

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: P163527

Luminaire Tested: **LDRL-SL3-E03-E-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163527
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-E03-E-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: (63) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5045.3 lumens
Efficiency: N/A
Efficacy: 67.1 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

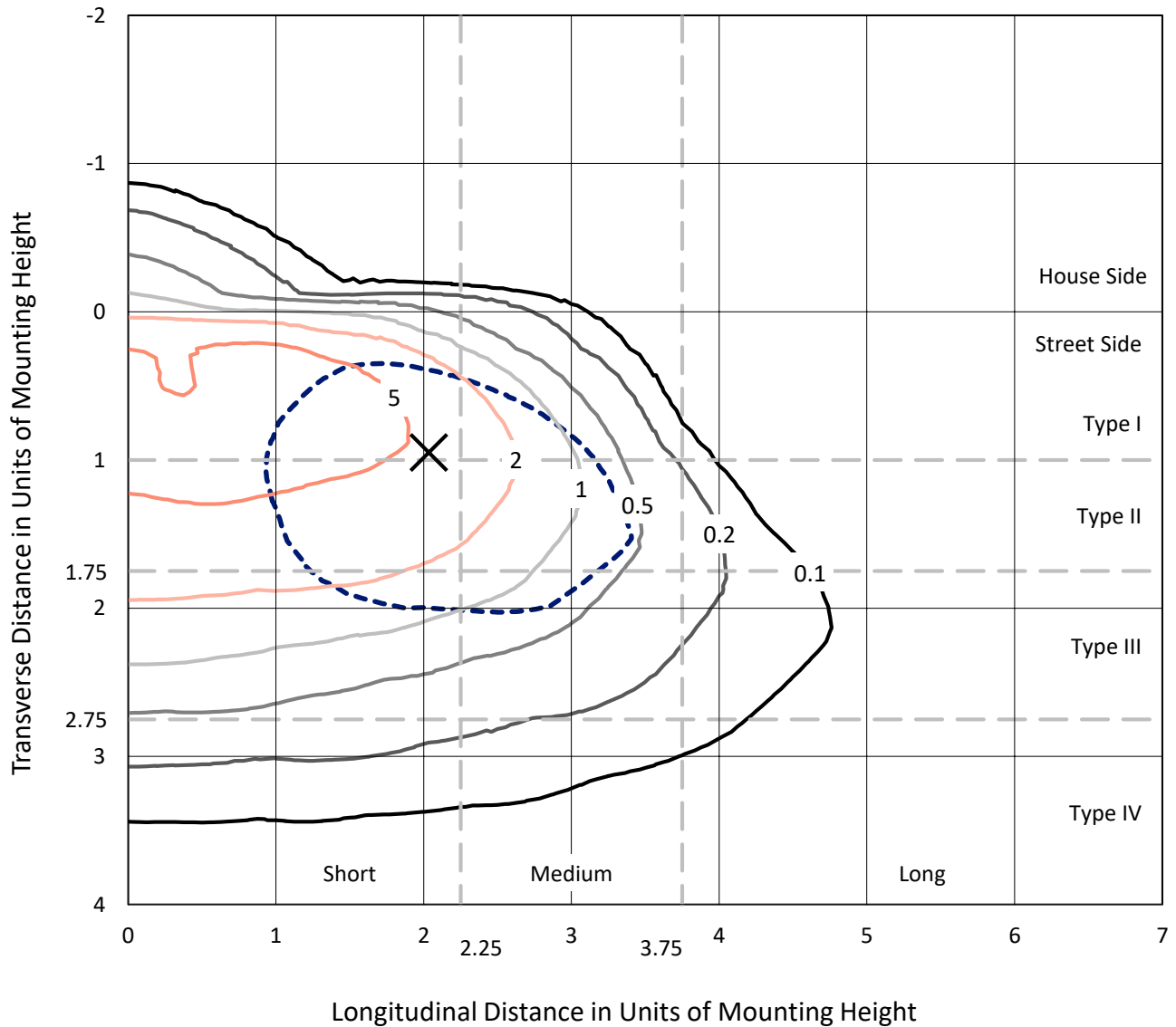
Input Watts (W): 75.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

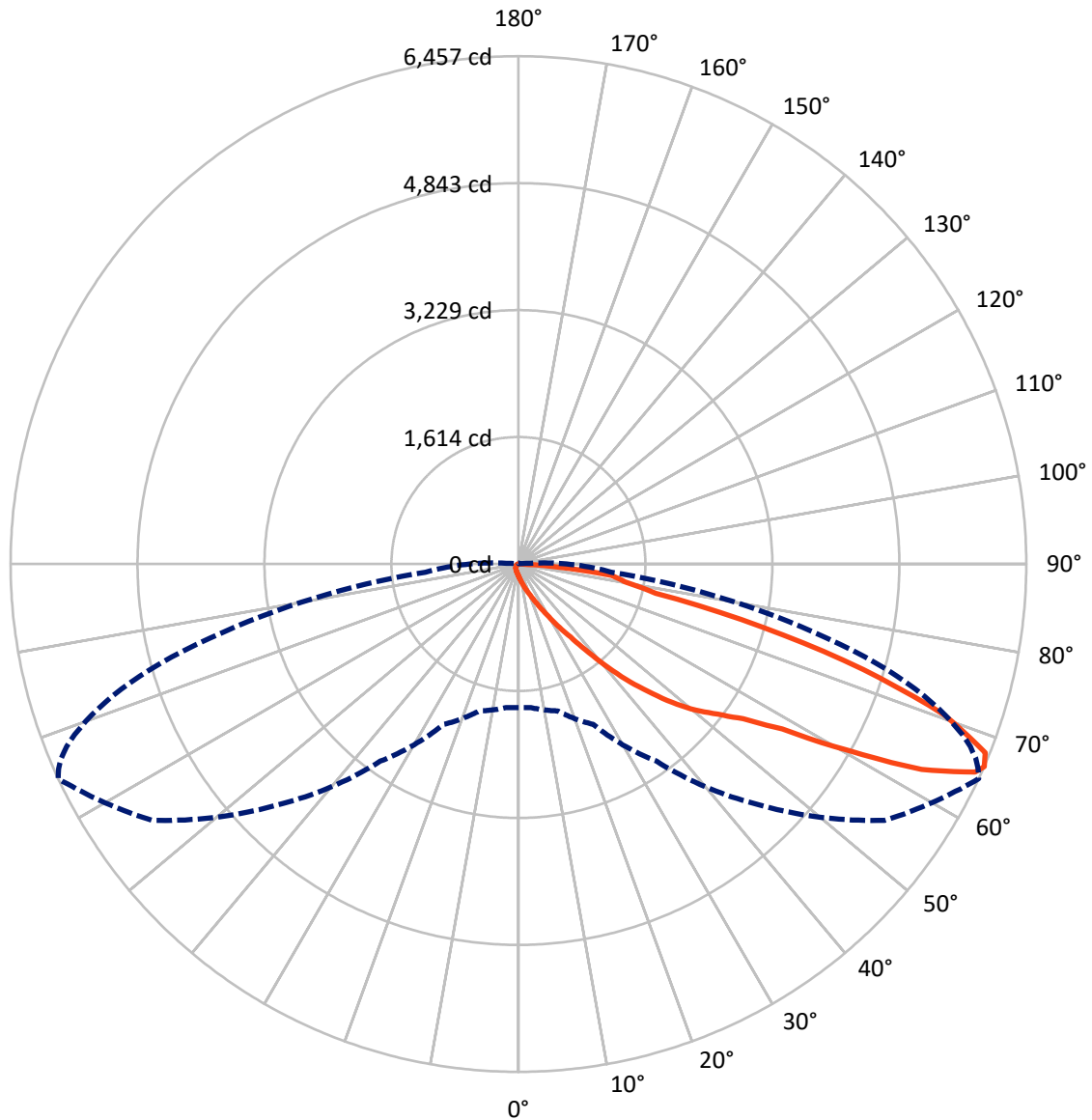
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 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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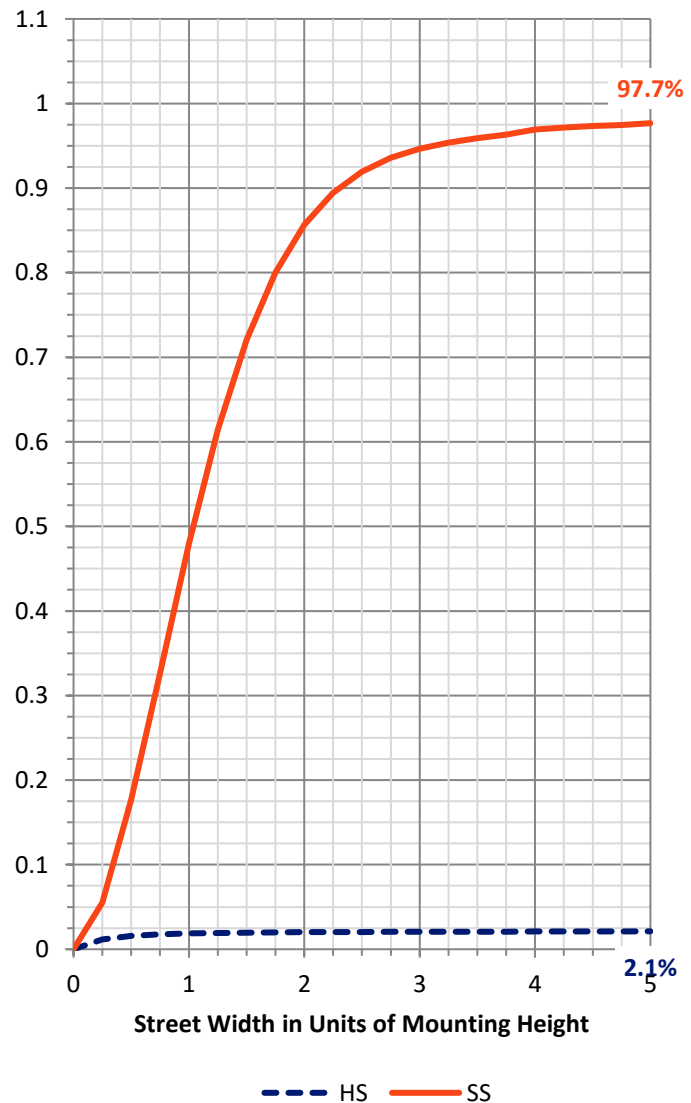
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	109.3	0.0	109.3
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	4936.0	0.0	4936.0
	% Fixture	97.8	0.0	97.8
Total	Lumens	5045.3	0.0	5045.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.0	0.3
10°-20°	72.3	1.4
20°-30°	155.9	3.1
30°-40°	332.9	6.6
40°-50°	736.3	14.6
50°-60°	1247.8	24.7
60°-70°	1665.1	33.0
70°-80°	733.5	14.5
80°-90°	84.5	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°	5045.3	100.0
0°-180°	5045.3	100.0



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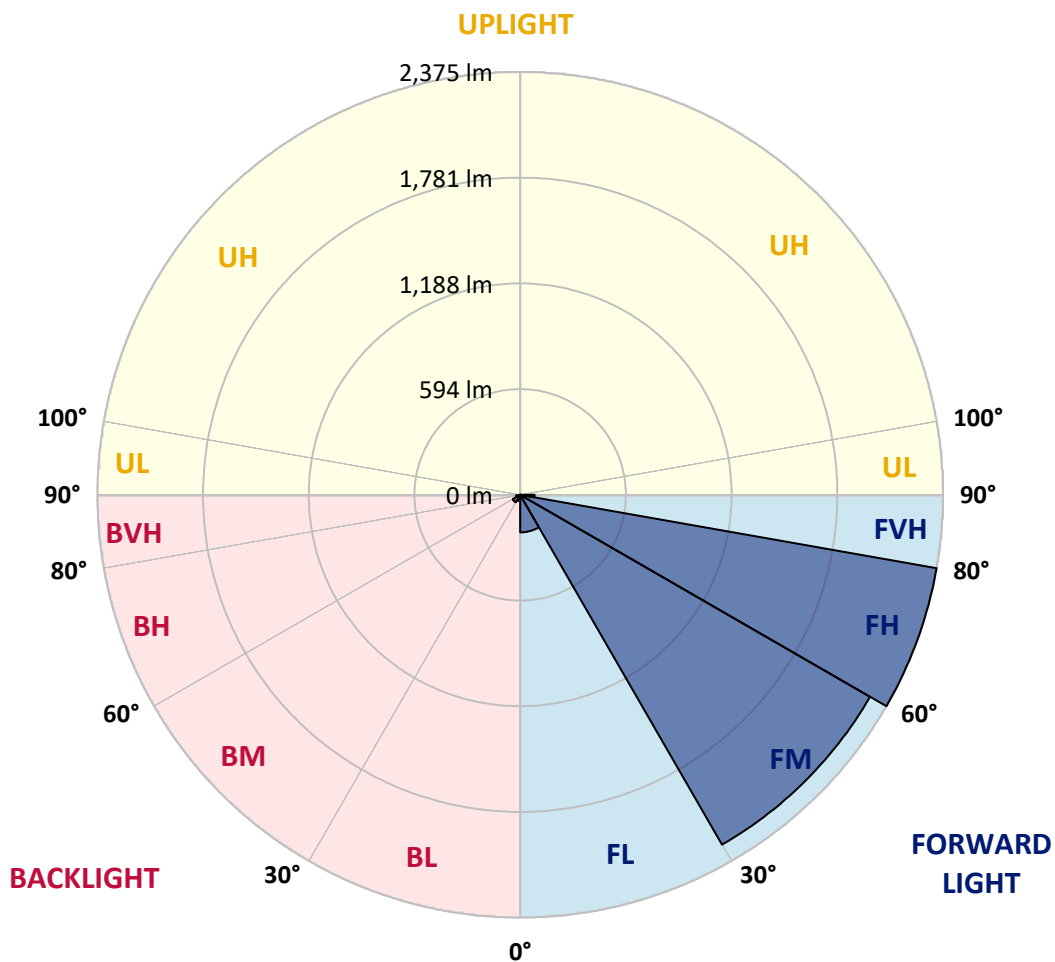
