

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: P145505

Luminaire Tested: **LDRC-SL4-F03-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145505
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33703)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRC-SL4-F03-E
Description: RC LED ROADWAY SMALL CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7137.6 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

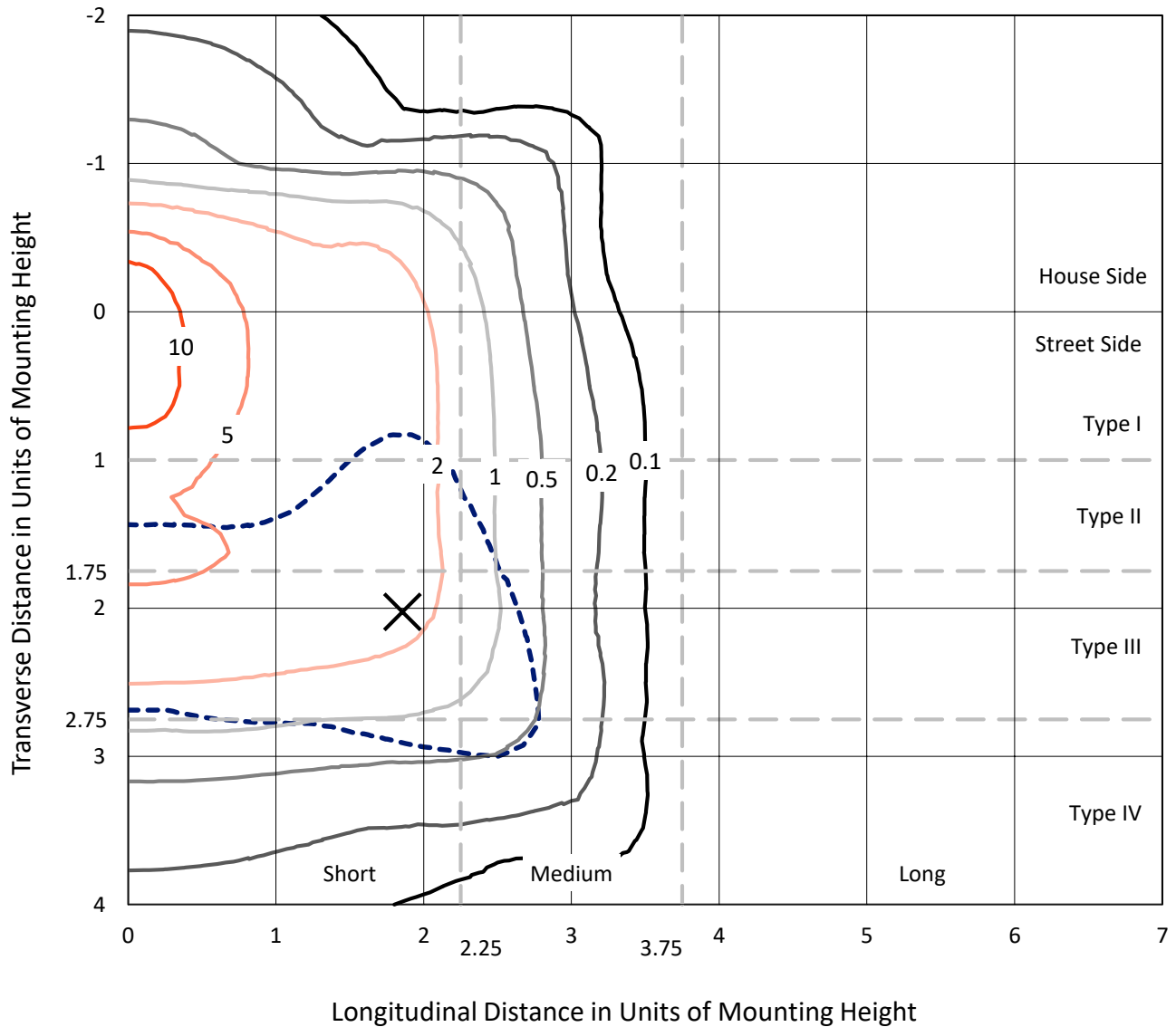
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

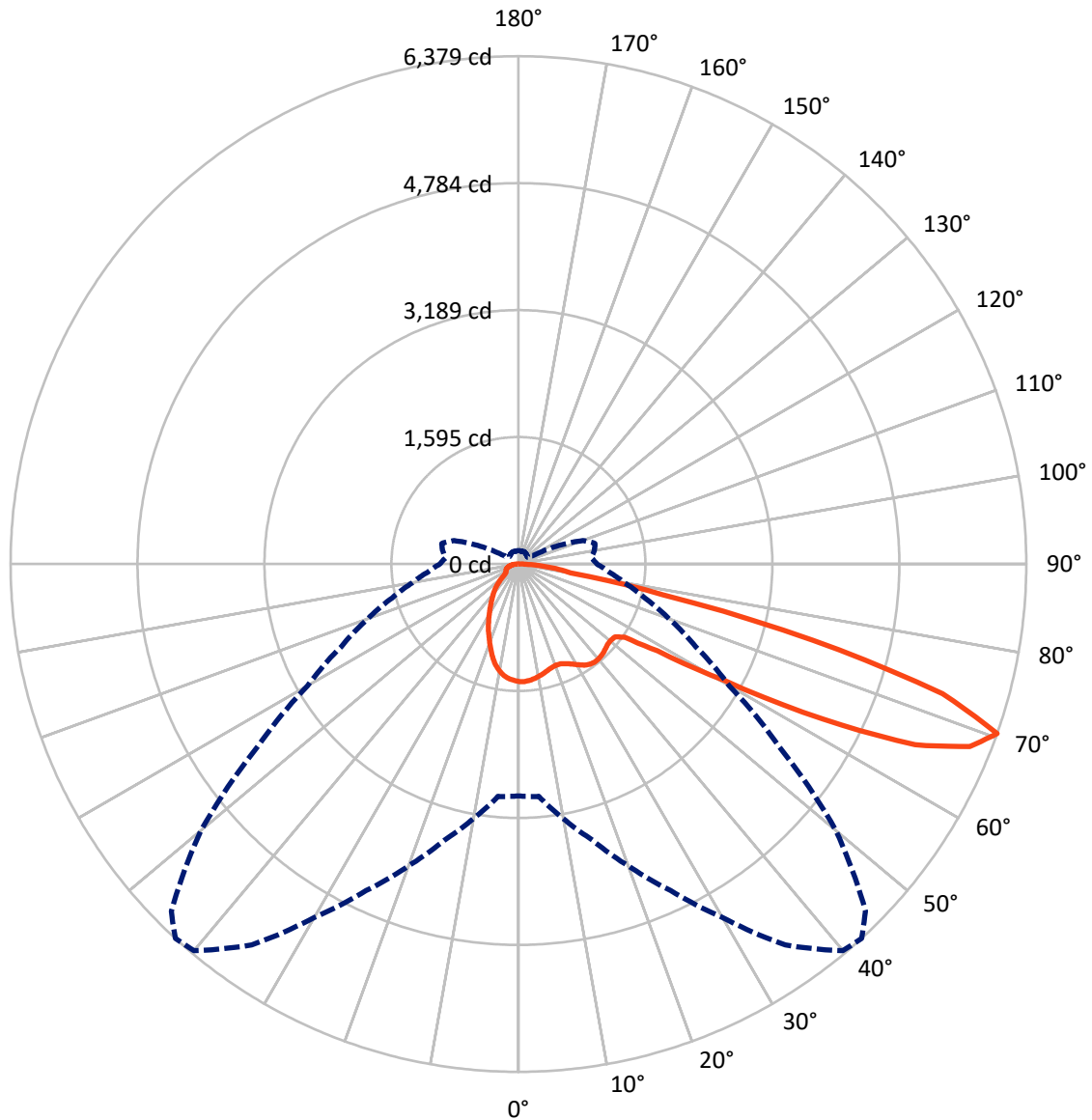
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1541.8	0.0	1541.8
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	5595.7	0.0	5595.7
	% Fixture	78.4	0.0	78.4
Total	Lumens	7137.6	0.0	7137.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.3	1.9
10°-20°	370.0	5.2
20°-30°	539.6	7.6
30°-40°	688.3	9.6
40°-50°	803.3	11.3
50°-60°	1228.5	17.2
60°-70°	2227.0	31.2
70°-80°	990.2	13.9
80°-90°	153.2	2.1
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°	7137.6	100.0
0°-180°	7137.6	100.0

Coefficient of Utilization



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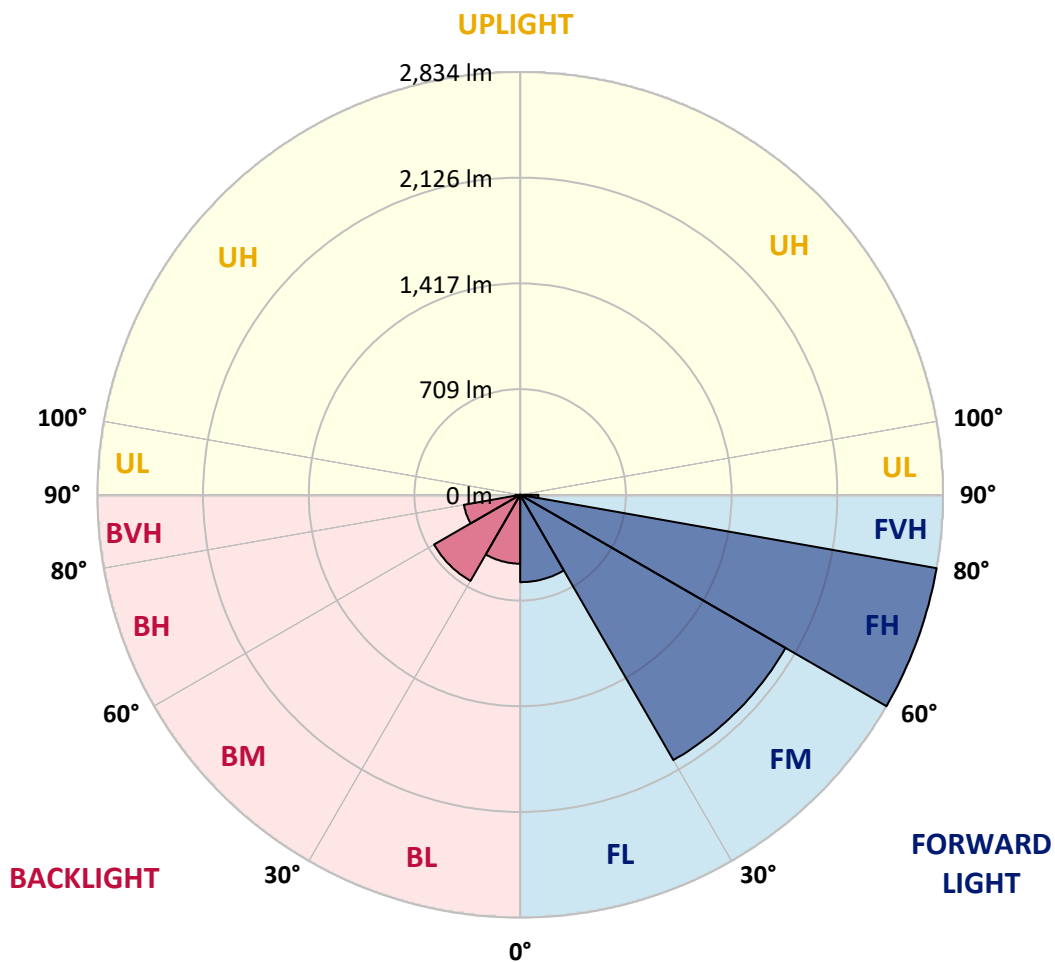
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	585.5	8.2			
FM	(30°-60°)	2053.7	28.8			
FH	(60°-80°)	2834.2	39.7			G2/5000
FVH	(80°-90°)	122.4	1.7			G2/225
BL	(0°-30°)	461.5	6.5	B1/500		
BM	(30°-60°)	666.5	9.3	B1/1000		
BH	(60°-80°)	383.0	5.4	B1/500		G1/500
BVH	(80°-90°)	30.8	0.4			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°	42.5°	45°
0°	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0
