

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: P163240

Luminaire Tested: **LDRL-SL2-F02-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163240
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33726)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL2-F02-E-8030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2478.4 lumens
Efficiency: N/A
Efficacy: 45.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

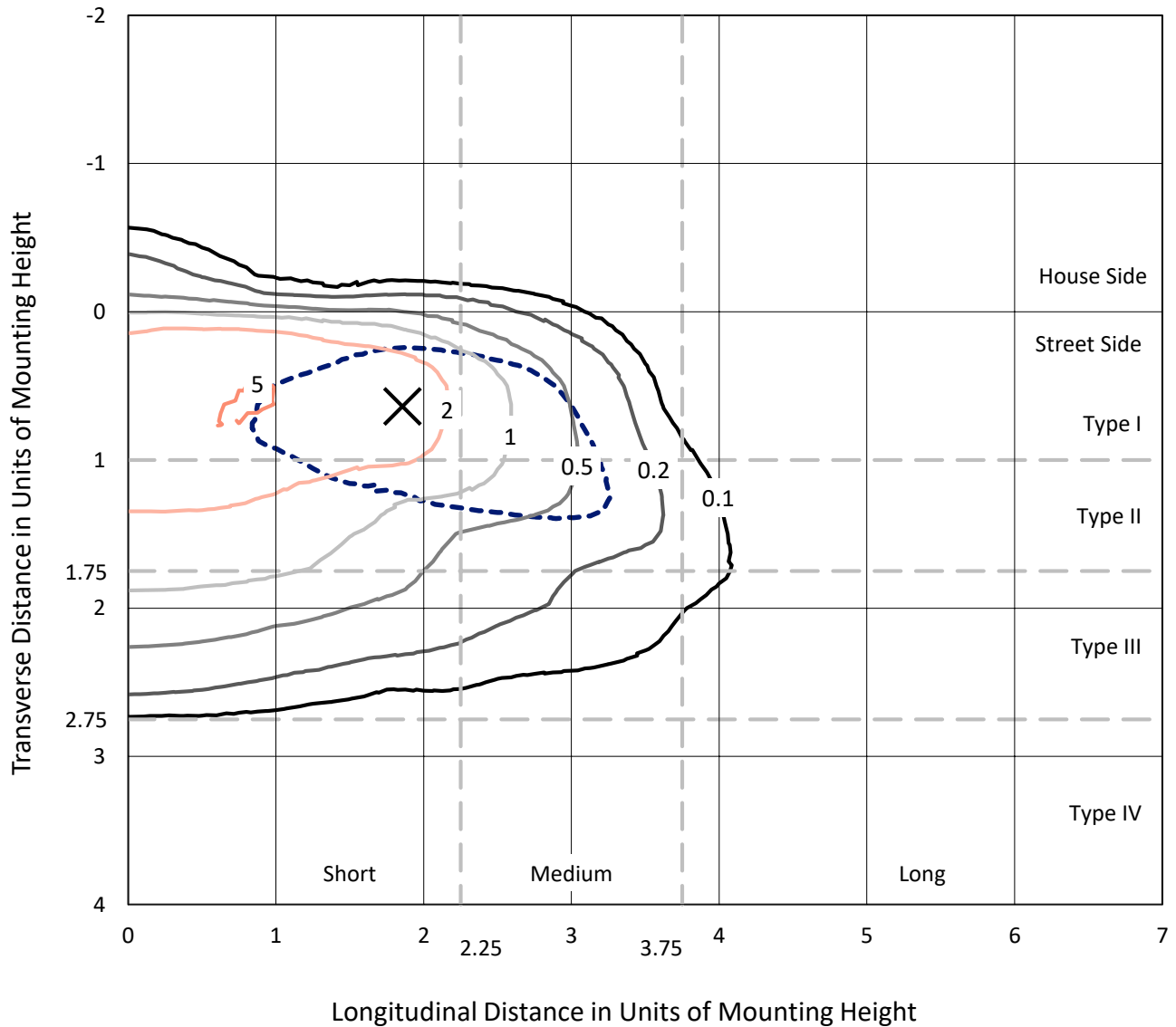
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

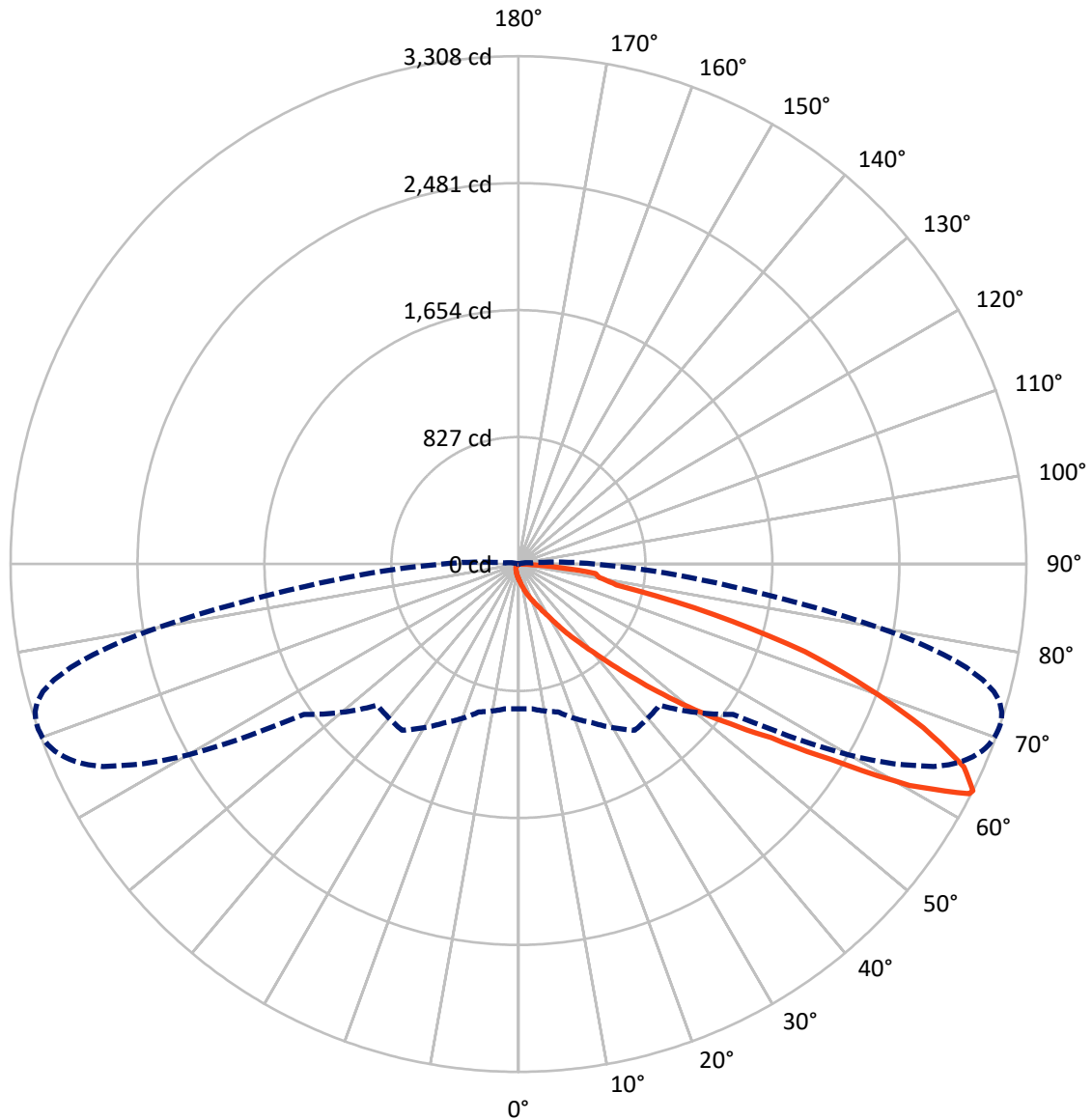
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	52.6	0.0	52.6
	% Fixture	2.1	0.0	2.1
Street Side	Lumens	2425.7	0.0	2425.7
	% Fixture	97.9	0.0	97.9
Total	Lumens	2478.4	0.0	2478.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.5	0.4
10°-20°	40.7	1.6
20°-30°	82.8	3.3
30°-40°	202.2	8.2
40°-50°	452.3	18.2
50°-60°	635.9	25.7
60°-70°	747.8	30.2
70°-80°	270.0	10.9
80°-90°	36.1	1.5
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°	2478.4	100.0
0°-180°	2478.4	100.0



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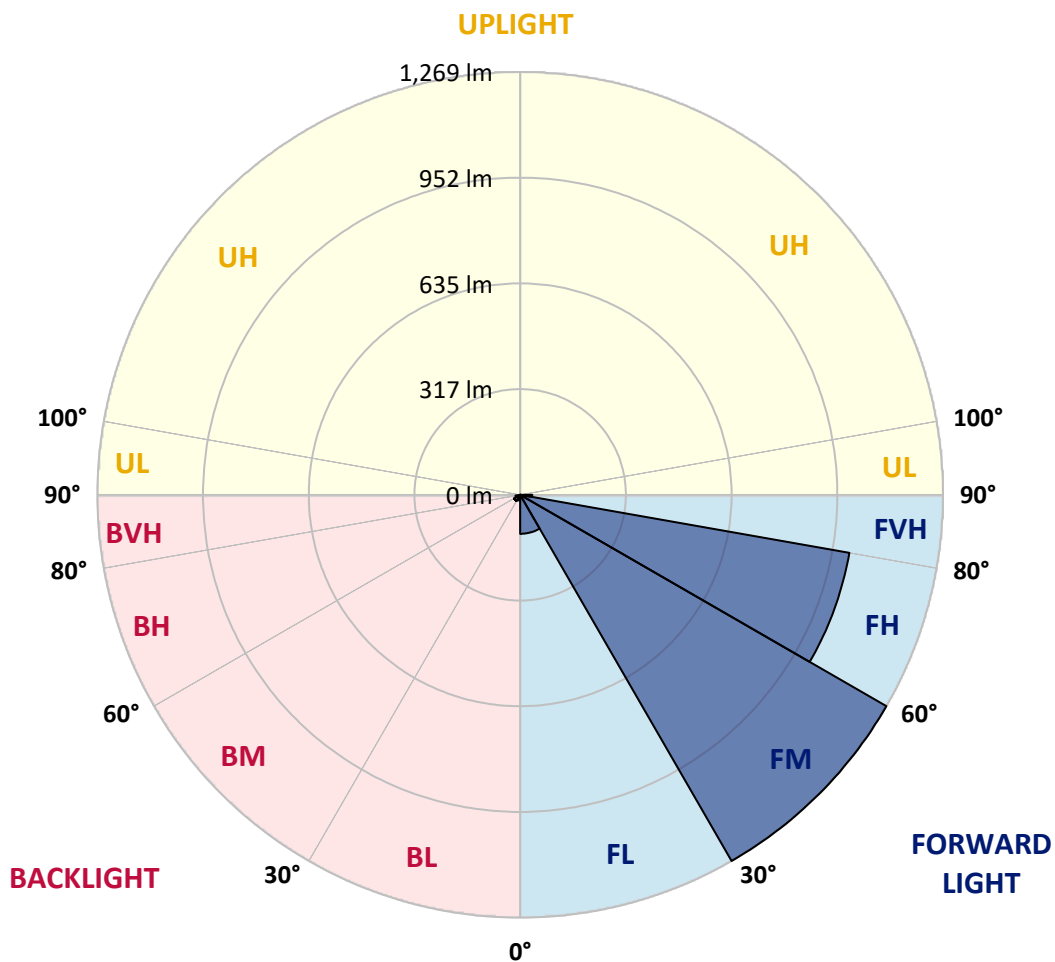
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	117.1	4.7			
FM (30°-60°)	1269.2	51.2			
FH (60°-80°)	1003.4	40.5			G1/1800
FVH (80°-90°)	36.0	1.5			G1/100
BL (0°-30°)	16.9	0.7	B0/110		
BM (30°-60°)	21.2	0.9	B0/220		
BH (60°-80°)	14.4	0.6	B0/110		G0/110
BVH (80°-90°)	0.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	124.4	125.7	124.8	122.5	119.8	116.2	113.1	113.1	112.6	111.3	111.7
5°	163.1	163.5	161.8	156.3	151.4	143.7	135.2	134.3	133.4	132.0	131.6
7.5°	200.9	202.8	200.9	195.1	185.2	173.5	159.9	158.6	155.9	155.9	154.1
