

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: P163530

Luminaire Tested: **LDRL-SL3-F03-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163530
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-8030-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) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3515.3 lumens
Efficiency: N/A
Efficacy: 44.9 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 - G1

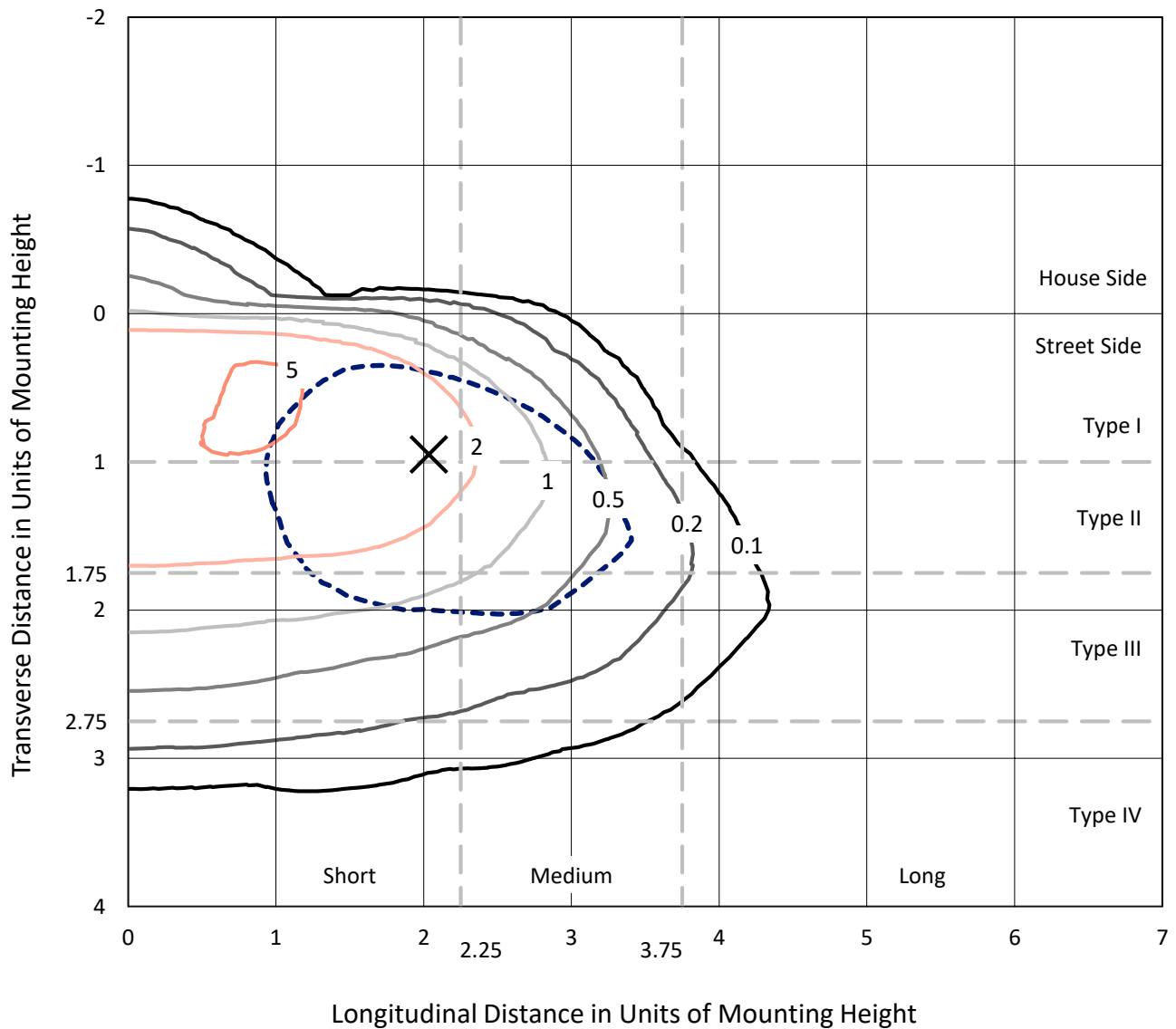
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

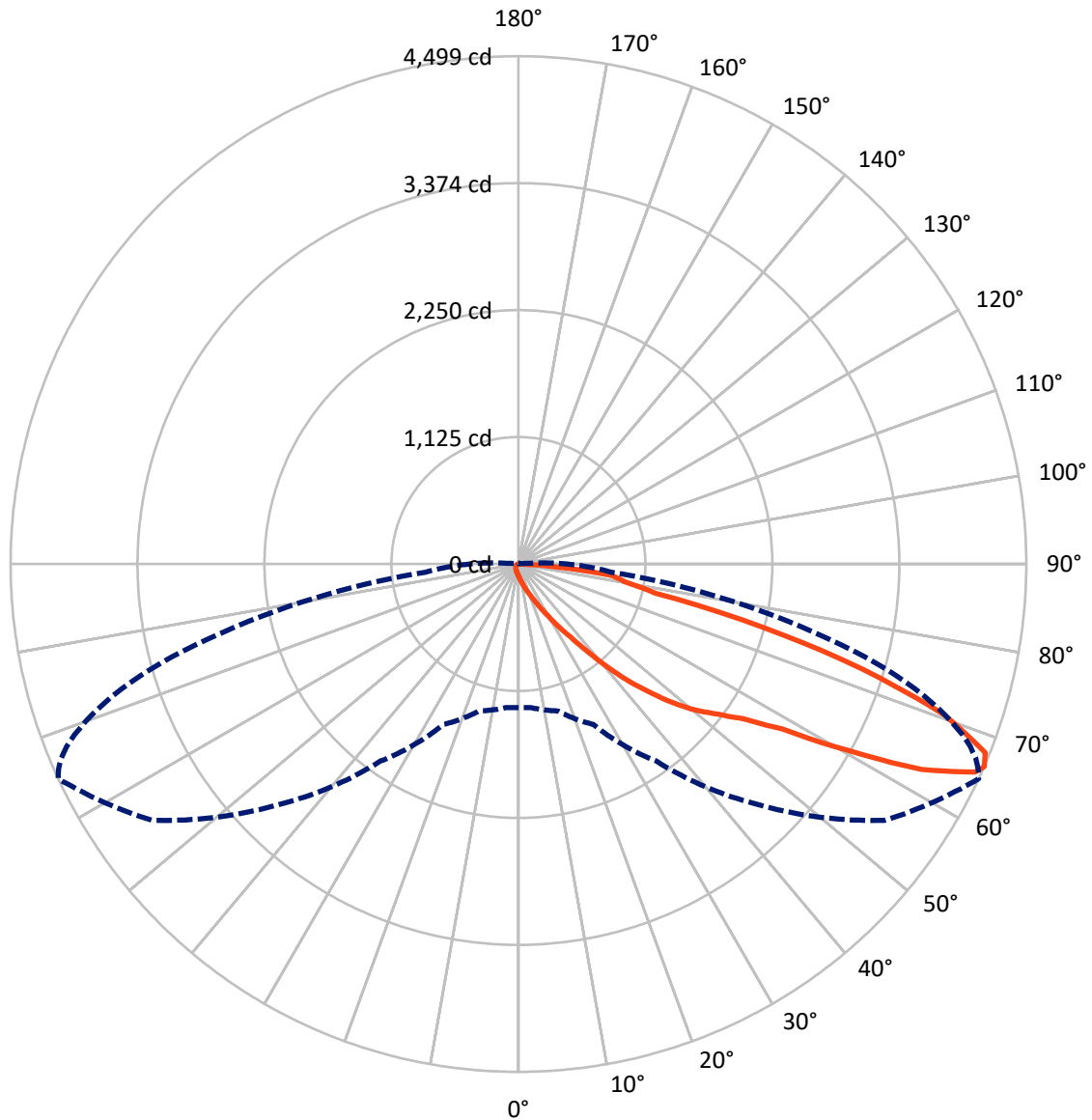
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 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	76.2	0.0	76.2
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	3439.1	0.0	3439.1
	% Fixture	97.8	0.0	97.8
Total	Lumens	3515.3	0.0	3515.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.9	0.3
10°-20°	50.4	1.4
20°-30°	108.6	3.1
30°-40°	232.0	6.6
40°-50°	513.0	14.6
50°-60°	869.4	24.7
60°-70°	1160.1	33.0
70°-80°	511.0	14.5
80°-90°	58.9	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°	3515.3	100.0
0°-180°	3515.3	100.0



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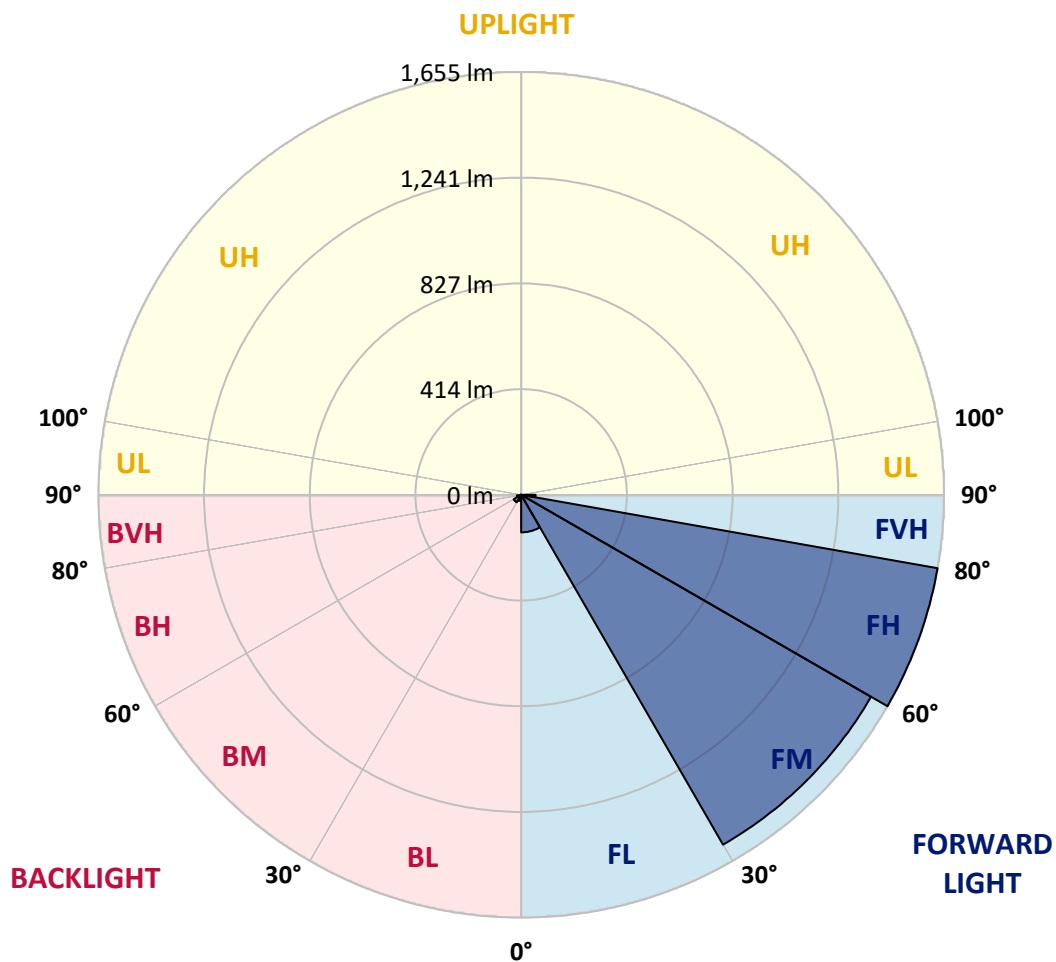
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	146.8	4.2			
FM (30°-60°)	1580.9	45.0			
FH (60°-80°)	1654.8	47.1			G1/1800
FVH (80°-90°)	56.5	1.6			G1/100
BL (0°-30°)	24.0	0.7	B0/110		
BM (30°-60°)	33.4	1.0	B0/220		
BH (60°-80°)	16.3	0.5	B0/110		G0/110
BVH (80°-90°)	2.4	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
