

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: P146596

Luminaire Tested: **LDRL-T3-F02-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146596
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-F02-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5058.4 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

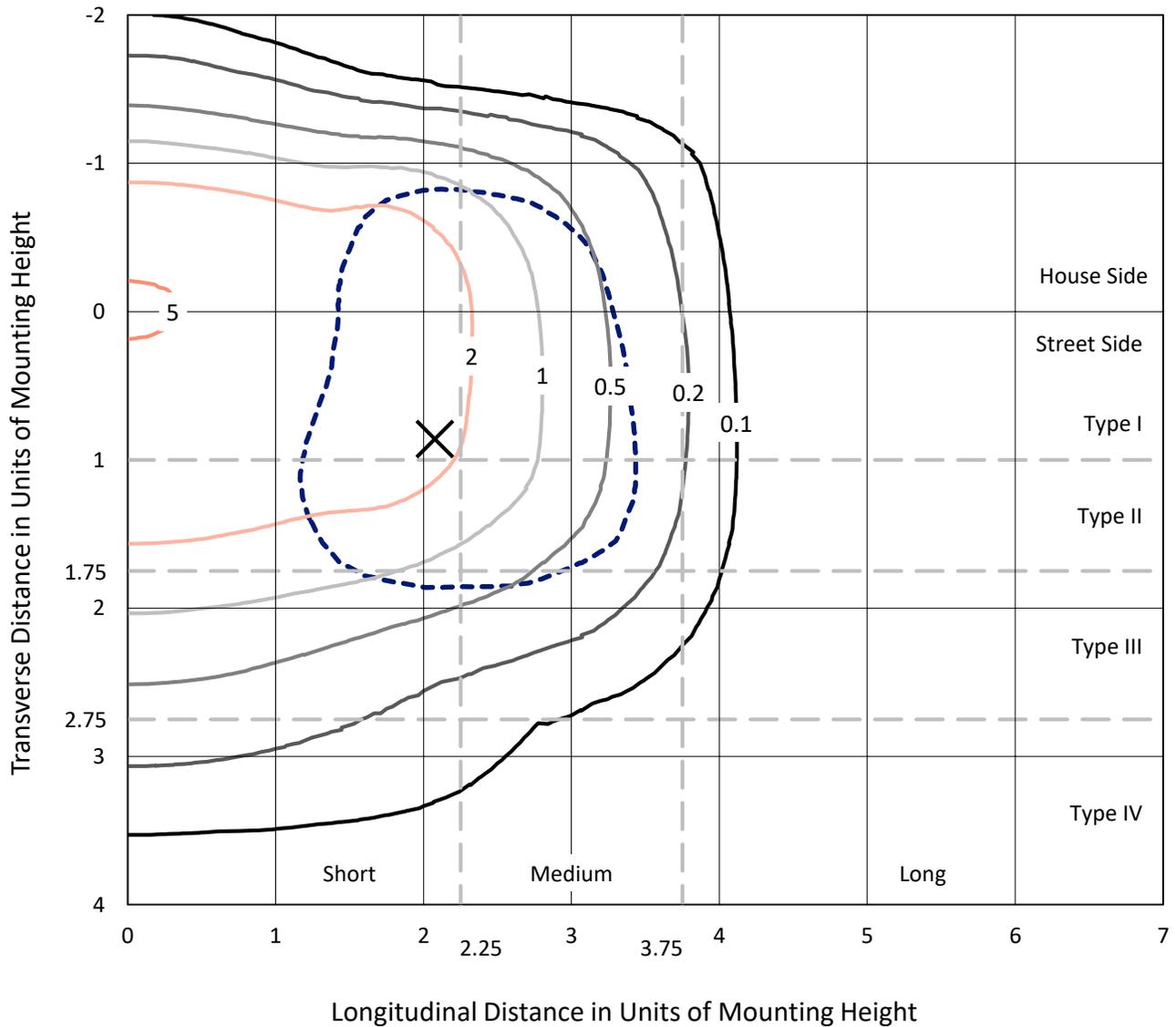
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

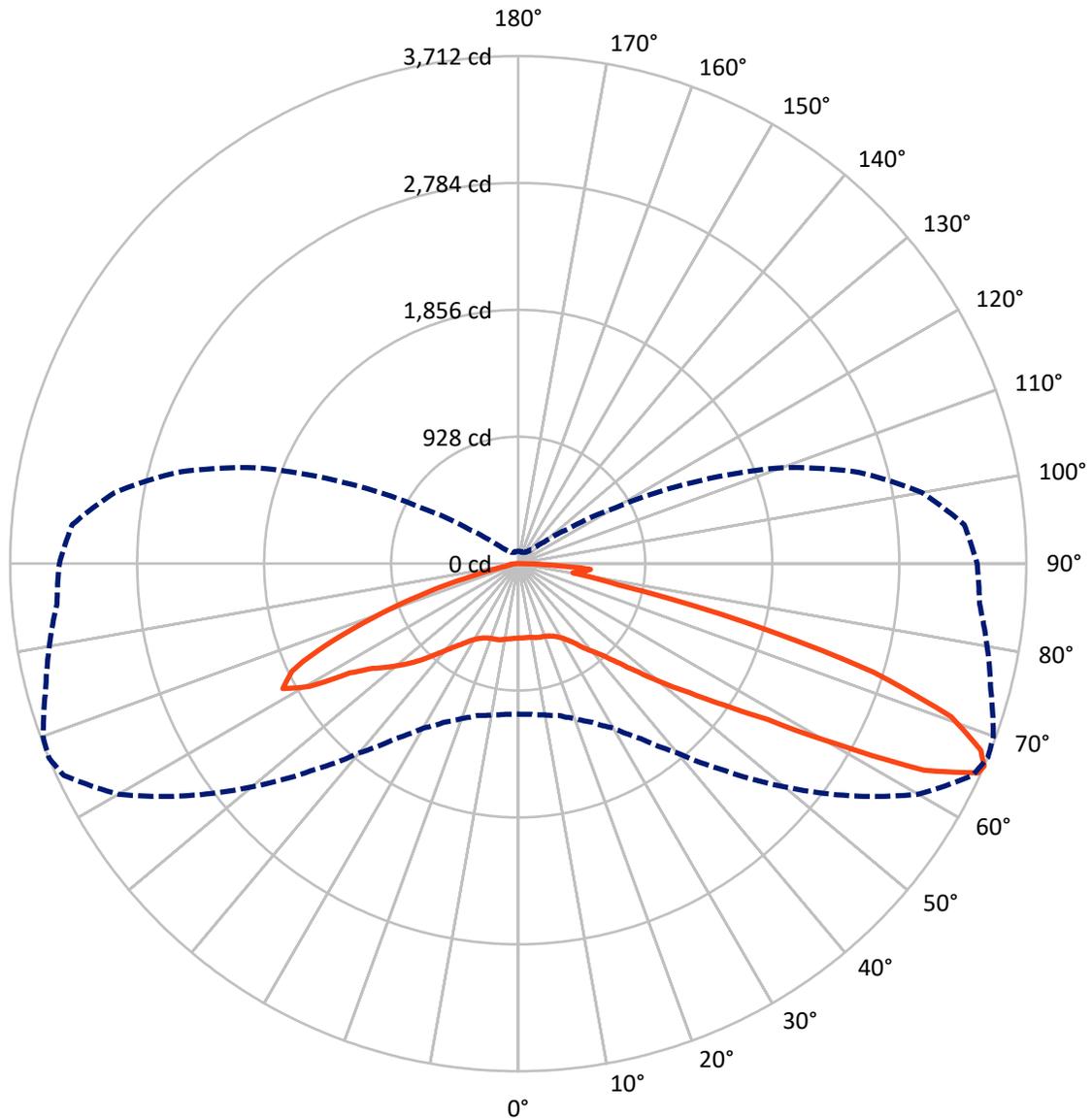
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 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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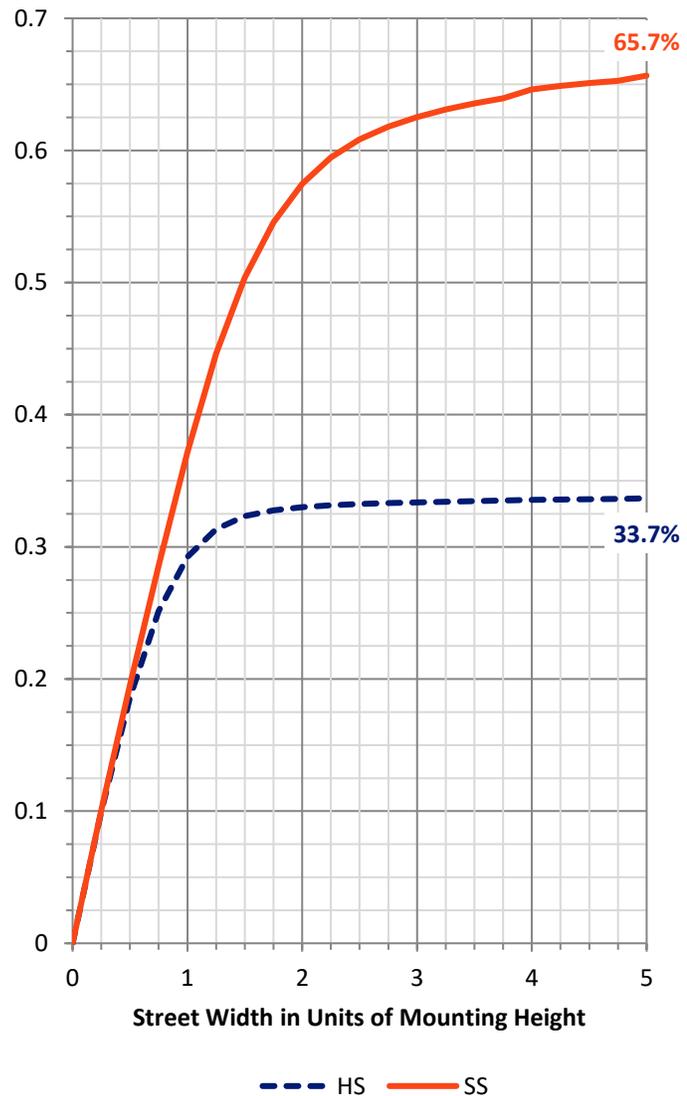
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1718.5	0.0	1718.5
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	3339.9	0.0	3339.9
	% Fixture	66.0	0.0	66.0
Total	Lumens	5058.4	0.0	5058.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	1.0
10°-20°	155.0	3.1
20°-30°	266.4	5.3
30°-40°	428.5	8.5
40°-50°	706.3	14.0
50°-60°	1107.2	21.9
60°-70°	1532.2	30.3
70°-80°	693.4	13.7
80°-90°	117.0	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°	5058.4	100.0
0°-180°	5058.4	100.0

Coefficient of Utilization



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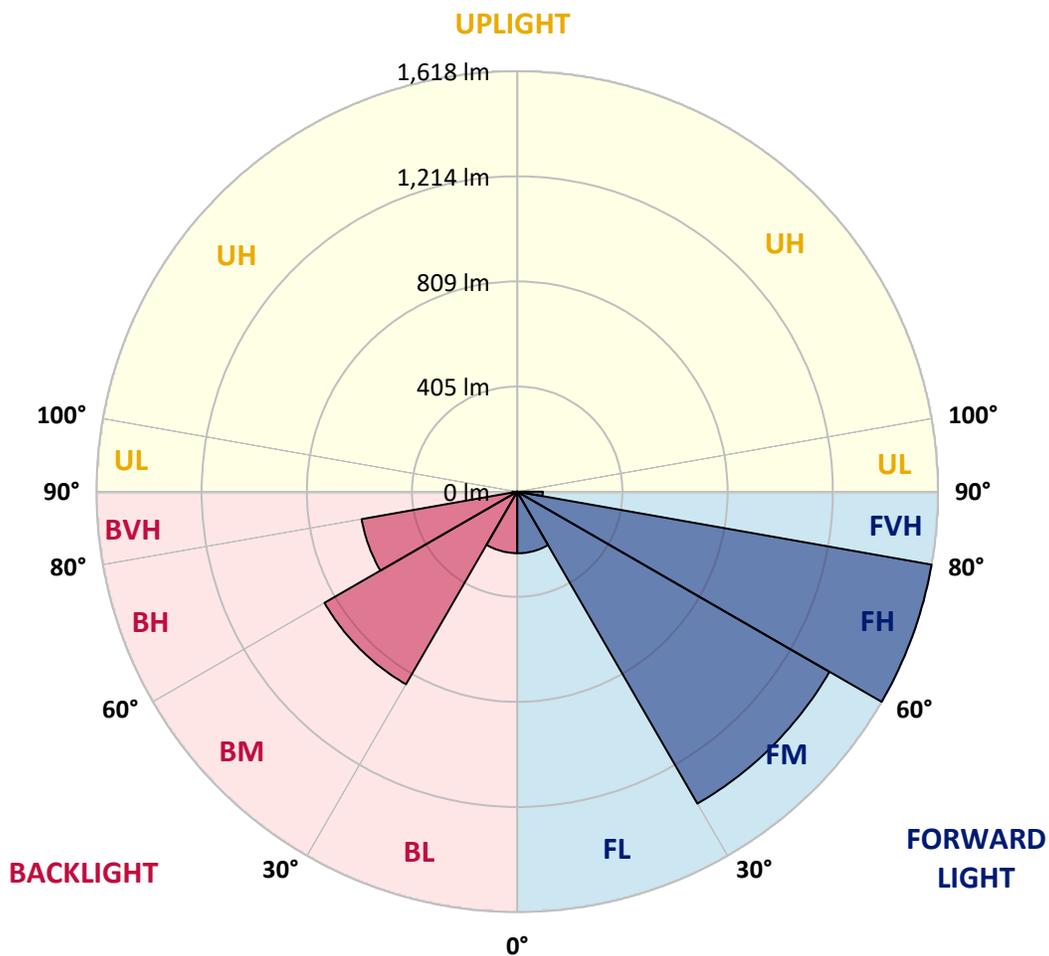
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	237.2	4.7			
FM	(30°-60°)	1386.2	27.4			