10°	239.7	239.7	237.9	231.1	222.1	205.5	188.3	186.1	182.9	182.0	179.3
12.5°	267.2	267.2	266.3	262.7	255.5	240.6	219.9	217.6	213.6	212.2	209.0
15°	278.0	278.0	278.4	281.6	282.0	275.3	253.7	251.9	247.8	244.2	242.9
17.5°	284.7	284.3	284.3	288.8	296.9	301.4	287.4	285.7	281.1	279.3	274.8
20°	299.6	298.7	296.0	296.0	303.7	319.4	319.4	319.0	314.0	312.7	310.4
22.5°	321.7	320.8	312.7	305.9	309.5	329.4	347.8	346.9	345.1	343.3	342.0
25°	357.7	354.6	340.6	320.8	317.6	338.8	369.5	371.7	373.1	373.1	374.0
27.5°	412.2	408.2	383.4	346.5	332.5	354.1	393.3	397.8	401.9	402.8	406.8
30°	487.9	480.7	445.2	391.1	359.1	376.7	428.5	433.4	439.3	441.1	447.4
32.5°	612.3	608.3	574.0	492.9	424.4	420.8	477.6	483.9	491.6	494.7	502.4
35°	801.5	802.4	774.5	701.5	606.9	557.3	565.4	570.8	573.6	583.0	587.1
37.5°	929.9	932.2	938.5	909.7	842.1	791.6	728.1	733.9	720.0	721.3	721.8
40°	1000.2	1007.4	1044.4	1072.3	1066.9	1037.6	986.7	989.9	963.7	957.9	929.5
42.5°	1047.1	1056.5	1115.6	1202.1	1246.2	1272.8	1261.1	1259.8	1239.5	1231.8	1207.9
45°	1076.4	1084.9	1159.3	1286.8	1388.6	1466.1	1498.1	1501.7	1484.6	1476.9	1457.1
47.5°	1075.0	1084.9	1164.7	1318.3	1468.4	1592.2	1682.4	1686.9	1697.2	1690.5	1691.8
50°	1015.5	1025.0	1105.2	1264.7	1444.9	1649.9	1814.8	1829.2	1845.9	1857.2	1862.6
52.5°	943.5	950.2	1021.4	1172.8	1344.9	1626.0	1893.2	1918.0	1942.8	1964.0	1978.8
55°	916.9	924.5	980.4	1106.1	1264.7	1526.0	1929.7	1966.2	2001.4	2036.0	2064.4
57.5°	930.8	938.1	978.1	1074.6	1216.9	1420.6	1940.1	1996.8	2054.5	2110.8	2166.7
60°	982.2	989.9	1024.1	1103.9	1204.3	1359.7	1899.5	1993.7	2089.6	2187.9	2280.2
62.5°	961.9	965.1	1015.5	1155.2	1294.4	1307.9	1752.2	1883.7	2030.2	2181.6	2330.7