2.5°	133.8	133.1	130.4	130.4	126.4	123.7	120.3	116.9	116.9	116.3	115.5
5°	177.1	173.0	172.3	164.9	158.8	150.0	141.9	131.1	129.8	128.4	127.7
7.5°	225.0	224.4	218.3	209.5	197.4	181.1	164.9	147.3	144.6	143.3	140.6
10°	287.2	283.9	275.7	260.9	242.6	221.0	194.6	166.9	163.5	160.9	159.5
12.5°	346.7	340.6	335.9	317.0	294.0	262.2	230.5	190.6	187.9	184.5	179.1
15°	402.1	396.7	388.6	372.4	346.7	306.8	269.6	221.0	214.2	209.5	205.5
17.5°	445.4	442.0	432.5	414.3	386.6	351.4	306.8	252.1	246.7	240.6	233.1
20°	486.6	481.9	467.0	442.0	412.3	385.2	350.7	292.6	285.2	277.7	269.6
22.5°	525.8	521.0	496.7	455.5	423.7	412.3	400.1	338.6	327.1	321.0	312.9
25°	580.5	570.4	532.5	467.0	424.4	433.2	454.2	398.1	387.2	378.5	365.6
27.5°	654.2	640.7	581.2	483.9	427.1	456.2	516.3	470.4	458.9	448.8	434.6
30°	737.3	728.5	657.6	524.4	446.7	490.0	585.9	562.3	548.8	536.6	519.7
32.5°	821.1	809.0	738.7	601.5	499.4	555.5	673.1	669.1	651.5	640.0	621.8
35°	894.8	888.7	836.7	727.9	619.7	670.4	789.3	794.1	778.6	766.4	746.1
37.5°	944.8	944.8	934.7	863.7	811.0	848.8	960.4	961.0	945.5	917.8	907.7
40°	970.5	977.9	1014.4	1027.9	1025.2	1073.9	1184.7	1172.6	1159.7	1145.5	1111.7
42.5°	1023.2	1030.0	1107.7	1200.9	1261.8	1326.0	1402.3	1398.3	1382.8	1357.0	1326.0
45°	1112.4	1121.2	1213.8	1361.8	1486.8	1578.1	1626.7	1607.8	1592.2	1567.9	1551.7
47.5°	1225.9	1242.8	1347.6	1530.7	1681.4	1832.1	1882.9	1832.9	1819.3	1800.4	1774.0
50°	1346.9	1363.1	1474.6	1684.2	1854.5	2034.2	2118.7	2034.2	2014.6	2008.6	1978.8