2.5°	1483.0	1481.5	1482.5	1483.5	1483.5	1484.0	1479.5	1480.0	1478.0	1478.5	1479.0
5°	1477.5	1476.0	1477.0	1477.0	1477.0	1476.5	1470.6	1470.1	1467.6	1467.6	1466.6
7.5°	1467.1	1461.7	1464.6	1465.1	1464.2	1461.7	1458.2	1454.7	1453.3	1453.3	1449.8
10°	1451.3	1445.3	1446.8	1447.8	1447.3	1442.4	1440.9	1437.4	1433.4	1432.0	1428.0
12.5°	1431.0	1427.0	1429.0	1428.5	1428.5	1424.0	1421.6	1416.6	1411.6	1409.2	1404.2
15°	1418.1	1413.1	1415.1	1415.1	1413.1	1408.7	1405.2	1396.3	1387.9	1384.9	1378.5
17.5°	1426.0	1421.1	1423.0	1421.6	1418.1	1408.7	1399.8	1385.4	1372.0	1364.1	1355.7
20°	1457.7	1452.8	1454.2	1453.3	1448.3	1432.9	1416.6	1391.8	1367.1	1355.2	1342.3
22.5°	1508.2	1504.3	1506.7	1505.3	1497.3	1477.5	1453.3	1417.6	1380.4	1362.6	1344.3
25°	1583.0	1582.0	1586.0	1581.5	1570.1	1540.4	1505.3	1457.2	1408.7	1386.4	1360.6
27.5°	1673.2	1664.8	1670.7	1666.7	1658.8	1621.2	1573.6	1512.7	1450.8	1421.6	1390.8
30°	1754.4	1747.0	1757.9	1755.9	1744.0	1705.4	1645.4	1574.1	1504.3	1467.1	1432.0
32.5°	1848.5	1839.1	1847.5	1847.5	1829.7	1777.7	1709.3	1627.6	1554.3	1514.7	1472.6
35°	1947.1	1937.2	1945.1	1942.6	1910.9	1842.1	1756.4	1667.7	1587.0	1546.4	1503.3
37.5°	2038.7	2037.2	2039.2	2022.9	1978.8	1890.6	1788.1	1689.0	1603.3	1560.7	1515.7
40°	2130.3	2126.9	2118.5	2089.7	2025.3	1919.3	1804.4	1696.5	1604.3	1559.7	1514.2
42.5°	2187.8	2181.4	2167.0	2127.9	2047.1	1926.3	1799.5	1685.1	1592.4	1546.9	1502.3
45°	2207.6	2201.2	2183.8	2139.8	2047.6	1915.4	1780.2	1662.3	1570.1	1528.5	1483.5
47.5°	2191.3	2187.3	2171.5	2127.4	2031.8	1895.1	1755.9	1639.5	1548.8	1508.2	1466.1
50°	2163.5	2161.1	2147.2	2106.6	2016.9	1882.7	1744.5	1628.6	1542.9	1505.3	1465.6