63°	942.5	946.2	997.5	1141.3	1321.9	1300.3	1706.7	1845.5	2000.0	2163.1	2325.3
65°	854.7	855.1	894.4	1007.9	1291.3	1313.8	1503.9	1636.4	1813.9	2009.5	2214.4
67.5°	638.0	634.8	672.7	759.2	1013.8	1314.3	1290.8	1365.2	1488.6	1662.1	1845.9
70°	226.2	221.2	282.5	402.4	631.7	1075.0	1109.3	1114.2	1148.4	1242.2	1357.5
72.5°	73.4	74.8	90.1	147.3	291.1	723.6	1004.3	988.9	979.9	979.5	994.8
75°	29.3	29.7	36.0	65.3	130.7	348.7	879.5	888.0	891.2	895.7	900.7
77.5°	14.0	15.3	20.3	36.5	64.9	172.6	629.4	701.9	743.4	775.4	794.8
80°	5.0	5.9	11.3	22.5	30.2	79.3	331.6	400.1	460.9	539.3	606.9
82.5°	0.0	0.0	2.3	15.8	16.7	32.0	136.1	159.5	182.5	236.5	303.7
85°	0.0	0.0	0.0	4.5	5.0	5.4	46.0	55.4	62.2	72.5	83.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.3	2.7	6.7	10.4
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):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	110.8	110.4	110.4	109.5	109.0	108.1	107.7	106.3	105.9	105.9	105.9
5°	131.1	129.3	128.4	126.2	124.8	124.4	122.1	121.2	119.8	120.3	118.1
7.5°	153.6	150.5	149.1	146.0	145.1	141.9	141.0	138.8	137.4	134.7	133.8
10°	178.4	174.4	172.1	167.2	165.8	163.5	160.8	158.1	155.9	153.2	151.8
12.5°	206.8	203.2	201.4	194.6	191.5	188.3	184.7	181.1	177.5	175.3	172.1
15°	240.2	234.3	232.5	226.2	220.8	216.7	211.8	207.3	204.6	200.0	196.9
17.5°	273.0	267.2	265.8	256.4	250.5	247.8	242.4	236.5	231.6	227.1	222.1
20°	305.9	301.9	298.3	289.3	283.0	278.4	271.2	265.4	261.3	255.0	248.7
22.5°	338.8	334.8	332.1	322.6	316.7	310.4	304.1	297.8	292.0	284.3	277.1
25°	372.6	369.9	368.5	360.0	354.6	348.7	342.4	335.2	328.0	319.4	311.8
27.5°	407.8	408.6	405.9	404.1	398.3	394.2	384.3	379.4	374.0	363.6	354.1
