8
42.5°	587.2	589.6	625.0	717.2	854.0	1030.6	1284.4	1557.6	1575.6	1593.7	1611.7
45°	522.4	524.0	557.2	647.0	786.2	984.2	1281.4	1625.0	1651.0	1677.1	1703.1
47.5°	458.6	462.4	496.6	581.8	708.8	917.8	1277.0	1699.6	1734.1	1768.6	1803.2
50°	397.6	401.8	437.0	517.8	634.0	839.0	1254.6	1784.2	1826.3	1868.4	1910.4
52.5°	335.4	339.6	374.8	452.0	564.6	750.2	1192.2	1873.0	1923.0	1973.1	2023.1
55°	269.0	270.6	306.8	384.2	495.2	675.8	1092.8	1954.4	2015.0	2075.6	2136.2
57.5°	195.6	201.0	236.8	308.8	424.4	610.0	966.4	1996.0	2071.6	2147.3	2222.9
60°	141.2	144.8	176.2	232.8	344.2	545.4	854.2	1965.6	2066.6	2167.5	2268.5
62.5°	111.6	115.6	139.8	175.4	266.2	474.4	781.0	1882.2	2023.8	2165.5	2307.1
65°	98.8	102.4	124.8	142.4	203.6	401.4	735.0	1799.6	1990.8	2181.9	2373.1
67.5°	90.2	94.0	113.6	125.6	168.2	354.4	713.2	1737.2	1958.0	2178.7	2399.5
69°	86.2	89.6	107.6	118.8	158.6	338.4	689.8	1631.6	1850.5	2069.4	2288.2
70°	84.0	87.0	103.4	114.6	154.8	325.2	655.2	1506.0	1717.2	1928.4	2139.6
72.5°	77.8	79.8	93.6	104.0	141.6	259.6	494.2	1062.6	1241.6	1420.7	1599.7
75°	69.0	71.4	83.6	93.2	108.0	156.0	309.4	616.8	739.5	862.2	984.8
77.5°	59.2	62.0	72.0	87.2	87.0	101.6	187.8	354.2	413.8	473.4	533.0
80°	50.8	53.2	62.2	86.2	72.8	80.4	140.0	264.2	288.2	312.2	336.2
82.5°	39.8	41.8	52.2	71.2	58.2	61.2	106.6	240.6	256.9	273.2	289.4
85°	25.0	25.8	38.0	49.2	41.4	37.0	68.6	185.2	197.0	208.9	220.7
87.5°	10.0	12.2	18.4	17.6	17.8	14.8	22.2	66.8	72.9	79.0	85.0
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4
2.5°	1154.7	1154.8	1154.4	1153.8	1154.4	1153.8	1154.0	1154.6	1154.4	1154.4	1154.0
5°	1167.9	1168.2	1168.2	1167.0	1167.6	1167.8	1168.0	1167.6	1167.8	1168.2	1167.4
7.5°	1189.8	1190.0	1190.6	1191.2	1190.8	1191.0	1191.4	1191.0	1190.4	1191.8	1190.8
10°	1220.7	1221.2	1221.2	1223.0	1222.2	1222.8	1224.6	1224.6	1223.6	1225.0	1224.6
12.5°	1257.0	1258.0	1257.8	1257.6	1258.4	1259.0	1261.0	1261.4	1261.8	1264.0	1263.2
15°	1290.0	1291.0	1291.8	1292.2	1293.6	1294.0	1295.2	1296.0	1296.6	1297.4	1297.8
17.5°	1313.8	1314.2	1315.4	1314.8	1316.8	1316.4	1317.8	1318.4	1319.0	1320.0	1320.6
20°	1325.0	1324.4	1324.6	1324.0	1324.0	1324.4	1324.6	1325.4	1325.0	1326.0	1326.8
22.5°	1326.9	1325.0	1323.8	1322.4	1321.8	1320.6	1320.6	1321.0	1319.6	1320.6	1321.8
25°	1326.0	1323.0	1320.8	1318.4	1316.2	1314.2	1313.0	1312.6	1311.6	1311.6	1312.6
27.5°	1330.0	1326.2	1323.0	1319.0	1316.2	1313.4	1310.8	1308.8	1306.8	1306.4	1306.4
30°	1341.8	1337.6	1334.0	1329.0	1324.6	1321.0	1317.4	1314.6	1310.8	1309.2	1307.4