FH	(60°-80°)	1618.1	32.0			G1/1800
FVH	(80°-90°)	98.3	1.9			G1/100
BL	(0°-30°)	236.5	4.7	B1/500		
BM	(30°-60°)	855.8	16.9	B1/1000		
BH	(60°-80°)	607.5	12.0	B2/1000		G2/1000
BVH	(80°-90°)	18.7	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°	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5
2.5°	543.8	543.5	543.1	543.1	542.8	543.1	543.5	543.8	543.5	543.8	543.5
5°	542.8	542.8	542.5	542.5	542.5	542.5	542.8	543.1	542.8	543.5	542.8
7.5°	538.4	540.4	539.8	540.4	541.1	541.8	542.1	542.8	543.8	544.5	543.8
10°	532.6	533.7	534.0	534.7	536.0	537.7	539.1	540.8	543.1	543.8	544.5
12.5°	522.1	523.5	524.5	525.9	527.9	530.6	533.0	535.7	539.8	542.5	544.8
15°	514.3	516.0	516.4	518.1	520.1	523.2	526.2	530.3	535.7	540.4	545.2
17.5°	519.4	520.1	519.4	519.4	520.1	521.5	523.8	527.2	533.0	538.7	544.5
20°	534.7	534.7	534.0	533.7	533.0	531.6	531.3	530.9	534.7	539.1	544.2
22.5°	549.2	549.2	548.9	550.3	549.9	549.9	548.9	547.2	545.5	544.8	548.2
25°	558.4	559.7	560.4	562.5	563.8	565.8	566.5	566.2	563.8	559.7	558.7
27.5°	573.3	574.3	575.0	577.4	580.1	582.4	584.8	587.9	587.9	584.1	579.1
30°	602.1	600.7	601.4	602.1	604.5	607.9	610.9	615.0	617.0	615.7	608.9
32.5°	628.9	630.2	630.9	632.9	635.3	640.4	644.1	648.9	653.3	653.9	650.6
35°	668.2	667.5	666.5	673.6	676.3	682.1	686.5	693.2	696.6	699.7	697.7
37.5°	730.2	728.1	726.8	728.8	732.6	736.3	742.7	747.8	753.6	760.7	758.3