30°	452.3	455.1	454.2	455.5	451.9	449.2	441.5	435.2	428.9	419.0	408.2
32.5°	508.7	512.3	514.1	519.0	517.2	516.3	514.1	505.1	500.6	483.5	478.9
35°	595.6	593.8	601.5	605.5	603.7	602.8	600.1	595.2	589.8	577.6	566.3
37.5°	708.7	710.5	713.2	705.1	699.7	699.2	691.1	686.2	678.5	665.0	651.5
40°	916.0	904.7	892.1	857.8	843.0	834.4	810.6	803.8	790.7	772.2	758.3
42.5°	1185.4	1174.1	1136.3	1079.1	1048.4	1006.1	986.7	962.8	944.4	914.2	898.0
45°	1453.0	1420.6	1416.1	1349.4	1311.6	1255.7	1221.0	1180.9	1139.0	1099.3	1070.5
47.5°	1678.7	1671.6	1649.5	1608.9	1573.8	1526.9	1482.3	1420.6	1377.3	1321.0	1269.2
50°	1859.4	1859.0	1850.9	1827.4	1798.2	1760.3	1721.1	1668.8	1619.7	1550.8	1495.4
52.5°	1994.6	2001.8	2004.5	1997.3	1986.0	1952.7	1932.9	1889.2	1847.7	1789.1	1729.2
55°	2093.7	2120.3	2133.8	2149.1	2146.0	2134.3	2133.3	2105.0	2086.1	2039.7	1997.3
57.5°	2216.3	2260.0	2301.9	2376.2	2378.9	2405.0	2418.6	2432.1	2435.7	2417.2	2403.2
60°	2372.2	2461.4	2540.7	2696.1	2736.6	2800.6	2842.1	2887.1	2925.4	2928.6	2927.7
62.5°	2482.1	2619.5	2747.5	2978.2	3057.0	3130.9	3186.3	3230.0	3256.6	3283.6	3296.2
63°	2485.2	2635.7	2771.8	3009.7	3092.6	3162.9	3215.6	3256.1	3284.1	3300.3	3308.4
65°	2409.1	2591.6	2753.8	2990.8	3068.7	3139.4	3166.9	3193.5	3207.0	3213.3	3189.5
67.5°	2041.9	2220.3	2409.5	2674.5	2741.2	2825.8	2848.4	2861.9	2868.2	2866.8	2846.6
70°	1526.9	1676.5	1886.9	2189.7	2278.0	2360.9	2412.2	2434.3	2441.5	2439.3	2409.1
72.5°	1066.0	1153.8	1327.3	1664.3	1784.6	1891.0	1954.5	1987.4	1994.1	1980.6	1952.7
75°	895.2	899.8	938.9	1123.2	1235.9	1349.4	1421.0	1441.8	1428.3	1387.3	1316.0
77.5°	799.3	809.2	809.2	836.7	858.7	890.3	897.1	846.6	788.0	712.3	651.1
80°	670.4	705.1	729.5	749.7	752.0	745.7	729.0	700.6	655.5	597.9	533.9
