

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: P163533

Luminaire Tested: **LDRL-SL3-F03-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163533
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL3-F03-E-7050-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (21) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4273.8 lumens
Efficiency: N/A
Efficacy: 54.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

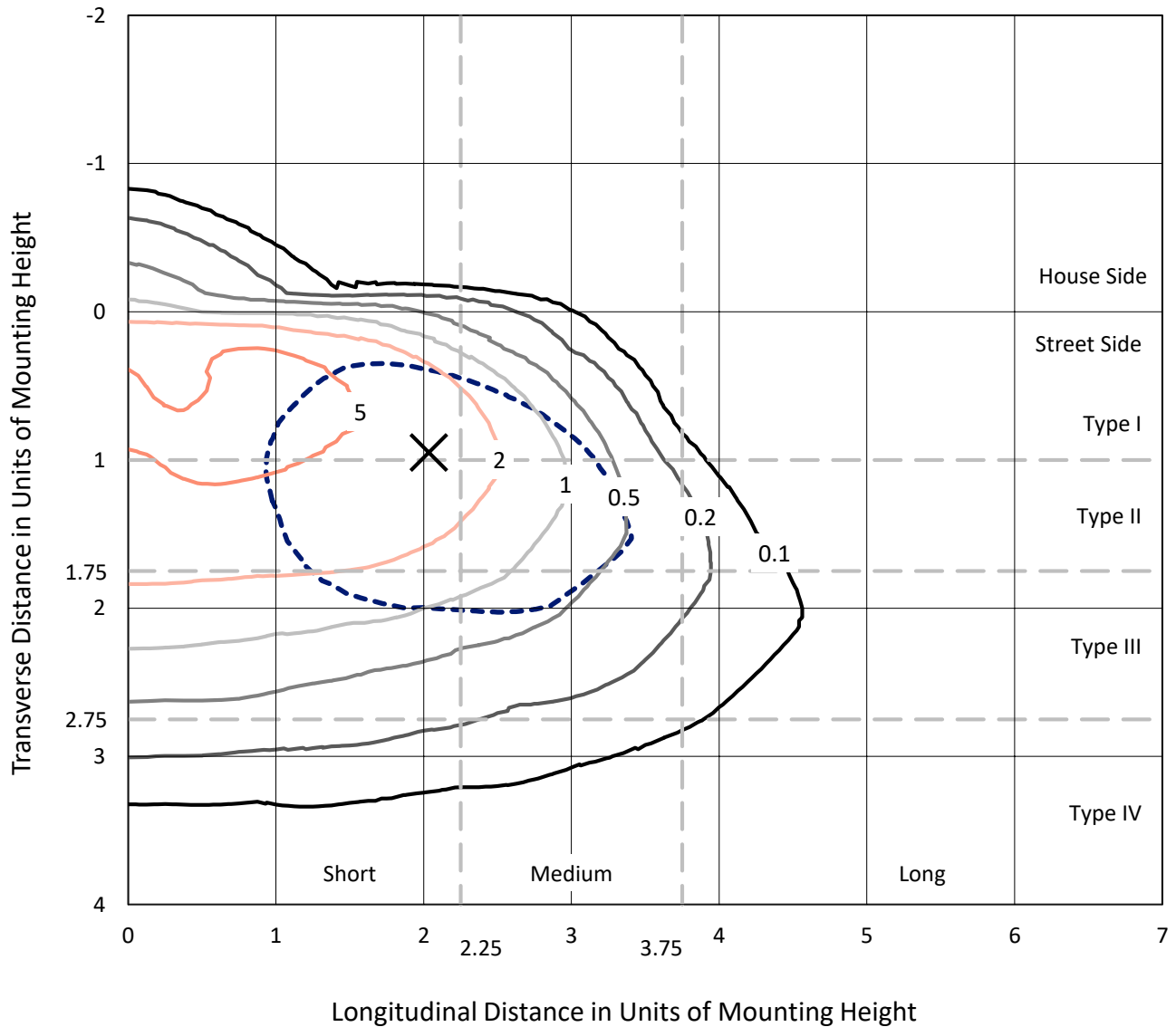
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

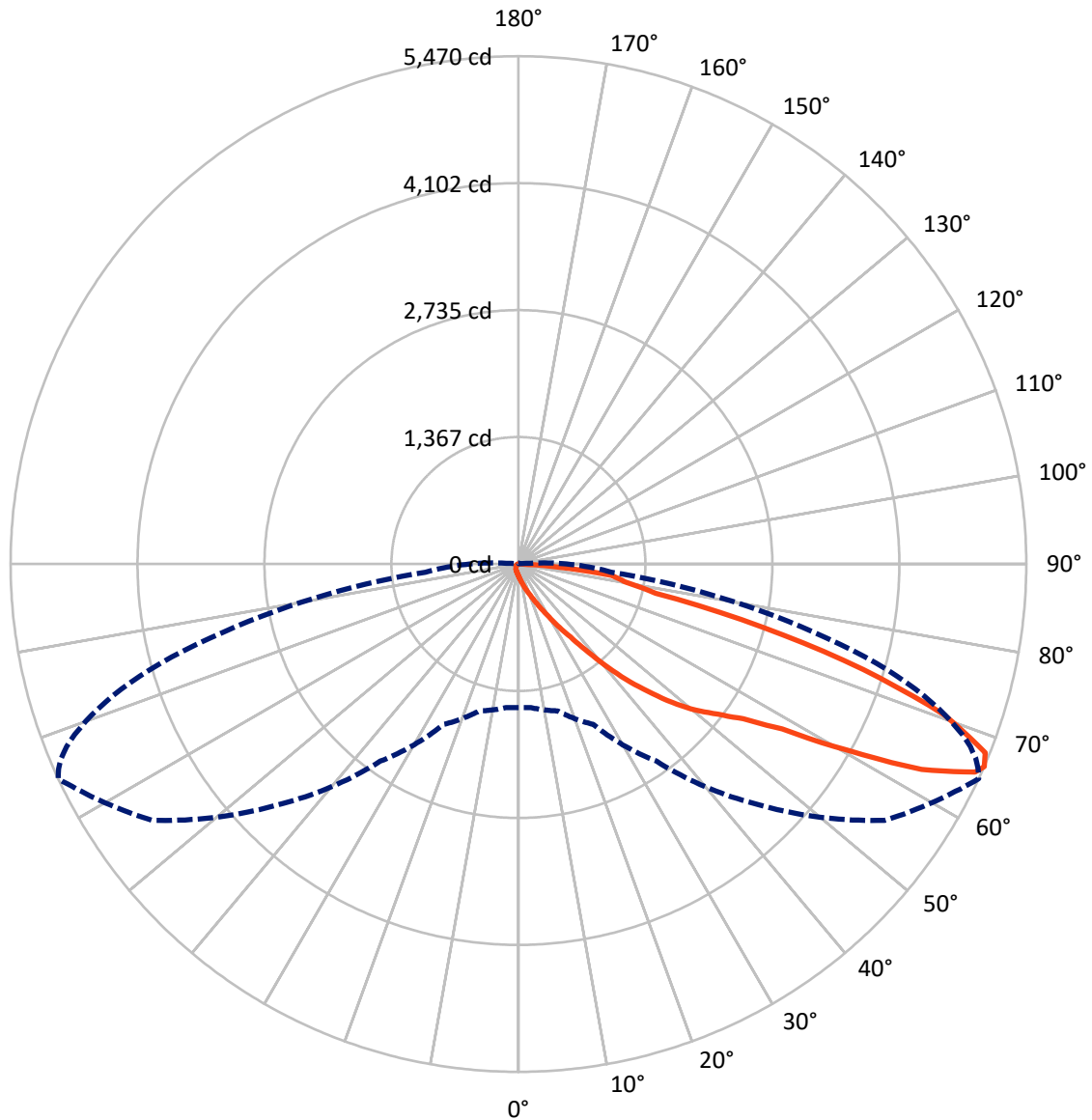


Based on 10 foot mounting height. Maximum calculated value = 7.1 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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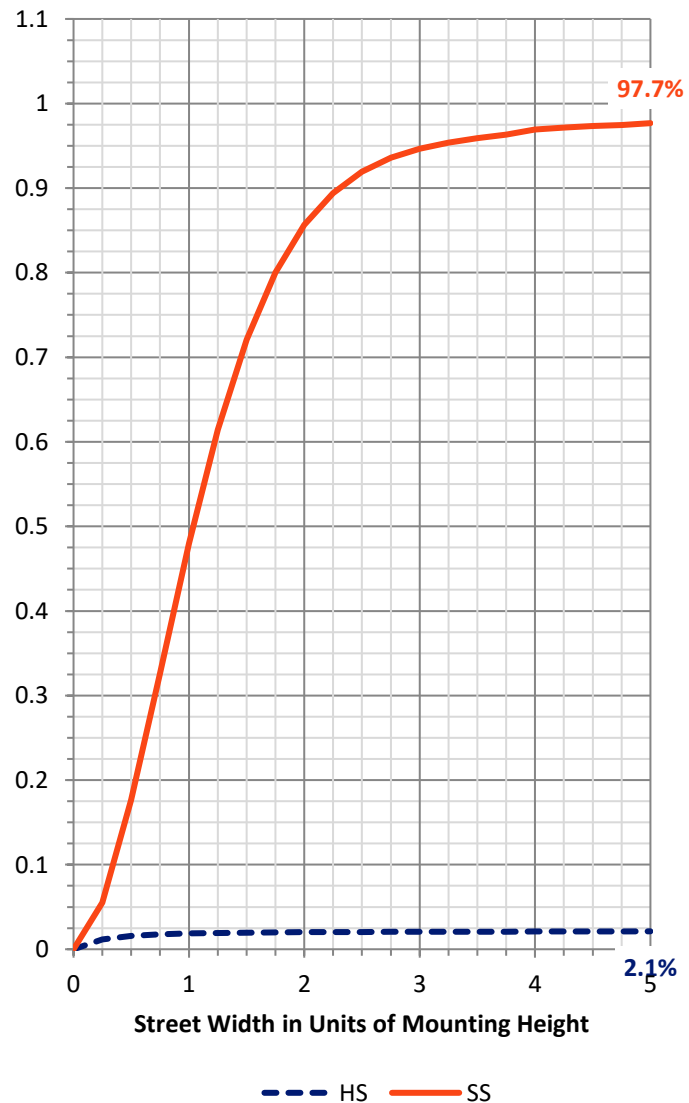
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	92.6	0.0	92.6
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	4181.2	0.0	4181.2
	% Fixture	97.8	0.0	97.8
Total	Lumens	4273.8	0.0	4273.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.4	0.3
10°-20°	61.2	1.4
20°-30°	132.1	3.1
30°-40°	282.0	6.6
40°-50°	623.7	14.6
50°-60°	1057.0	24.7
60°-70°	1410.5	33.0
70°-80°	621.3	14.5
80°-90°	71.6	1.7
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°	4273.8	100.0
0°-180°	4273.8	100.0



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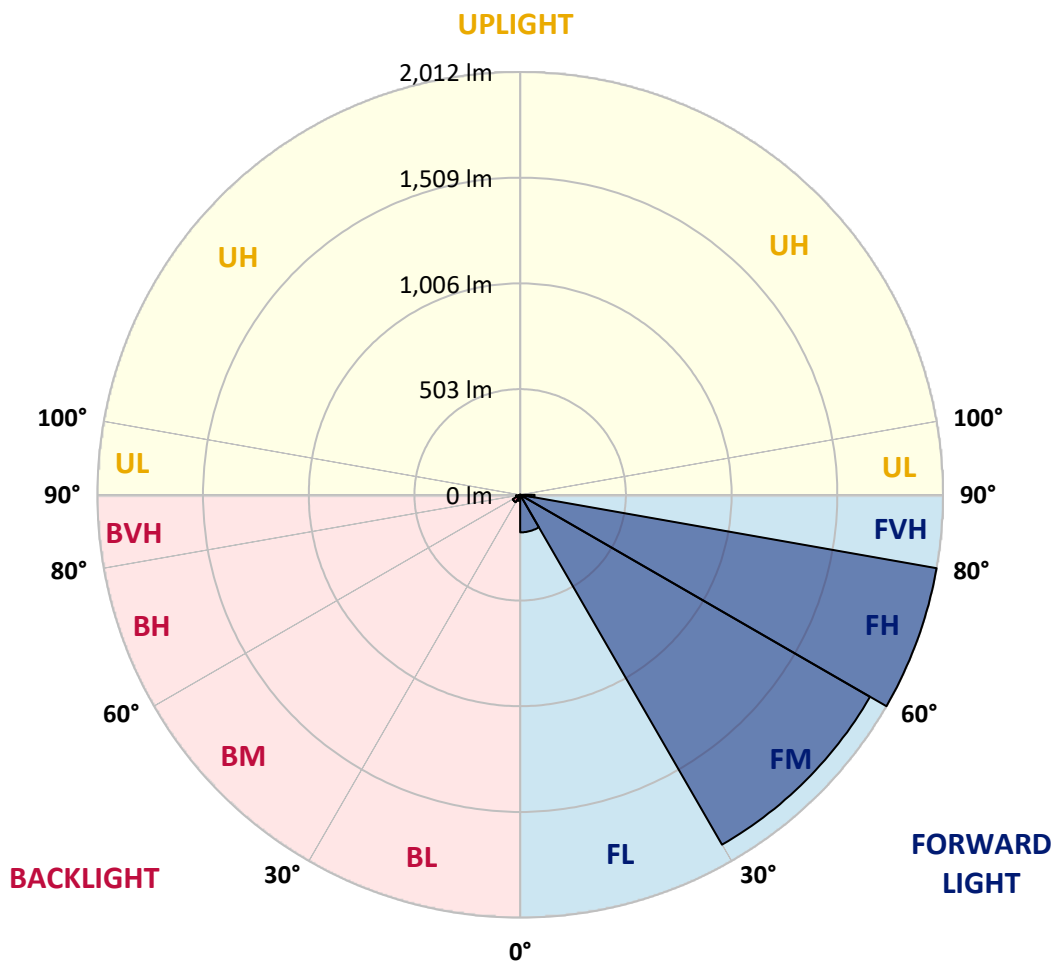