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	210.7	4.2			
FM	(30°-60°)	2269.1	45.0			
FH	(60°-80°)	2375.1	47.1			G2/5000
FVH	(80°-90°)	81.1	1.6			G1/100
BL	(0°-30°)	34.5	0.7	B0/110		
BM	(30°-60°)	48.0	1.0	B0/220		
BH	(60°-80°)	23.4	0.5	B0/110		G0/110
BVH	(80°-90°)	3.4	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3
2.5°	192.1	191.1	187.2	187.2	181.4	177.5	172.7	167.8	167.8	166.9	165.8
5°	254.2	248.3	247.3	236.7	227.9	215.3	203.7	188.2	186.2	184.3	183.3
7.5°	323.0	322.0	313.3	300.7	283.3	260.0	236.7	211.4	207.6	205.6	201.8
10°	412.3	407.4	395.8	374.4	348.2	317.2	279.4	239.6	234.7	230.9	228.9
12.5°	497.6	488.9	482.1	454.9	421.9	376.4	330.8	273.5	269.6	264.8	257.0
15°	577.1	569.4	557.8	534.5	497.6	440.4	387.0	317.2	307.5	300.7	294.9
17.5°	639.2	634.4	620.8	594.6	554.8	504.4	440.4	361.8	354.1	345.3	334.6
20°	698.4	691.6	670.3	634.4	591.7	552.9	503.4	420.0	409.3	398.6	387.0
22.5°	754.7	747.8	712.9	653.8	608.2	591.7	574.3	485.9	469.5	460.7	449.1
25°	833.2	818.7	764.3	670.3	609.2	621.8	651.8	571.3	555.8	543.2	524.8
27.5°	938.9	919.6	834.2	694.5	613.0	654.7	741.1	675.1	658.6	644.1	623.7
30°	1058.3	1045.6	943.8	752.7	641.2	703.3	841.0	807.1	787.6	770.2	745.9
32.5°	1178.5	1161.1	1060.2	863.3	716.8	797.3	966.1	960.3	935.1	918.6	892.4
35°	1284.2	1275.5	1200.8	1044.7	889.5	962.2	1132.9	1139.8	1117.4	1100.0	1070.9
37.5°	1356.1	1356.1	1341.5	1239.7	1164.0	1218.3	1378.4	1379.3	1357.0	1317.2	1302.7