82.5°	407.3	475.8	503.7	608.3	659.6	694.3	691.6	653.8	619.5	559.6	505.1
85°	102.7	110.8	120.3	156.3	175.3	214.0	238.3	249.6	253.7	232.9	210.9
87.5°	9.9	6.7	11.3	8.6	12.2	9.0	12.2	11.3	14.0	14.9	16.2
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):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	105.0	104.5	104.1	103.6	103.2	102.7	101.8	101.8	100.9	100.5	100.0
5°	116.7	115.8	115.4	114.4	113.1	112.2	110.8	109.0	107.7	107.2	106.3
7.5°	131.6	129.3	128.4	127.1	125.2	122.5	120.8	119.4	117.1	115.8	113.1
10°	148.2	146.0	143.3	140.6	137.9	134.7	132.5	130.7	127.1	125.2	122.1
12.5°	169.4	165.3	162.2	158.6	155.0	151.4	148.7	143.3	140.1	136.1	133.4
15°	191.0	187.4	183.8	179.3	173.9	168.1	165.3	160.4	156.3	150.0	146.4
17.5°	217.2	210.4	205.0	199.6	194.6	189.2	183.8	176.2	170.3	164.9	157.7
20°	242.9	234.7	228.9	221.7	214.5	205.9	199.6	194.2	186.1	178.9	171.2
22.5°	270.3	262.2	252.7	245.6	235.6	228.9	220.3	211.3	203.2	193.7	184.3
25°	303.7	295.1	284.3	274.8	263.6	254.1	243.7	233.4	223.5	212.7	200.5
27.5°	344.7	335.7	324.0	312.7	297.8	286.1	276.2	262.2	249.6	236.1	222.1
30°	396.5	386.6	372.2	355.9	341.1	328.0	314.0	295.6	281.6	265.4	247.3
32.5°	464.1	452.3	433.0	417.7	399.2	382.1	362.7	344.2	324.4	303.2	282.5
35°	549.2	538.4	515.9	493.3	473.1	452.8	428.5	407.3	379.4	353.7	327.1
37.5°	637.5	618.1	597.4	573.1	547.9	523.5	493.8	464.5	432.5	404.6	371.2
40°	738.5	715.0	697.9	671.8	636.2	601.5	574.0	537.5	497.4	460.0	420.8
42.5°	876.8	850.6	820.0	780.3	754.7	714.1	678.5	635.3	582.6	540.7	493.3
45°	1036.7	1001.1	971.4	933.1	902.0	851.6	810.1	752.4	699.7	644.7	587.1
47.5°	1219.2	1175.0	1131.8	1093.9	1044.4	994.8	942.1	880.8	813.3	752.9	684.4