40°	817.9	822.0	816.2	819.0	822.0	813.5	819.3	824.0	833.9	834.2	833.9
42.5°	932.1	935.2	933.8	935.5	930.1	927.4	925.0	927.4	939.6	937.9	929.8
45°	1046.3	1050.7	1049.7	1050.4	1060.9	1056.5	1060.2	1060.9	1073.4	1070.0	1063.9
47.5°	1143.9	1151.3	1153.0	1159.1	1173.4	1184.9	1200.8	1212.7	1218.8	1222.8	1227.6
50°	1221.1	1226.6	1236.1	1251.3	1272.0	1292.0	1327.9	1351.3	1372.6	1387.5	1402.8
52.5°	1272.3	1278.4	1293.0	1316.0	1345.8	1382.4	1424.4	1473.2	1518.3	1544.7	1567.4
55°	1293.3	1299.4	1317.4	1347.5	1387.2	1433.9	1494.2	1563.0	1623.0	1683.6	1718.5
57.5°	1281.1	1287.9	1308.6	1342.4	1390.2	1451.5	1526.4	1610.8	1698.6	1790.4	1860.5
60°	1245.2	1251.3	1274.7	1309.9	1364.5	1433.6	1523.4	1629.1	1752.4	1888.6	2021.8
62.5°	1195.7	1204.9	1225.5	1261.5	1315.7	1391.2	1493.6	1631.1	1808.0	2027.6	2286.8
65°	1132.7	1139.5	1157.8	1186.2	1245.9	1324.8	1432.9	1601.3	1832.4	2143.8	2513.8
66°	1100.2	1106.6	1123.6	1150.3	1204.9	1280.8	1388.9	1561.3	1805.3	2143.1	2537.8
67.5°	1042.9	1046.0	1058.2	1084.6	1120.2	1188.3	1288.6	1450.2	1690.4	2052.6	2470.8
70°	874.9	879.3	891.1	904.7	917.9	942.3	1012.4	1119.2	1311.3	1658.6	2057.4
72.5°	605.2	611.9	624.8	649.9	670.5	701.4	728.8	764.4	828.1	1069.3	1471.9
75°	437.4	439.8	458.8	502.8	544.5	606.2	660.7	678.0	656.3	652.6	864.7
77.5°	260.9	264.3	291.7	336.1	379.5	463.2	575.0	661.4	709.2	692.2	654.6
80°	109.8	114.5	130.8	142.3	178.2	248.4	358.8	494.4	620.4	698.0	680.4