52.5°	1451.7	1465.2	1572.6	1802.4	1987.0	2197.8	2320.8	2209.3	2195.1	2174.8	2153.2
55°	1513.9	1524.7	1625.3	1859.2	2076.8	2345.1	2516.1	2418.1	2397.2	2389.1	2358.0
57.5°	1534.8	1545.6	1636.2	1866.6	2125.5	2479.6	2753.3	2756.7	2731.7	2702.6	2693.2
60°	1534.8	1547.0	1623.3	1848.4	2172.8	2622.9	3069.6	3351.4	3297.3	3292.0	3257.5
62.5°	1471.3	1482.8	1559.8	1792.3	2236.3	2816.2	3510.3	4007.6	3992.1	3957.0	3900.2
65°	1333.4	1340.2	1415.9	1649.0	2212.0	2993.9	3892.1	4444.2	4419.2	4350.3	4277.3
66°	1271.2	1276.7	1347.6	1567.2	2132.2	3018.3	3959.7	4499.0	4457.7	4399.6	4317.2
67.5°	1181.3	1190.8	1240.8	1415.2	1941.0	2933.8	3917.1	4460.5	4424.6	4354.4	4271.9
70°	788.7	781.9	958.3	1086.1	1478.7	2390.4	3514.3	4005.0	4005.6	3972.5	3939.4
72.5°	374.4	378.5	429.8	668.4	967.8	1597.0	2797.2	3196.7	3242.6	3183.1	3141.9
75°	269.0	275.1	306.1	408.9	577.1	958.3	1813.3	2235.6	2237.0	2131.6	2037.6
77.5°	78.4	81.8	114.9	252.1	432.5	646.8	1041.5	1242.8	1213.8	1138.1	1067.1
80°	32.4	32.4	33.8	80.4	173.7	439.3	728.5	957.0	953.6	924.5	882.6
82.5°	12.2	12.8	16.2	33.1	41.2	108.1	485.9	830.6	828.6	787.3	757.6
85°	1.3	1.3	4.1	14.2	15.6	20.3	97.3	366.3	364.3	366.3	321.0
87.5°	0.0	0.0	0.7	1.3	2.0	2.7	4.1	14.2	15.6	14.9	13.5
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°	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
2.5°	115.5	114.2	114.2	113.5	113.5	113.5	112.9	112.2	112.2	111.5	110.8
5°	126.4	125.0	124.4	123.0	122.3	121.7	120.3	119.6	118.3	117.6	116.9
7.5°	139.2	136.5	135.8	133.8	131.8	130.4	129.1	127.0	125.7	123.0	122.3