50°	1428.7	1366.1	1306.2	1257.5	1189.5	1132.2	1075.0	1006.1	931.3	861.9	784.0
52.5°	1661.6	1589.1	1509.8	1435.0	1356.2	1282.7	1213.8	1134.5	1051.1	966.4	879.5
55°	1942.8	1888.3	1795.0	1699.9	1594.5	1496.3	1407.5	1309.3	1207.9	1096.6	1005.2
57.5°	2383.0	2356.4	2278.4	2183.4	2046.0	1926.6	1776.1	1655.8	1508.9	1355.7	1237.7
60°	2979.5	2946.6	2902.9	2825.8	2716.8	2554.6	2388.8	2201.9	1978.4	1766.2	1564.8
62.5°	3297.6	3285.9	3250.3	3197.1	3095.3	2967.3	2800.2	2594.7	2342.4	2084.7	1827.9
63°	3307.0	3292.2	3261.5	3207.5	3117.8	2993.9	2829.9	2630.3	2383.4	2120.8	1858.5
65°	3179.1	3173.2	3142.1	3083.1	3021.9	2927.2	2800.2	2628.5	2421.3	2173.0	1912.1
67.5°	2819.5	2802.0	2754.2	2736.2	2693.4	2627.6	2530.7	2412.7	2264.5	2069.4	1844.1
70°	2384.8	2358.6	2298.7	2266.7	2214.4	2173.0	2114.0	2029.7	1938.3	1802.2	1634.2
72.5°	1923.9	1869.8	1814.8	1731.5	1658.5	1584.6	1519.2	1459.8	1359.3	1304.3	1176.8
75°	1249.4	1151.1	1057.0	930.8	817.3	716.8	619.1	569.5	466.3	424.4	364.5
77.5°	592.9	538.0	464.1	406.8	333.8	272.6	222.6	167.2	131.1	102.7	78.4
80°	478.5	432.1	387.5	335.7	280.7	223.9	171.6	128.4	91.0	63.1	44.6
82.5°	426.7	376.2	321.3	285.7	248.3	203.2	166.7	136.1	100.5	73.4	50.0
85°	165.8	139.7	107.7	87.8	68.5	56.3	50.9	35.1	27.5	21.6	16.7
87.5°	14.4	11.7	9.4	6.3	6.7	3.6	4.0	2.7	2.3	2.3	1.8
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):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	99.6	99.1	98.7	97.8	97.8	96.9	96.4	96.0	93.7	88.8	84.7
5°	104.5	103.6	102.7	101.4	100.5	99.1	98.2	96.9	91.9	82.4	74.3
7.5°	111.7	109.9	108.6	105.9	104.5	102.7	101.4	99.1	91.0	76.6	65.3
10°	120.3	117.1	114.9	111.7	109.0	106.8	104.5	101.4	90.1	70.3	57.2