32.5°	1365.1	1361.6	1356.6	1352.2	1347.0	1342.6	1337.8	1333.4	1329.0	1325.0	1323.4
35°	1402.5	1401.0	1398.2	1395.2	1390.2	1384.6	1380.6	1375.4	1370.4	1364.6	1363.0
37.5°	1461.8	1465.2	1463.6	1461.4	1460.0	1458.2	1452.8	1449.4	1446.0	1441.2	1440.2
40°	1535.2	1544.6	1554.0	1560.2	1558.0	1565.4	1566.6	1567.2	1564.2	1568.2	1569.0
42.5°	1629.8	1647.8	1664.8	1677.2	1691.6	1702.4	1716.4	1722.4	1733.8	1745.6	1752.4
45°	1729.2	1755.2	1779.6	1805.0	1830.0	1857.4	1884.0	1902.8	1930.2	1950.6	1963.4
47.5°	1837.7	1872.2	1901.4	1939.4	1975.6	2008.0	2054.6	2092.0	2125.4	2157.2	2190.6
50°	1952.5	1994.6	2030.6	2077.0	2121.0	2171.8	2226.4	2274.0	2326.4	2377.0	2422.0
52.5°	2073.2	2123.2	2171.8	2219.4	2272.8	2328.0	2387.2	2456.0	2518.8	2595.0	2649.6
55°	2196.8	2257.4	2309.2	2359.0	2415.6	2476.8	2547.2	2628.6	2708.4	2791.8	2874.6
57.5°	2298.6	2374.2	2430.8	2489.0	2550.0	2610.6	2698.0	2781.4	2882.6	2985.0	3088.6
60°	2369.4	2470.4	2539.0	2612.6	2683.2	2756.8	2851.0	2956.4	3083.0	3207.0	3347.8
62.5°	2448.8	2590.4	2686.6	2784.8	2870.6	2959.0	3085.0	3206.4	3369.0	3511.8	3689.0
65°	2564.2	2755.4	2897.0	3029.4	3144.6	3265.0	3414.4	3566.2	3752.2	3949.6	4171.8
67.5°	2620.2	2841.0	3026.4	3189.8	3337.0	3490.4	3644.6	3824.2	4033.8	4271.4	4515.4
69°	2507.1	2726.0	2939.2	3104.4	3259.4	3423.2	3588.2	3769.4	3975.8	4222.4	4481.0
70°	2350.8	2562.0	2788.6	2954.2	3110.6	3280.6	3448.6	3631.6	3829.0	4083.0	4344.6
72.5°	1778.8	1957.8	2177.8	2352.8	2517.2	2689.0	2862.0	3020.8	3221.0	3465.4	3706.4
75°	1107.5	1230.2	1428.0	1603.8	1736.0	1883.2	2045.6	2196.0	2397.0	2570.2	2802.0
77.5°	592.6	652.2	767.6	893.6	967.2	1039.0	1144.8	1226.4	1311.0	1411.2	1507.0
80°	360.2	384.2	423.6	450.8	440.6	411.2	401.8	372.4	383.0	365.0	352.0
82.5°	305.7	322.0	346.0	362.4	350.4	303.4	250.2	210.6	182.6	155.8	132.4
85°	232.6	244.4	256.8	264.2	263.6	240.2	190.8	147.8	115.2	89.2	74.2
87.5°	91.1	97.2	106.2	104.8	109.4	110.2	86.2	66.6	47.4	32.0	28.0
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):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4	1150.4
2.5°	1153.2	1153.0	1153.2	1153.8	1153.8	1154.2	1153.8	1154.0	1153.4	1152.8	1153.2
5°	1167.4	1167.0	1167.4	1167.8	1167.8	1167.4	1168.4	1168.4	1168.0	1167.4	1167.6
7.5°	1191.8	1192.0	1191.4	1193.4	1191.6	1191.8	1193.0	1192.8	1192.4	1192.6	1192.8
10°	1225.8	1225.6	1226.0	1227.2	1225.4	1226.6	1228.0	1228.4	1227.4	1227.4	1227.6
12.5°	1263.4	1265.0	1265.2	1266.0	1266.0	1267.0	1267.2	1267.4	1268.2	1268.4	1267.2
15°	1299.4	1300.6	1301.4	1302.2	1301.2	1302.6	1304.2	1304.2	1304.0	1304.8	1303.6