40°	1392.9	1403.6	1456.0	1475.3	1471.5	1541.3	1700.4	1682.9	1664.5	1644.1	1595.6
42.5°	1468.6	1478.3	1589.8	1723.7	1811.0	1903.1	2012.7	2006.9	1984.6	1947.7	1903.1
45°	1596.6	1609.2	1742.1	1954.5	2134.0	2264.9	2334.8	2307.6	2285.3	2250.4	2227.1
47.5°	1759.6	1783.8	1934.2	2197.0	2413.3	2629.6	2702.4	2630.6	2611.2	2584.1	2546.2
50°	1933.2	1956.5	2116.5	2417.2	2661.7	2919.7	3040.9	2919.7	2891.5	2882.8	2840.2
52.5°	2083.6	2102.9	2257.1	2587.0	2851.8	3154.4	3331.0	3170.9	3150.5	3121.4	3090.4
55°	2172.8	2188.3	2332.8	2668.4	2980.8	3365.9	3611.3	3470.6	3440.6	3428.9	3384.3
57.5°	2202.8	2218.4	2348.3	2679.1	3050.6	3558.9	3951.7	3956.6	3920.7	3879.0	3865.4
60°	2202.8	2220.3	2329.9	2652.9	3118.5	3764.5	4405.7	4810.2	4732.6	4724.8	4675.4
62.5°	2111.6	2128.1	2238.7	2572.4	3209.7	4042.0	5038.1	5752.0	5729.8	5679.3	5597.8
65°	1913.8	1923.5	2032.1	2366.8	3174.8	4297.1	5586.2	6378.7	6342.8	6243.8	6139.1
66°	1824.5	1832.3	1934.2	2249.4	3060.3	4332.0	5683.2	6457.2	6398.0	6314.6	6196.3
67.5°	1695.5	1709.1	1780.9	2031.2	2785.8	4210.7	5622.1	6401.9	6350.5	6249.7	6131.3
70°	1132.0	1122.3	1375.4	1558.8	2122.3	3430.9	5044.0	5748.2	5749.1	5701.6	5654.1
72.5°	537.4	543.2	616.9	959.3	1389.0	2292.1	4014.8	4588.1	4654.0	4568.6	4509.5
75°	386.0	394.8	439.4	586.9	828.4	1375.4	2602.5	3208.7	3210.7	3059.3	2924.5
77.5°	112.5	117.4	164.9	361.8	620.8	928.3	1494.8	1783.8	1742.1	1633.4	1531.6
80°	46.6	46.6	48.5	115.4	249.3	630.5	1045.6	1373.5	1368.7	1327.0	1266.8