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	178.5	4.2			
FM	(30°-60°)	1922.1	45.0			
FH	(60°-80°)	2011.9	47.1			G2/5000
FVH	(80°-90°)	68.7	1.6			G1/100
BL	(0°-30°)	29.2	0.7	B0/110		
BM	(30°-60°)	40.7	1.0	B0/220		
BH	(60°-80°)	19.9	0.5	B0/110		G0/110
BVH	(80°-90°)	2.8	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	162.7	161.9	158.6	158.6	153.6	150.3	146.3	142.2	142.2	141.3	140.5
5°	215.3	210.4	209.5	200.5	193.1	182.4	172.5	159.4	157.8	156.1	155.3
7.5°	273.6	272.8	265.4	254.7	239.9	220.2	200.5	179.1	175.9	174.2	170.9
10°	349.2	345.1	335.2	317.1	295.0	268.7	236.6	202.9	198.8	195.6	193.9
12.5°	421.5	414.1	408.4	385.4	357.4	318.8	280.2	231.7	228.4	224.3	217.7
15°	488.9	482.3	472.5	452.7	421.5	373.1	327.8	268.7	260.5	254.7	249.8
17.5°	541.5	537.4	525.9	503.7	470.0	427.3	373.1	306.5	299.9	292.5	283.4
20°	591.6	585.9	567.8	537.4	501.2	468.3	426.4	355.8	346.7	337.7	327.8
22.5°	639.3	633.5	603.9	553.8	515.2	501.2	486.4	411.6	397.7	390.3	380.4
25°	705.8	693.5	647.5	567.8	516.0	526.7	552.2	484.0	470.8	460.1	444.5
27.5°	795.4	778.9	706.6	588.3	519.3	554.6	627.7	571.9	557.9	545.6	528.3
30°	896.4	885.7	799.5	637.6	543.1	595.7	712.4	683.6	667.2	652.4	631.9
32.5°	998.3	983.5	898.1	731.3	607.2	675.4	818.4	813.4	792.1	778.1	755.9
35°	1087.8	1080.5	1017.2	884.9	753.5	815.1	959.7	965.5	946.6	931.8	907.1