52.5°	2232.9	2225.5	2200.7	2152.6	2048.1	1905.0	1762.3	1644.9	1556.8	1518.6	1478.0
55°	3085.3	3030.3	2907.5	2677.2	2354.7	2104.6	1894.1	1752.4	1657.3	1620.2	1581.5
57.5°	4057.6	4000.2	3949.1	3773.3	3390.4	2917.9	2492.9	2244.3	2073.9	2057.5	2042.2
60°	4432.1	4450.4	4445.9	4380.6	4184.4	3960.0	3604.4	3310.7	2985.3	2971.9	2991.2
62.5°	4690.1	4705.5	4707.5	4687.7	4623.8	4549.0	4474.7	4380.6	4318.7	4291.9	4119.0
65°	4796.6	4818.9	4868.0	4904.6	4915.0	4940.8	5008.1	5264.2	5477.7	5476.2	5273.6
67.5°	4390.0	4416.7	4602.5	4784.7	4937.8	5115.1	5388.0	5804.6	6126.1	6116.1	5950.2
70°	2913.4	2930.3	3245.8	3589.1	4034.3	4526.7	5123.0	5841.2	6339.5	6378.7	6164.7
72.5°	1787.1	1825.7	1928.8	2067.9	2305.7	2761.9	3648.5	4875.9	5607.0	5570.3	5399.9
75°	1206.6	1208.6	1205.6	1220.5	1233.8	1326.0	1683.1	2681.1	3798.1	3817.9	3744.6
77.5°	824.7	835.6	841.5	837.6	851.0	847.0	867.8	918.8	1455.7	1857.9	1707.4
80°	720.7	725.1	731.6	722.2	697.4	683.5	702.9	684.5	644.9	666.2	638.0
82.5°	456.2	469.6	471.0	503.7	552.3	554.3	579.0	560.7	510.2	477.0	436.4
85°	327.9	332.9	341.8	343.7	326.9	312.5	321.5	306.1	275.9	258.1	228.3
87.5°	191.2	196.1	205.1	199.6	182.8	162.0	146.1	125.8	99.6	93.1	82.2
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0
2.5°	1479.5	1477.0	1475.0	1474.1	1476.0	1474.1	1472.1	1471.1	1469.1	1469.6	1467.1
5°	1465.6	1462.2	1459.2	1456.7	1458.7	1455.2	1452.3	1450.3	1447.8	1447.3	1444.8
7.5°	1446.3	1440.9	1436.9	1432.5	1427.5	1424.5	1421.1	1417.6	1412.1	1411.6	1410.7
10°	1421.1	1416.6	1408.7	1401.7	1394.8	1387.4	1379.9	1374.5	1368.1	1365.6	1362.1