82.5°	17.5	18.4	23.3	47.5	59.2	155.2	697.4	1192.1	1189.2	1130.0	1087.4
85°	1.9	1.9	5.8	20.3	22.3	29.1	139.7	525.7	522.8	525.7	460.7
87.5°	0.0	0.0	1.0	1.9	2.9	3.9	5.8	20.3	22.3	21.4	19.4
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°	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3
2.5°	165.8	163.9	163.9	163.0	163.0	163.0	162.0	161.0	161.0	160.0	159.1
5°	181.4	179.5	178.5	176.5	175.6	174.6	172.7	171.7	169.7	168.8	167.8
7.5°	199.8	196.0	194.9	192.1	189.1	187.2	185.3	182.3	180.4	176.5	175.6
10°	223.1	218.2	214.4	210.5	207.6	202.7	199.8	196.0	192.1	189.1	186.2
12.5°	253.1	246.4	240.5	236.7	229.9	224.0	218.2	215.3	207.6	203.7	198.8
15°	286.1	278.4	271.6	263.8	259.0	249.3	241.5	232.8	228.9	222.1	214.4
17.5°	328.8	316.2	305.5	297.8	288.1	278.4	269.6	260.9	249.3	241.5	231.8
20°	374.4	363.7	349.2	335.6	324.0	312.4	299.7	288.1	277.4	264.8	253.1
22.5°	432.6	417.1	399.7	386.0	370.6	357.9	340.4	325.0	307.5	291.0	277.4
25°	506.3	485.9	469.5	450.1	431.6	412.3	390.9	371.5	349.2	333.7	310.4
27.5°	597.5	578.1	555.8	530.6	512.2	483.1	454.9	430.7	404.5	380.2	354.1
30°	713.9	685.8	662.5	638.3	601.4	573.2	540.3	507.3	471.4	447.2	407.4
32.5°	853.6	823.5	788.6	753.7	719.8	680.0	639.2	598.5	558.7	514.1	473.3
35°	1024.3	988.4	948.7	910.8	858.4	815.8	764.3	708.1	663.5	612.1	560.6
37.5°	1250.3	1191.1	1156.2	1116.5	1045.6	987.4	930.2	874.0	795.4	741.1	668.3