37.5°	1148.7	1148.7	1136.3	1050.1	986.0	1032.0	1167.6	1168.4	1149.5	1115.8	1103.5
40°	1179.9	1188.9	1233.3	1249.7	1246.5	1305.6	1440.4	1425.6	1410.0	1392.7	1351.6
42.5°	1244.0	1252.2	1346.7	1460.1	1534.0	1612.1	1704.9	1700.0	1681.1	1649.9	1612.1
45°	1352.4	1363.1	1475.7	1655.6	1807.6	1918.6	1977.7	1954.7	1935.8	1906.2	1886.5
47.5°	1490.5	1511.0	1638.4	1861.0	2044.3	2227.5	2289.1	2228.4	2211.9	2188.9	2156.8
50°	1637.6	1657.3	1792.8	2047.6	2254.6	2473.2	2575.9	2473.2	2449.3	2442.0	2405.8
52.5°	1764.9	1781.3	1912.0	2191.4	2415.7	2672.0	2821.6	2686.0	2668.7	2644.1	2617.8
55°	1840.5	1853.7	1976.1	2260.4	2525.0	2851.2	3059.0	2939.9	2914.4	2904.6	2866.8
57.5°	1866.0	1879.1	1989.2	2269.4	2584.1	3014.7	3347.4	3351.5	3321.1	3285.8	3274.3
60°	1866.0	1880.8	1973.6	2247.2	2641.6	3188.8	3731.9	4074.6	4008.8	4002.3	3960.4
62.5°	1788.7	1802.7	1896.4	2179.1	2718.9	3423.8	4267.7	4872.4	4853.5	4810.8	4741.8
65°	1621.2	1629.3	1721.4	2004.8	2689.3	3640.0	4731.9	5403.2	5372.8	5289.0	5200.3
66°	1545.5	1552.1	1638.4	1905.4	2592.3	3669.5	4814.1	5469.7	5419.6	5349.0	5248.8
67.5°	1436.3	1447.7	1508.6	1720.6	2359.8	3566.8	4762.3	5422.9	5379.4	5293.9	5193.7
70°	958.9	950.7	1165.1	1320.4	1797.8	2906.2	4272.6	4869.1	4870.0	4829.7	4789.5
72.5°	455.2	460.1	522.6	812.6	1176.6	1941.5	3400.8	3886.5	3942.3	3870.0	3819.9
75°	327.0	334.4	372.2	497.1	701.7	1165.1	2204.5	2718.0	2719.7	2591.5	2477.3