10°	155.4	152.0	149.4	146.6	144.6	141.3	139.2	136.5	133.8	131.8	129.8
12.5°	176.4	171.6	167.6	164.9	160.2	156.1	152.0	150.0	144.6	141.9	138.5
15°	199.4	194.0	189.2	183.8	180.4	173.7	168.3	162.2	159.5	154.8	149.4
17.5°	229.1	220.3	212.9	207.5	200.7	194.0	187.9	181.8	173.7	168.3	161.5
20°	260.9	253.4	243.3	233.9	225.7	217.6	208.8	200.7	193.3	184.5	176.4
22.5°	301.4	290.6	278.5	269.0	258.2	249.4	237.2	226.4	214.2	202.8	193.3
25°	352.8	338.6	327.1	313.6	300.7	287.2	272.4	258.9	243.3	232.5	216.3
27.5°	416.3	402.8	387.2	369.7	356.8	336.6	317.0	300.1	281.8	264.9	246.7
30°	497.4	477.8	461.6	444.7	419.0	399.4	376.4	353.5	328.5	311.6	283.9
32.5°	594.7	573.8	549.4	525.1	501.5	473.8	445.4	417.0	389.3	358.2	329.8
35°	713.7	688.7	661.0	634.6	598.1	568.4	532.5	493.4	462.3	426.4	390.6
37.5°	871.2	829.9	805.6	777.9	728.5	688.0	648.1	608.9	554.2	516.3	465.7
40°	1068.5	1044.1	1004.3	959.7	915.1	861.7	807.6	755.6	692.0	639.4	580.5
42.5°	1300.3	1264.5	1223.9	1159.7	1114.5	1051.6	990.1	921.2	843.4	775.8	706.9
45°	1517.9	1475.3	1444.2	1380.0	1332.7	1258.4	1184.1	1111.1	1021.2	934.0	854.2
47.5°	1753.1	1717.9	1666.6	1614.6	1566.6	1482.8	1402.3	1313.8	1219.2	1115.8	1012.4
50°	1959.9	1932.2	1897.0	1834.2	1780.8	1710.5	1615.9	1519.2	1399.6	1296.9	1179.3
52.5°	2135.6	2114.0	2064.7	2020.1	1972.1	1905.9	1821.4	1728.8	1599.7	1486.8	1353.0
55°	2343.1	2327.5	2284.3	2256.6	2214.0	2150.5	2071.4	1985.6	1849.1	1726.1	1574.7
57.5°	2683.0	2670.9	2633.0	2621.5	2579.6	2524.2	2426.9	2335.0	2175.5	2022.7	1849.7
60°	3246.0	3221.7	3166.2	3137.9	3049.3	2975.0	2848.6	2722.2	2529.6	2335.0	2126.8