40°	1533.5	1498.6	1441.4	1377.4	1313.3	1236.7	1159.1	1084.4	993.2	917.6	833.2
42.5°	1866.2	1814.9	1756.7	1664.5	1599.5	1509.3	1421.0	1322.1	1210.6	1113.5	1014.6
45°	2178.6	2117.5	2072.9	1980.7	1912.8	1806.1	1699.4	1594.7	1465.7	1340.5	1226.0
47.5°	2516.2	2465.7	2392.0	2317.3	2248.4	2128.1	2012.7	1885.7	1749.8	1601.5	1453.0
50°	2813.0	2773.2	2722.7	2632.6	2555.9	2455.0	2319.2	2180.5	2008.9	1861.4	1692.7
52.5°	3065.2	3034.1	2963.3	2899.3	2830.4	2735.4	2614.1	2481.2	2296.0	2134.0	1941.9
55°	3362.9	3340.6	3278.6	3238.8	3177.7	3086.5	2973.0	2849.8	2653.9	2477.3	2260.1
57.5°	3850.9	3833.4	3779.1	3762.6	3702.5	3622.9	3483.2	3351.3	3122.4	2903.2	2654.9
60°	4658.9	4624.0	4544.4	4503.7	4376.6	4269.9	4088.5	3907.1	3630.7	3351.3	3052.6
62.5°	5524.1	5426.1	5274.8	5144.8	4964.4	4779.1	4536.7	4259.2	3935.2	3603.5	3260.2
65°	5990.6	5823.8	5632.7	5426.1	5192.3	4919.8	4614.2	4281.5	3933.3	3583.1	3220.4
66°	6044.0	5855.8	5653.1	5423.2	5163.2	4873.2	4562.8	4213.6	3851.8	3510.4	3147.6
67.5°	5977.1	5780.2	5565.8	5310.7	5029.4	4728.7	4402.8	4040.0	3691.8	3345.5	2992.4
70°	5508.6	5312.6	5121.5	4852.9	4553.2	4250.5	3942.1	3536.6	3206.8	2888.6	2574.4
72.5°	4398.9	4266.0	4076.9	3847.0	3555.0	3200.0	2942.9	2580.2	2294.0	1985.6	1742.1
75°	2749.0	2561.8	2328.0	2035.0	1811.9	1523.9	1373.5	1098.0	935.1	792.5	654.7
77.5°	1405.5	1264.9	1100.9	936.1	778.0	620.8	480.1	339.5	228.9	159.1	118.3
80°	1161.1	1036.9	901.1	750.8	611.1	474.3	341.5	232.8	148.4	97.0	75.7