77.5°	95.3	99.4	139.7	306.5	525.9	786.3	1266.2	1511.0	1475.7	1383.6	1297.4
80°	39.4	39.4	41.1	97.8	211.2	534.1	885.7	1163.5	1159.4	1124.0	1073.1
82.5°	14.8	15.6	19.7	40.3	50.1	131.5	590.8	1009.8	1007.3	957.2	921.1
85°	1.6	1.6	4.9	17.2	18.9	24.6	118.3	445.3	442.9	445.3	390.3
87.5°	0.0	0.0	0.8	1.6	2.4	3.3	4.9	17.2	18.9	18.1	16.4
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	140.5	138.9	138.9	138.0	138.0	138.0	137.2	136.4	136.4	135.5	134.7
5°	153.6	152.0	151.2	149.5	148.7	147.9	146.3	145.4	143.8	143.0	142.2
7.5°	169.2	166.0	165.1	162.7	160.2	158.6	156.9	154.5	152.8	149.5	148.7
10°	189.0	184.8	181.6	178.3	175.9	171.7	169.2	166.0	162.7	160.2	157.8
12.5°	214.4	208.7	203.8	200.5	194.7	189.8	184.8	182.4	175.9	172.5	168.4
15°	242.4	235.8	230.1	223.5	219.4	211.2	204.6	197.2	193.9	188.2	181.6
17.5°	278.5	267.8	258.8	252.2	244.0	235.8	228.4	221.0	211.2	204.6	196.4
20°	317.1	308.1	295.8	284.3	274.5	264.6	253.9	244.0	235.0	224.3	214.4
22.5°	366.4	353.3	338.5	327.0	313.9	303.2	288.4	275.3	260.5	246.5	235.0
25°	428.9	411.6	397.7	381.2	365.6	349.2	331.1	314.7	295.8	282.6	262.9
27.5°	506.2	489.7	470.8	449.4	433.8	409.2	385.4	364.8	342.6	322.1	299.9
30°	604.8	580.9	561.2	540.7	509.4	485.6	457.7	429.7	399.3	378.8	345.1
32.5°	723.1	697.6	668.0	638.4	609.7	576.0	541.5	507.0	473.3	435.5	401.0
35°	867.7	837.3	803.6	771.5	727.1	691.0	647.5	599.8	562.0	518.5	474.9