12.5°	130.7	127.1	122.5	118.9	115.4	112.2	109.0	105.0	88.8	64.9	50.9
15°	141.0	135.6	132.5	127.5	122.5	118.1	113.5	109.9	89.2	59.0	45.5
17.5°	152.7	147.3	140.6	135.2	129.8	123.9	118.5	111.3	87.0	54.5	41.4
20°	164.0	156.3	150.0	143.3	135.6	128.4	121.7	115.4	85.1	50.0	37.8
22.5°	176.2	167.2	159.1	150.5	141.0	132.9	124.8	116.7	82.0	46.0	34.7
25°	191.0	180.7	168.9	158.6	148.7	138.8	128.4	118.5	78.8	42.4	32.4
27.5°	209.0	195.5	183.8	170.8	156.8	144.2	132.9	122.1	75.7	39.7	30.2
30°	232.0	216.3	199.6	182.9	168.1	153.6	137.9	124.4	72.5	37.0	27.9
32.5°	262.7	242.9	222.6	203.2	183.4	164.9	148.2	130.7	70.7	34.7	25.7
35°	303.2	277.6	252.7	228.4	204.6	182.0	160.4	140.6	70.7	32.0	23.0
37.5°	341.5	311.8	280.3	250.0	221.7	195.5	169.9	146.0	67.1	29.7	20.7
40°	383.0	347.4	310.4	274.8	240.6	208.2	178.9	151.4	64.0	27.0	18.5
42.5°	446.5	401.4	353.2	311.8	270.8	230.7	194.2	161.8	59.9	24.3	16.2
45°	529.9	472.6	415.9	365.4	313.1	264.0	220.8	180.7	59.0	22.1	14.0
47.5°	619.1	551.5	484.8	420.4	359.1	301.9	250.0	201.9	59.0	19.8	12.2
50°	707.8	623.1	551.9	477.1	408.2	340.6	278.9	223.9	59.5	18.0	9.9
52.5°	788.0	697.5	617.7	531.2	455.1	376.7	309.5	245.6	58.6	15.8	8.1
55°	899.3	793.0	700.6	605.1	515.9	427.6	351.4	278.0	59.0	14.0	6.7
57.5°	1104.3	979.5	868.2	743.0	640.2	526.2	433.9	344.7	64.4	11.7	5.0
60°	1398.5	1236.3	1080.0	927.2	796.6	661.0	541.1	436.1	75.7	9.4	3.6
62.5°	1596.3	1384.1	1197.6	1029.1	877.2	735.3	604.6	485.2	83.4	7.7	2.3
63°	1616.6	1397.1	1209.7	1035.8	880.8	738.9	607.3	488.9	83.8	7.2	2.3
65°	1654.9	1419.7	1216.5	1037.2	877.2	733.9	605.5	488.4	84.7	5.9	1.8
67.5°	1611.2	1385.0	1177.3	998.4	845.7	704.7	583.0	470.4	84.2	4.0	1.3