62.5°	3848.8	3780.6	3675.1	3584.6	3458.9	3329.8	3160.9	2967.5	2741.8	2510.7	2271.5
65°	4173.9	4057.7	3924.5	3780.6	3617.7	3427.8	3214.9	2983.1	2740.5	2496.5	2243.8
66°	4211.1	4080.0	3938.7	3778.6	3597.4	3395.3	3179.1	2935.8	2683.7	2445.8	2193.0
67.5°	4164.4	4027.2	3877.9	3700.2	3504.1	3294.7	3067.6	2814.8	2572.2	2330.9	2084.9
70°	3838.0	3701.5	3568.4	3381.2	3172.3	2961.5	2746.6	2464.1	2234.3	2012.6	1793.6
72.5°	3064.9	2972.3	2840.5	2680.3	2476.9	2229.5	2050.5	1797.7	1598.3	1383.4	1213.8
75°	1915.3	1784.9	1622.0	1417.9	1262.4	1061.7	957.0	765.0	651.5	552.1	456.2
77.5°	979.3	881.3	767.1	652.2	542.0	432.5	334.5	236.5	159.5	110.8	82.4
80°	809.0	722.5	627.9	523.1	425.8	330.5	237.9	162.2	103.4	67.6	52.7
82.5°	668.4	595.4	510.9	413.6	329.1	259.5	180.4	117.6	73.0	47.3	37.2
85°	284.5	258.2	199.4	158.1	118.9	87.9	61.5	41.2	29.1	23.7	21.6
87.5°	12.2	13.5	12.8	10.1	7.4	7.4	6.8	5.4	5.4	5.4	5.4
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
2.5°	110.8	110.2	109.5	109.5	108.8	108.1	104.1	100.7	96.7	93.9	91.2
5°	115.5	114.9	113.5	112.9	111.5	110.8	102.0	94.6	88.5	83.8	80.4
7.5°	120.3	119.6	117.6	115.5	114.9	113.5	99.3	89.9	81.8	76.4	73.0
10°	126.4	124.4	122.3	119.6	117.6	115.5	96.7	84.5	75.7	70.9	67.6
12.5°	135.2	131.8	128.4	125.0	122.3	118.9	95.3	79.8	70.9	65.5	62.2
15°	145.3	140.6	136.5	132.5	127.7	124.4	92.6	75.7	66.9	61.5	57.4
17.5°	154.8	149.4	143.3	137.2	132.5	127.7	89.9	71.7	62.8	57.4	53.4
20°	168.3	160.2	152.8	145.3	138.5	132.5	85.8	67.6	59.5	53.4	49.3