37.5°	1059.1	1009.0	979.4	945.7	885.7	836.4	788.0	740.3	673.8	627.7	566.1
40°	1299.0	1269.4	1221.0	1166.7	1112.5	1047.6	981.9	918.6	841.3	777.3	705.8
42.5°	1580.8	1537.3	1488.0	1410.0	1354.9	1278.5	1203.7	1119.9	1025.4	943.3	859.4
45°	1845.4	1793.6	1755.9	1677.8	1620.3	1529.9	1439.6	1350.8	1241.5	1135.5	1038.5
47.5°	2131.4	2088.6	2026.2	1962.9	1904.6	1802.7	1704.9	1597.3	1482.2	1356.6	1230.8
50°	2382.8	2349.1	2306.4	2230.0	2165.1	2079.6	1964.6	1847.1	1701.7	1576.8	1433.8
52.5°	2596.4	2570.1	2510.2	2455.9	2397.6	2317.1	2214.4	2101.8	1944.9	1807.6	1644.9
55°	2848.7	2829.8	2777.2	2743.5	2691.7	2614.5	2518.4	2414.0	2248.1	2098.5	1914.5
57.5°	3262.0	3247.2	3201.2	3187.2	3136.3	3068.9	2950.6	2838.8	2644.9	2459.2	2248.9
60°	3946.4	3916.8	3849.5	3814.9	3707.3	3616.9	3463.3	3309.6	3075.4	2838.8	2585.7
62.5°	4679.3	4596.3	4468.1	4358.1	4205.2	4048.3	3842.9	3607.9	3333.4	3052.5	2761.6
65°	5074.5	4933.2	4771.4	4596.3	4398.3	4167.4	3908.6	3626.8	3331.8	3035.2	2727.9
66°	5119.7	4960.3	4788.6	4593.9	4373.7	4128.0	3865.1	3569.3	3262.8	2973.6	2666.3
67.5°	5063.0	4896.2	4714.6	4498.6	4260.3	4005.6	3729.5	3422.2	3127.2	2833.9	2534.8
70°	4666.2	4500.2	4338.3	4110.7	3856.9	3600.5	3339.2	2995.8	2716.4	2446.9	2180.7
72.5°	3726.2	3613.6	3453.4	3258.7	3011.4	2710.6	2492.9	2185.6	1943.2	1681.9	1475.7
75°	2328.6	2170.0	1972.0	1723.8	1534.9	1290.8	1163.5	930.1	792.1	671.3	554.6