12.5°	1395.8	1386.9	1377.5	1366.6	1358.2	1346.3	1336.4	1326.0	1316.5	1310.6	1304.2
15°	1366.1	1356.7	1343.3	1332.9	1321.0	1307.6	1294.8	1279.4	1264.0	1254.6	1245.7
17.5°	1340.3	1328.4	1317.5	1302.7	1290.8	1275.4	1256.1	1239.8	1221.4	1206.1	1189.7
20°	1320.5	1307.1	1294.3	1280.9	1266.5	1249.2	1227.9	1204.6	1181.3	1159.5	1135.3
22.5°	1312.6	1291.3	1276.9	1264.5	1249.7	1229.9	1206.1	1177.4	1148.6	1120.9	1092.7
25°	1319.5	1287.8	1265.5	1251.7	1238.3	1218.0	1191.2	1158.5	1124.9	1089.7	1056.0
27.5°	1338.3	1298.2	1266.5	1244.7	1229.4	1209.6	1179.8	1145.7	1107.5	1067.9	1031.7
30°	1365.6	1315.6	1275.9	1244.7	1221.9	1199.2	1167.0	1128.3	1088.2	1046.6	1006.0
32.5°	1395.3	1334.9	1287.3	1246.2	1211.0	1182.3	1148.6	1111.0	1068.4	1024.3	980.7
35°	1417.6	1348.7	1292.3	1240.8	1195.7	1159.5	1123.4	1086.7	1045.1	1000.5	956.9
37.5°	1427.0	1354.2	1291.3	1229.4	1174.4	1134.8	1097.1	1060.5	1020.3	978.2	938.1
40°	1427.5	1354.2	1285.3	1214.0	1152.1	1109.0	1069.4	1035.2	997.6	961.4	925.7
42.5°	1418.1	1347.3	1274.4	1199.7	1135.8	1087.2	1046.6	1011.4	981.2	949.0	918.8
45°	1401.2	1333.4	1264.5	1191.7	1129.8	1081.8	1038.2	1005.0	977.8	949.0	922.8
47.5°	1388.4	1325.5	1265.0	1203.1	1144.2	1094.6	1047.6	1012.4	989.1	966.4	947.5
50°	1390.8	1328.4	1271.0	1212.0	1154.1	1104.1	1058.5	1028.3	1014.4	1007.0	1002.5
52.5°	1403.7	1340.3	1296.7	1257.6	1238.8	1208.1	1182.8	1160.0	1163.5	1145.7	1122.9
55°	1536.5	1515.2	1565.2	1601.4	1619.2	1650.4	1695.5	1652.4	1646.4	1591.4	1428.0
57.5°	2063.0	2113.5	2190.3	2244.8	2250.2	2240.8	2203.7	2168.0	2110.0	2027.3	1798.5
60°	2946.1	2934.2	2862.9	2767.3	2693.0	2595.5	2497.4	2414.7	2321.5	2194.7	1951.0