82.5°	35.2	41.0	48.5	58.6	69.1	92.5	143.3	214.5	338.8	505.2	621.1
85°	12.9	13.2	18.3	25.4	28.1	32.5	41.7	64.4	114.5	189.4	352.4
87.5°	5.1	6.1	7.1	9.8	10.2	10.5	11.9	15.2	14.9	12.9	66.7
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°	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5
2.5°	543.8	544.5	544.2	544.5	544.5	543.8	543.8	545.2	544.2	544.8	544.8
5°	543.5	544.2	543.8	544.5	544.5	544.2	544.2	546.2	545.9	546.9	547.5
7.5°	544.8	545.2	544.8	544.8	545.9	545.5	545.9	546.5	548.2	549.9	551.3
10°	546.5	547.2	548.2	548.6	549.9	549.6	550.6	551.6	553.3	555.0	556.7
12.5°	548.9	550.9	554.0	554.7	556.0	557.0	558.7	559.7	561.1	563.8	565.8
15°	550.9	554.7	558.4	559.7	561.1	562.5	564.2	565.2	567.5	569.9	572.3
17.5°	551.6	556.0	560.8	562.5	563.8	566.2	568.2	570.3	573.0	576.0	578.7
20°	552.0	558.1	564.2	566.2	569.2	572.6	576.0	577.7	581.4	585.2	587.5
22.5°	555.0	562.5	570.9	574.7	577.7	583.8	588.2	590.9	595.3	598.4	599.4
25°	563.5	571.3	581.4	587.2	592.3	601.1	606.5	611.6	614.0	618.0	617.0
27.5°	578.7	584.8	598.0	605.8	612.3	623.8	634.3	639.0	642.8	644.8	642.4
30°	604.8	607.2	621.8	631.2	642.1	660.0	671.6	677.7	682.4	682.7	676.6
32.5°	643.8	640.1	652.9	666.5	680.7	702.4	718.0	724.4	728.1	728.5	714.9
35°	696.6	690.2	701.0	714.3	731.9	760.3	780.0	787.4	793.2	790.5	770.5
37.5°	763.4	763.0	768.1	785.1	805.1	841.7	862.3	866.4	866.1	857.9	827.8