22.5°	183.1	173.7	164.2	154.1	145.3	137.2	82.4	64.2	56.1	50.0	45.3
25°	202.1	190.6	177.8	164.9	154.8	143.9	79.1	60.8	52.7	46.6	41.9
27.5°	228.4	212.2	198.0	181.8	166.3	154.1	76.4	58.1	49.3	43.3	38.5
30°	264.2	240.6	218.3	200.7	182.5	164.9	73.7	54.7	46.6	39.9	34.4
32.5°	304.1	276.4	250.7	224.4	201.4	181.1	70.9	52.0	43.3	36.5	31.8
35°	353.5	318.3	283.9	253.4	225.7	198.7	68.3	49.3	40.6	33.1	28.4
37.5°	424.4	380.5	335.2	296.0	260.2	224.4	66.2	46.6	37.2	29.7	25.0
40°	521.8	465.0	409.6	356.2	309.5	264.9	63.5	43.9	34.4	27.0	22.3
42.5°	627.2	558.3	485.3	425.1	360.9	304.8	60.8	41.2	31.8	24.3	19.6
45°	758.3	672.5	583.9	502.2	423.7	351.4	58.1	38.5	28.4	21.6	16.9
47.5°	901.5	792.1	692.0	589.3	496.0	409.6	54.7	36.5	25.7	18.9	14.9
50°	1048.9	933.3	806.9	690.0	579.2	467.7	51.4	33.1	23.0	16.9	12.2
52.5°	1207.7	1071.2	942.1	796.8	667.7	544.0	48.0	30.4	20.9	14.9	10.1
55°	1409.8	1257.1	1105.6	942.8	787.3	632.6	44.6	27.0	18.2	12.8	8.1
57.5°	1663.9	1482.8	1296.9	1113.1	924.5	748.8	41.9	23.7	15.6	10.8	6.8
60°	1903.8	1692.3	1467.2	1255.7	1042.8	838.0	37.8	20.9	13.5	8.8	6.8
62.5°	2028.2	1786.9	1544.2	1311.1	1084.0	869.8	33.8	17.6	11.5	7.4	6.1
65°	1997.7	1751.8	1516.6	1281.4	1059.0	849.5	29.7	15.6	10.1	6.8	6.1
66°	1953.8	1710.5	1474.0	1250.3	1038.1	827.9	27.7	14.9	9.4	6.8	5.4
67.5°	1857.9	1622.7	1396.9	1188.8	980.6	786.7	25.0	13.5	8.8	6.1	5.4
70°	1586.8	1373.3	1192.8	1007.6	838.0	663.0	20.3	11.5	7.4	5.4	5.4
72.5°	1050.2	904.9	784.6	675.1	564.3	437.9	16.9	9.4	6.1	5.4	4.7
75°	396.1	358.2	307.5	276.4	241.3	211.5	13.5	6.1	4.7	4.7	4.7