62.5°	3874.8	3588.6	3334.5	3118.0	2934.2	2771.3	2623.2	2498.9	2371.1	2188.8	1929.3
65°	4624.8	4074.0	3626.2	3278.0	3004.6	2774.3	2583.1	2411.7	2240.8	2029.8	1778.2
67.5°	5160.7	4287.0	3611.3	3121.5	2738.1	2421.1	2142.7	1947.6	1772.2	1606.3	1492.9
70°	5203.3	3992.2	3055.1	2455.8	2013.5	1641.0	1352.2	1139.2	986.7	917.8	966.9
72.5°	4446.4	2953.6	2031.3	1503.3	1193.2	927.2	745.4	595.9	473.0	412.6	421.0
75°	2618.7	1418.1	914.8	681.6	556.7	444.8	384.9	324.9	286.8	229.8	183.8
77.5°	997.1	616.7	461.6	383.4	273.4	196.6	155.0	133.7	122.8	121.4	114.9
80°	574.6	452.2	316.5	207.0	151.6	128.3	110.0	94.1	87.7	86.2	88.7
82.5°	363.1	281.8	173.9	133.2	110.5	95.1	79.3	68.8	63.4	61.4	64.9
85°	187.7	141.2	106.0	91.1	84.7	77.3	63.4	53.0	52.5	55.0	63.4
87.5°	69.3	60.4	47.6	41.1	44.1	41.1	29.7	25.8	23.3	30.7	44.6
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0	1476.0
2.5°	1467.1	1466.1	1466.6	1465.6	1465.6	1467.1	1465.1	1463.7	1466.1	1466.1	1467.6
5°	1444.3	1445.3	1445.3	1444.8	1445.8	1448.3	1447.8	1447.8	1451.8	1453.3	1455.2
7.5°	1408.2	1409.7	1410.2	1411.6	1412.1	1415.6	1418.1	1421.1	1427.0	1428.5	1432.9
10°	1359.1	1358.2	1361.6	1361.1	1365.6	1368.6	1370.5	1377.0	1385.9	1390.8	1395.3
12.5°	1301.2	1301.2	1303.2	1303.7	1307.6	1311.6	1314.1	1322.0	1329.4	1335.9	1345.8
15°	1239.8	1237.8	1233.3	1232.8	1234.3	1238.3	1243.7	1249.7	1261.1	1270.5	1278.9
17.5°	1175.4	1169.4	1164.0	1157.1	1156.6	1156.1	1159.0	1163.5	1181.3	1190.7	1202.6
20°	1118.4	1105.5	1092.7	1078.3	1069.9	1065.9	1067.4	1073.3	1090.2	1102.6	1115.0
22.5°	1067.4	1048.1	1027.8	1005.0	991.1	982.7	983.7	986.2	998.6	1006.0	1012.4