17.5°	1321.6	1322.6	1324.0	1323.8	1324.0	1325.2	1326.2	1326.6	1327.0	1327.0	1327.2
20°	1328.6	1329.2	1330.0	1330.8	1331.2	1332.4	1333.2	1333.8	1334.2	1333.8	1334.0
22.5°	1323.0	1323.8	1325.4	1326.0	1326.2	1328.0	1328.8	1329.4	1329.8	1330.2	1329.6
25°	1313.4	1314.2	1315.8	1316.4	1316.8	1318.4	1319.4	1320.8	1321.2	1321.4	1321.6
27.5°	1306.8	1307.2	1308.4	1309.2	1309.4	1311.2	1312.6	1313.6	1313.8	1314.0	1314.0
30°	1307.0	1307.0	1308.4	1308.6	1308.4	1310.0	1310.8	1311.4	1311.8	1311.8	1312.0
32.5°	1320.8	1320.0	1321.2	1319.4	1319.6	1319.4	1319.2	1319.8	1319.4	1319.6	1318.8
35°	1359.8	1357.6	1355.8	1356.6	1353.8	1349.8	1352.0	1351.0	1348.8	1349.0	1349.6
37.5°	1434.6	1432.4	1434.4	1432.6	1433.2	1427.6	1429.0	1424.0	1422.6	1424.4	1419.2
40°	1567.4	1566.4	1570.2	1568.6	1569.6	1571.2	1572.6	1567.8	1559.8	1567.0	1567.2
42.5°	1751.4	1760.4	1764.0	1769.0	1774.4	1772.0	1776.8	1778.2	1769.4	1776.0	1777.6
45°	1982.2	1991.8	2003.0	2006.4	2015.2	2016.4	2020.0	2021.0	2013.0	2013.8	2015.6
47.5°	2224.0	2241.6	2254.8	2264.0	2273.2	2275.0	2277.0	2273.2	2273.8	2275.6	2275.6
50°	2461.6	2499.2	2522.6	2540.8	2556.6	2548.4	2555.4	2556.0	2558.4	2553.4	2556.4
52.5°	2711.4	2761.2	2800.4	2831.0	2840.6	2869.8	2857.8	2867.0	2873.2	2864.0	2870.0
55°	2955.4	3026.4	3089.4	3133.8	3165.0	3194.6	3199.2	3223.0	3220.2	3229.2	3225.2
57.5°	3187.4	3286.6	3376.6	3442.4	3487.2	3532.4	3563.0	3589.0	3591.6	3617.4	3602.8
60°	3468.0	3606.2	3722.0	3820.0	3886.2	3953.4	4006.4	4049.0	4058.8	4103.0	4088.4
62.5°	3846.6	4015.2	4163.2	4278.2	4425.6	4496.6	4599.8	4664.2	4704.4	4715.4	4736.0
65°	4378.8	4598.4	4793.6	4977.6	5143.4	5258.4	5377.8	5473.8	5550.8	5544.4	5576.0
67.5°	4774.2	5024.6	5259.6	5480.2	5658.6	5806.6	5943.8	6047.6	6116.4	6160.2	6178.8
69°	4733.0	5001.8	5261.0	5496.6	5680.6	5846.0	5979.6	6081.8	6160.6	6208.2	6222.0
70°	4596.0	4872.2	5142.4	5373.6	5561.2	5742.8	5878.8	5992.6	6067.6	6119.6	6127.6
72.5°	3975.4	4274.6	4513.6	4765.8	4946.4	5130.2	5215.8	5356.8	5454.6	5486.2	5485.6
75°	2998.4	3248.0	3458.0	3644.4	3806.0	3930.6	3971.0	4071.4	4152.6	4151.6	4144.0
77.5°	1614.6	1673.4	1752.0	1778.4	1828.2	1827.4	1777.4	1793.2	1839.2	1750.0	1778.8
80°	346.4	341.2	336.8	334.2	332.8	333.4	335.2	323.8	335.0	330.0	308.8
82.5°	120.6	117.8	115.0	117.0	115.6	116.8	116.4	117.8	117.6	117.2	114.4
85°	67.8	65.4	64.0	65.0	62.8	60.8	59.4	58.8	58.6	57.2	56.4
87.5°	25.8	25.6	25.4	24.4	22.0	20.2	19.0	16.6	15.6	14.2	13.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)