77.5°	1190.6	1071.4	932.6	792.9	659.0	525.9	406.7	287.6	193.9	134.7	100.2
80°	983.5	878.3	763.3	636.0	517.6	401.8	289.2	197.2	125.7	82.2	64.1
82.5°	812.6	723.9	621.2	502.9	400.1	315.5	219.4	143.0	88.7	57.5	45.2
85°	345.9	313.9	242.4	192.3	144.6	106.8	74.8	50.1	35.3	28.8	26.3
87.5°	14.8	16.4	15.6	12.3	9.0	9.0	8.2	6.6	6.6	6.6	6.6
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	134.7	133.9	133.1	133.1	132.3	131.5	126.6	122.4	117.5	114.2	110.9
5°	140.5	139.7	138.0	137.2	135.5	134.7	124.1	115.0	107.6	101.9	97.8
7.5°	146.3	145.4	143.0	140.5	139.7	138.0	120.8	109.3	99.4	92.9	88.7
10°	153.6	151.2	148.7	145.4	143.0	140.5	117.5	102.7	92.0	86.2	82.2
12.5°	164.3	160.2	156.1	152.0	148.7	144.6	115.8	97.0	86.2	79.7	75.6
15°	176.7	170.9	166.0	161.1	155.3	151.2	112.6	92.0	81.3	74.8	69.8
17.5°	188.2	181.6	174.2	166.8	161.1	155.3	109.3	87.1	76.4	69.8	64.9
20°	204.6	194.7	185.7	176.7	168.4	161.1	104.3	82.2	72.3	64.9	60.0
22.5°	222.7	211.2	199.6	187.3	176.7	166.8	100.2	78.1	68.2	60.8	55.0
25°	245.7	231.7	216.1	200.5	188.2	175.0	96.1	73.9	64.1	56.7	50.9
27.5°	277.7	258.0	240.8	221.0	202.1	187.3	92.9	70.6	60.0	52.6	46.8
30°	321.3	292.5	265.4	244.0	221.8	200.5	89.6	66.5	56.7	48.5	41.9
32.5°	369.7	336.1	304.8	272.8	244.9	220.2	86.2	63.3	52.6	44.4	38.6
35°	429.7	387.0	345.1	308.1	274.5	241.6	83.0	60.0	49.3	40.3	34.5