40°	837.6	831.5	832.2	844.4	867.4	915.5	944.3	951.1	948.7	936.9	897.6
42.5°	931.1	928.4	919.2	925.7	947.0	1005.6	1040.5	1047.3	1049.4	1029.7	983.3
45°	1062.2	1059.9	1039.5	1040.9	1056.5	1118.1	1154.4	1165.6	1165.9	1147.3	1087.0
47.5°	1221.1	1219.1	1195.4	1188.6	1196.4	1251.3	1296.4	1298.7	1299.4	1273.7	1211.0
50°	1401.4	1395.6	1377.7	1370.6	1361.4	1422.1	1458.3	1458.0	1454.3	1425.8	1355.3
52.5°	1575.6	1588.4	1581.7	1567.8	1568.1	1611.8	1646.0	1627.1	1629.4	1602.3	1521.3
55°	1761.6	1794.4	1819.2	1824.3	1821.9	1844.3	1863.2	1829.3	1816.8	1812.4	1726.3
57.5°	1959.1	2043.1	2119.4	2151.2	2139.0	2180.0	2197.0	2161.7	2162.4	2197.0	2122.8
60°	2223.1	2435.2	2627.3	2686.9	2714.7	2782.5	2752.3	2750.3	2803.5	2848.2	2710.6
62.5°	2623.6	2974.9	3281.6	3326.0	3348.3	3363.6	3350.0	3313.1	3368.0	3373.4	3161.3
65°	2927.2	3339.5	3636.0	3691.6	3687.5	3609.9	3534.7	3460.8	3460.1	3405.9	3132.8
66°	2960.0	3374.1	3663.1	3712.2	3694.3	3574.7	3479.1	3383.2	3352.4	3271.1	2993.9
67.5°	2888.2	3313.8	3600.7	3644.8	3606.5	3424.6	3294.4	3164.7	3118.3	3005.1	2722.5
70°	2469.1	2907.5	3291.4	3355.1	3309.7	3068.1	2875.3	2732.7	2606.3	2494.8	2261.7
72.5°	1914.4	2242.4	2648.6	2715.0	2718.8	2529.7	2312.5	2175.6	2028.6	1916.8	1741.9
75°	1255.7	1503.7	1727.0	1704.7	1711.1	1562.3	1432.9	1319.1	1185.9	1097.8	1014.5
77.5°	733.9	822.7	802.4	746.8	700.0	550.3	393.7	270.4	235.8	246.0	277.5