77.5°	70.3	64.9	57.4	52.7	48.7	44.6	10.8	4.1	4.1	4.7	4.7
80°	47.3	43.9	39.9	36.5	33.8	30.4	7.4	3.4	4.1	4.1	4.7
82.5°	33.8	31.8	29.7	27.0	25.0	22.3	4.7	3.4	4.1	4.1	4.1
85°	20.3	18.9	17.6	16.2	14.2	13.5	3.4	3.4	3.4	4.1	4.1
87.5°	5.4	4.7	5.4	5.4	4.1	4.7	2.7	2.7	2.7	3.4	3.4
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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CATALOG NUMBER: LDRL-SL3-F03-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	106.1	106.1	106.1	106.1	106.1
2.5°	89.9	89.9	88.5	90.5	90.5
5°	77.7	77.7	77.0	77.7	77.7
7.5°	70.9	70.3	70.3	70.3	70.9
10°	64.9	64.2	64.2	64.2	64.2
12.5°	59.5	58.8	58.1	58.8	58.8
15°	54.7	53.4	53.4	53.4	53.4
17.5°	50.7	49.3	48.7	48.7	48.7
20°	46.6	44.6	44.6	44.6	44.6
22.5°	42.6	40.6	40.6	40.6	40.6
25°	38.5	36.5	36.5	36.5	36.5
27.5°	35.2	33.1	33.1	33.1	33.1
30°	31.1	29.7	29.7	30.4	29.7
32.5°	28.4	26.3	26.3	27.0	27.0
35°	25.0	23.7	23.7	23.7	23.7
37.5°	21.6	20.3	20.3	20.3	20.3
40°	18.9	17.6	16.9	17.6	17.6
42.5°	16.2	14.9	14.2	14.2	14.2
45°	14.2	12.2	11.5	12.2	12.2
47.5°	11.5	10.1	10.1	10.8	10.8
50°	8.8	8.8	9.4	10.8	10.8
52.5°	8.1	8.1	9.4	10.8	10.8
55°	7.4	8.1	9.4	10.1	10.8
57.5°	6.8	8.1	9.4	10.1	10.1
60°	6.8	7.4	8.8	10.1	10.1
62.5°	6.1	6.8	8.1	9.4	9.4
65°	6.1	6.8	8.1	9.4	9.4
66°	6.1	6.8	8.1	9.4	9.4
67.5°	6.1	6.8	8.1	9.4	9.4
70°	6.1	6.8	8.1	8.8	8.8
72.5°	5.4	6.1	7.4	8.8	8.8
75°	5.4	6.1	7.4	8.8	8.8
77.5°	5.4	6.1	7.4	8.8	8.8
80°	5.4	6.1	7.4	8.1	8.8
82.5°	4.7	6.1	6.8	8.1	8.1
85°	4.7	5.4	6.8	7.4	8.1
87.5°	4.1	4.7	5.4	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)