37.5°	516.0	462.6	407.6	359.9	316.3	272.8	80.5	56.7	45.2	36.1	30.4
40°	634.3	565.3	497.9	433.0	376.3	322.1	77.3	53.4	41.9	32.9	27.1
42.5°	762.5	678.7	590.0	516.8	438.8	370.6	73.9	50.1	38.6	29.6	23.8
45°	921.9	817.6	709.9	610.5	515.2	427.3	70.6	46.8	34.5	26.3	20.5
47.5°	1096.1	963.0	841.3	716.5	603.1	497.9	66.5	44.4	31.2	23.0	18.1
50°	1275.2	1134.7	981.1	838.9	704.2	568.6	62.5	40.3	28.0	20.5	14.8
52.5°	1468.3	1302.3	1145.4	968.7	811.8	661.4	58.3	36.9	25.5	18.1	12.3
55°	1714.0	1528.3	1344.2	1146.2	957.2	769.1	54.2	32.9	22.2	15.6	9.9
57.5°	2022.9	1802.7	1576.8	1353.3	1124.0	910.4	50.9	28.8	18.9	13.2	8.2
60°	2314.6	2057.4	1783.8	1526.6	1267.8	1018.8	46.0	25.5	16.4	10.7	8.2
62.5°	2465.8	2172.4	1877.5	1594.0	1317.9	1057.5	41.1	21.3	14.0	9.0	7.4
65°	2428.8	2129.8	1843.8	1557.9	1287.5	1032.8	36.1	18.9	12.3	8.2	7.4
66°	2375.4	2079.6	1792.0	1520.1	1262.1	1006.5	33.7	18.1	11.5	8.2	6.6
67.5°	2258.7	1972.8	1698.4	1445.3	1192.2	956.4	30.4	16.4	10.7	7.4	6.6
70°	1929.2	1669.6	1450.2	1225.1	1018.8	806.0	24.6	14.0	9.0	6.6	6.6
72.5°	1276.9	1100.2	953.9	820.8	686.1	532.4	20.5	11.5	7.4	6.6	5.7
75°	481.5	435.5	373.9	336.1	293.3	257.2	16.4	7.4	5.7	5.7	5.7
77.5°	85.4	78.9	69.8	64.1	59.2	54.2	13.2	4.9	4.9	5.7	5.7
80°	57.5	53.4	48.5	44.4	41.1	36.9	9.0	4.1	4.9	4.9	5.7
82.5°	41.1	38.6	36.1	32.9	30.4	27.1	5.7	4.1	4.9	4.9	4.9
85°	24.6	23.0	21.3	19.7	17.2	16.4	4.1	4.1	4.1	4.9	4.9