80°	638.0	588.2	460.5	404.9	368.3	250.1	134.5	94.9	83.4	84.4	89.5
82.5°	686.8	712.6	584.8	481.5	419.8	294.4	158.2	78.9	56.9	66.4	73.2
85°	533.0	678.3	625.5	528.6	444.5	313.1	161.6	50.1	33.9	45.4	57.3
87.5°	151.8	240.2	192.1	169.8	136.9	93.5	38.6	20.0	18.3	23.7	32.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5	544.5
2.5°	545.2	545.2	546.2	546.5	546.9	546.9	547.5	547.5	547.9	549.2	548.9
5°	548.6	549.6	550.9	551.6	552.6	553.0	554.0	554.0	555.0	556.0	555.7
7.5°	552.6	553.6	554.7	555.7	556.7	558.1	557.7	557.4	557.0	556.4	555.7
10°	558.4	559.4	560.4	560.1	559.4	558.7	556.0	553.0	551.6	548.9	546.9
12.5°	567.9	568.9	567.9	565.2	561.4	557.0	551.3	546.2	543.1	539.1	536.7
15°	575.0	576.0	574.0	569.2	563.1	557.4	549.6	543.1	537.7	533.3	529.9
17.5°	580.4	579.7	575.3	569.9	563.5	558.7	551.6	544.5	538.1	532.0	527.2
20°	588.2	584.5	578.0	571.3	564.8	560.8	555.0	548.6	541.8	533.0	526.9
22.5°	598.4	591.6	583.1	576.4	570.3	566.2	560.4	554.3	547.9	537.7	529.3
25°	612.9	602.1	592.3	585.2	579.7	575.7	568.6	562.1	555.0	544.8	534.0
27.5°	633.3	617.7	607.5	600.4	595.0	590.2	581.1	573.3	564.2	554.0	541.1
30°	659.7	640.7	629.5	623.4	617.7	610.9	601.1	589.6	577.7	564.2	550.3
32.5°	692.6	671.2	660.7	654.6	647.2	638.0	625.1	609.9	592.3	574.3	557.0
35°	739.3	714.9	703.4	692.9	682.1	668.5	649.2	627.2	603.8	580.4	559.1
37.5°	785.7	763.0	748.8	738.0	721.0	699.0	672.2	641.7	610.6	580.8	555.0