70°	1440.8	1253.4	1071.0	904.3	765.5	638.0	530.7	428.9	77.5	2.7	0.9
72.5°	1057.9	930.4	788.9	668.6	576.7	478.9	408.6	322.1	59.9	1.8	0.4
75°	313.6	285.7	240.2	211.8	187.0	154.5	137.4	107.2	30.6	0.9	0.0
77.5°	62.6	56.8	50.9	46.4	43.7	37.4	35.6	29.3	12.6	0.4	0.0
80°	32.9	27.0	23.0	20.3	17.6	14.4	12.2	9.9	2.3	0.0	0.0
82.5°	31.5	21.2	15.3	12.6	10.8	8.6	6.7	5.0	1.3	0.0	0.0
85°	11.7	9.0	6.7	5.4	4.5	4.0	3.1	2.7	0.0	0.0	0.0
87.5°	1.8	1.3	1.3	0.9	0.9	0.4	0.4	0.4	0.0	0.0	0.0
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):

	125°	135°	145°	155°	165°	175°	180°
0°	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	80.7	77.0	75.2	73.0	73.0	72.5	73.4
5°	67.1	62.2	58.6	55.9	56.3	55.0	55.4
7.5°	56.8	51.8	48.7	46.8	46.4	46.0	46.0
10°	49.1	44.6	41.9	40.6	40.1	40.1	40.1
12.5°	43.7	39.2	37.0	36.0	36.0	35.6	35.6
15°	39.2	35.6	33.3	32.4	32.4	32.0	32.4
17.5°	35.6	32.0	30.2	29.3	29.3	28.8	28.8
20°	32.4	29.3	27.5	26.1	26.1	25.7	26.1
22.5°	29.7	26.6	24.3	23.4	23.0	22.5	23.0
25°	27.0	23.9	21.6	20.3	19.8	19.8	19.4
27.5°	24.8	21.6	18.9	17.6	17.1	17.1	16.7
30°	22.5	18.9	16.2	14.9	14.4	14.4	14.4
32.5°	20.3	16.2	14.0	12.6	12.2	12.2	12.2
35°	18.0	14.0	11.7	10.4	9.9	9.9	9.9
37.5°	15.3	11.7	9.0	8.1	7.7	7.2	7.2
40°	13.1	9.0	6.7	5.9	5.0	5.0	5.0
42.5°	10.8	7.2	5.0	3.6	3.1	2.7	3.1
45°	9.0	5.4	3.1	1.8	1.3	1.3	1.3
47.5°	7.2	3.6	1.3	0.4	0.4	0.4	0.4
50°	5.4	2.3	0.4	0.0	0.0	0.4	0.4
52.5°	4.0	1.3	0.0	0.0	0.0	0.0	0.0
55°	2.3	0.4	0.0	0.0	0.0	0.0	0.0
57.5°	1.3	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.9	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.4	0.0	0.0	0.0	0.0	0.0	0.0
63°	0.4	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.4	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)