87.5°	6.6	5.7	6.6	6.6	4.9	5.7	3.3	3.3	3.3	4.1	4.1
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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CATALOG NUMBER: LDRL-SL3-F03-E-7050-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	129.0	129.0	129.0	129.0	129.0
2.5°	109.3	109.3	107.6	110.1	110.1
5°	94.5	94.5	93.7	94.5	94.5
7.5°	86.2	85.4	85.4	85.4	86.2
10°	78.9	78.1	78.1	78.1	78.1
12.5°	72.3	71.5	70.6	71.5	71.5
15°	66.5	64.9	64.9	64.9	64.9
17.5°	61.6	60.0	59.2	59.2	59.2
20°	56.7	54.2	54.2	54.2	54.2
22.5°	51.7	49.3	49.3	49.3	49.3
25°	46.8	44.4	44.4	44.4	44.4
27.5°	42.7	40.3	40.3	40.3	40.3
30°	37.8	36.1	36.1	36.9	36.1
32.5°	34.5	32.0	32.0	32.9	32.9
35°	30.4	28.8	28.8	28.8	28.8
37.5°	26.3	24.6	24.6	24.6	24.6
40°	23.0	21.3	20.5	21.3	21.3
42.5°	19.7	18.1	17.2	17.2	17.2
45°	17.2	14.8	14.0	14.8	14.8
47.5°	14.0	12.3	12.3	13.2	13.2
50°	10.7	10.7	11.5	13.2	13.2
52.5°	9.9	9.9	11.5	13.2	13.2
55°	9.0	9.9	11.5	12.3	13.2
57.5°	8.2	9.9	11.5	12.3	12.3
60°	8.2	9.0	10.7	12.3	12.3
62.5°	7.4	8.2	9.9	11.5	11.5
65°	7.4	8.2	9.9	11.5	11.5
66°	7.4	8.2	9.9	11.5	11.5
67.5°	7.4	8.2	9.9	11.5	11.5
70°	7.4	8.2	9.9	10.7	10.7
72.5°	6.6	7.4	9.0	10.7	10.7
75°	6.6	7.4	9.0	10.7	10.7
77.5°	6.6	7.4	9.0	10.7	10.7
80°	6.6	7.4	9.0	9.9	10.7
82.5°	5.7	7.4	8.2	9.9	9.9
85°	5.7	6.6	8.2	9.0	9.9
87.5°	4.9	5.7	6.6	8.2	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)