40°	851.5	825.1	808.4	789.1	761.7	727.5	688.5	647.5	608.9	573.0	542.5
42.5°	932.1	902.0	877.2	842.3	799.6	750.2	696.3	644.1	597.0	555.7	522.1
45°	1034.1	994.8	953.5	898.6	833.2	764.1	696.0	632.3	576.7	529.9	496.7
47.5°	1153.0	1097.8	1028.3	944.7	855.2	767.5	685.1	610.9	546.2	494.7	456.4
50°	1275.4	1195.4	1096.8	980.2	866.4	759.0	661.1	576.0	506.2	447.6	406.3
52.5°	1426.1	1302.1	1158.8	1004.3	861.6	733.9	621.1	526.9	452.3	395.1	347.6
55°	1605.7	1424.8	1217.8	1017.5	840.6	688.8	560.4	462.5	384.2	332.1	289.4
57.5°	1902.9	1616.9	1318.4	1037.2	799.3	621.8	486.6	385.2	311.7	267.3	233.1
60°	2415.2	2011.0	1531.2	1085.6	742.0	526.2	392.7	301.9	241.2	205.7	181.6
62.5°	2772.6	2249.8	1645.7	1069.0	644.8	414.4	290.4	215.8	175.9	152.5	136.2
65°	2703.2	2155.6	1507.8	908.1	505.2	293.1	193.1	146.0	123.3	108.8	100.6
66°	2578.5	2051.6	1402.8	815.2	438.1	244.3	159.3	121.0	106.1	95.6	90.1
67.5°	2351.1	1836.1	1214.0	654.3	328.0	180.3	121.0	94.2	86.1	80.6	76.9
70°	1946.6	1451.9	835.9	386.6	173.5	101.0	76.9	69.5	65.7	63.4	63.0
72.5°	1492.5	1041.6	483.5	187.0	92.8	67.1	59.0	56.2	54.9	54.2	54.2
75°	922.0	587.5	216.2	93.9	64.0	54.9	51.2	49.8	49.5	49.5	49.5
77.5°	324.3	204.7	96.9	68.8	56.2	49.5	46.4	45.7	46.4	46.4	46.4
80°	89.5	78.9	70.1	61.0	50.8	45.7	43.0	42.7	44.0	44.4	43.0
82.5°	69.8	65.7	60.0	54.6	46.4	41.7	40.3	41.0	41.7	40.7	38.6
85°	59.6	56.9	42.0	42.0	37.6	36.3	35.9	36.6	36.3	33.5	30.8