25°	1023.8	997.1	968.8	939.6	920.3	907.4	906.9	906.9	901.5	902.5	899.0
27.5°	994.1	956.9	920.8	886.6	861.4	848.5	831.1	818.8	807.9	793.0	786.6
30°	965.4	927.2	886.1	848.5	818.3	793.0	760.8	734.1	712.8	692.5	675.1
32.5°	939.6	900.0	860.9	819.7	778.1	734.6	692.5	661.7	631.5	600.3	579.5
35°	916.8	879.7	840.5	794.0	735.5	678.6	631.0	589.4	553.8	516.1	485.9
37.5°	903.9	870.3	829.7	766.3	692.9	628.1	575.1	528.5	481.0	435.9	398.7
40°	897.5	867.8	818.3	738.0	654.8	585.5	526.5	470.5	414.6	361.6	322.9
42.5°	896.5	867.8	801.4	709.3	622.1	547.8	481.9	414.6	346.7	295.2	261.0
45°	905.4	866.8	783.6	683.5	592.9	514.1	434.9	355.6	285.8	240.7	221.9
47.5°	931.2	870.3	769.7	661.7	565.2	477.0	381.4	290.3	230.8	210.5	210.0
50°	972.8	886.1	766.7	645.9	537.9	430.4	318.5	232.3	203.6	202.6	208.0
52.5°	1038.7	915.8	774.2	635.0	505.2	370.0	252.1	200.6	195.2	200.6	207.5
55°	1183.8	968.8	784.1	615.7	452.2	293.2	207.5	190.2	192.7	199.1	205.6
57.5°	1447.8	1078.8	794.5	572.1	366.5	225.4	186.7	186.2	190.7	196.1	202.1
60°	1615.2	1214.5	819.7	507.7	276.9	186.2	178.8	183.8	189.2	193.2	198.1
62.5°	1620.7	1250.2	833.1	438.8	206.1	170.4	171.9	181.3	187.7	189.2	191.7
65°	1516.2	1182.8	772.7	357.1	170.9	161.5	166.9	175.3	181.8	182.8	184.8
67.5°	1324.5	1043.1	654.8	269.5	155.5	154.5	160.5	166.9	171.4	175.3	178.3
70°	997.6	860.9	526.5	209.0	146.1	145.1	151.1	156.5	160.5	165.4	170.4
72.5°	505.7	595.9	399.2	170.9	133.2	134.2	140.7	145.6	148.6	153.1	158.0
75°	172.4	260.0	252.6	138.2	118.9	122.8	125.8	131.3	135.7	138.7	141.2
77.5°	108.0	112.9	130.3	111.4	105.0	106.0	111.0	115.9	120.9	122.8	123.8
80°	90.1	90.6	91.1	89.2	89.7	92.6	95.6	101.0	106.0	107.0	107.5