87.5°	33.9	29.8	22.7	24.7	26.4	27.1	22.7	24.4	24.1	21.3	20.0
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°	544.5	544.5	544.5	544.5	544.5
2.5°	549.6	549.6	550.3	550.3	549.9
5°	556.4	556.4	557.4	556.7	557.0
7.5°	555.0	553.6	553.6	553.0	552.6
10°	545.5	543.1	541.8	542.5	541.5
12.5°	534.7	532.6	531.3	530.9	530.6
15°	527.9	525.5	524.5	523.8	523.8
17.5°	524.2	521.5	520.1	519.1	518.7
20°	522.5	519.1	517.1	516.0	515.4
22.5°	523.2	519.1	516.4	515.0	514.3
25°	525.9	520.8	517.4	515.7	514.7
27.5°	530.6	523.8	520.1	517.7	516.4
30°	536.4	526.9	521.5	518.1	516.7
32.5°	540.1	527.2	520.4	515.4	514.0
35°	539.4	523.5	514.7	508.2	507.2
37.5°	532.6	513.7	502.8	494.4	493.3
40°	518.1	498.8	486.2	477.8	475.7
42.5°	497.7	477.8	464.2	456.4	453.7
45°	467.9	443.5	431.0	424.6	420.8
47.5°	425.9	402.9	389.0	383.6	378.8
50°	378.1	352.7	342.6	336.5	331.0
52.5°	321.9	300.2	292.4	286.7	282.2
55°	267.3	252.1	242.9	236.8	237.2
57.5°	214.8	205.7	200.6	194.1	194.8
60°	169.1	161.3	161.3	157.2	155.9
62.5°	129.1	126.0	125.0	123.7	121.3
65°	97.9	97.9	98.3	98.3	96.9
66°	88.1	89.1	90.5	90.5	88.8
67.5°	76.2	77.6	78.9	79.6	79.6
70°	63.0	64.7	65.4	66.1	65.7
72.5°	55.2	56.6	56.6	56.9	56.2
75°	50.1	50.8	51.2	50.5	50.1
77.5°	46.4	46.8	46.4	46.1	45.7
80°	42.0	41.7	40.7	39.3	39.0
82.5°	36.3	34.9	34.2	32.2	31.9
85°	29.1	27.4	26.1	23.4	22.0
87.5°	19.3	18.6	17.6	12.9	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)