82.5°	71.3	76.3	75.8	75.3	77.8	80.7	82.7	84.7	86.7	87.7	89.2
85°	62.9	61.9	62.4	63.9	61.9	59.9	59.4	59.4	62.4	65.9	67.4
87.5°	57.5	49.0	36.7	34.7	34.7	33.7	31.7	31.7	34.7	37.6	39.1
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):

	160°	165°	170°	175°	180°
0°	1476.0	1476.0	1476.0	1476.0	1476.0
2.5°	1467.1	1467.6	1467.1	1467.1	1469.6
5°	1456.2	1458.2	1457.2	1458.7	1460.2
7.5°	1433.9	1438.9	1439.9	1443.8	1442.4
10°	1401.7	1405.2	1410.2	1414.1	1412.6
12.5°	1350.7	1359.1	1366.6	1371.0	1370.0
15°	1285.8	1297.7	1307.6	1311.1	1307.1
17.5°	1216.5	1223.9	1235.8	1238.3	1242.2
20°	1128.8	1128.3	1138.7	1138.7	1136.7
22.5°	1014.4	1021.8	1021.8	1014.9	1011.4
25°	897.5	900.0	892.6	894.0	884.6
27.5°	780.1	773.7	767.7	770.2	763.3
30°	668.2	654.3	648.4	649.4	641.9
32.5°	560.7	544.4	538.4	530.5	524.0
35°	463.1	437.4	422.0	418.0	422.5
37.5°	367.5	349.2	330.9	317.5	319.0
40°	290.7	271.9	260.0	254.6	253.6
42.5°	240.2	229.3	226.9	227.3	227.3
45°	217.9	218.4	220.4	222.4	222.9
47.5°	213.5	216.5	219.9	222.4	222.9
50°	213.0	216.0	218.4	221.4	222.4
52.5°	212.5	214.5	216.0	217.4	218.9
55°	210.5	211.5	211.0	212.0	213.5
57.5°	205.6	206.1	205.1	205.6	208.5
60°	201.1	201.6	199.6	202.1	202.6
62.5°	195.6	195.2	194.2	195.6	195.6
65°	187.7	184.8	185.7	187.2	187.7
67.5°	178.3	175.3	175.3	176.3	177.8
70°	166.4	164.9	164.9	166.9	168.9
72.5°	153.1	154.0	157.0	160.0	163.0
75°	142.2	144.6	147.6	155.0	159.5
77.5°	128.3	128.8	131.3	138.7	146.6
80°	109.0	108.5	109.0	110.0	111.4
82.5°	86.2	85.2	82.2	83.2	81.2
85°	63.4	61.9	58.4	56.0	55.5
87.5°	36.7	36.7	35.2	33.2	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)