82.5°	959.3	854.6	733.3	593.6	472.4	372.5	259.0	168.8	104.8	67.9	53.3
85°	408.4	370.6	286.1	227.0	170.7	126.1	88.3	59.2	41.7	34.0	31.0
87.5°	17.5	19.4	18.4	14.5	10.7	10.7	9.7	7.7	7.7	7.7	7.7
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3
2.5°	159.1	158.1	157.1	157.1	156.2	155.2	149.4	144.5	138.7	134.8	130.9
5°	165.8	164.9	163.0	162.0	160.0	159.1	146.5	135.8	127.1	120.3	115.4
7.5°	172.7	171.7	168.8	165.8	164.9	163.0	142.6	129.0	117.4	109.6	104.8
10°	181.4	178.5	175.6	171.7	168.8	165.8	138.7	121.3	108.7	101.8	97.0
12.5°	194.0	189.1	184.3	179.5	175.6	170.7	136.7	114.5	101.8	94.1	89.2
15°	208.6	201.8	196.0	190.1	183.3	178.5	132.9	108.7	96.0	88.3	82.4
17.5°	222.1	214.4	205.6	196.9	190.1	183.3	129.0	102.8	90.2	82.4	76.6
20°	241.5	229.9	219.2	208.6	198.8	190.1	123.2	97.0	85.4	76.6	70.8
22.5°	262.9	249.3	235.7	221.2	208.6	196.9	118.3	92.2	80.5	71.8	65.0
25°	290.0	273.5	255.1	236.7	222.1	206.6	113.5	87.3	75.7	66.9	60.1
27.5°	327.8	304.6	284.2	260.9	238.6	221.2	109.6	83.4	70.8	62.1	55.3
30°	379.3	345.3	313.3	288.1	261.9	236.7	105.7	78.5	66.9	57.2	49.4
32.5°	436.5	396.7	359.9	322.0	289.1	260.0	101.8	74.7	62.1	52.4	45.6
35°	507.3	456.8	407.4	363.7	324.0	285.2	98.0	70.8	58.2	47.5	40.7
37.5°	609.2	546.1	481.1	424.9	373.4	322.0	95.0	66.9	53.3	42.7	35.9
40°	748.9	667.4	587.8	511.2	444.2	380.2	91.2	63.1	49.4	38.8	32.0
42.5°	900.2	801.2	696.5	610.1	518.0	437.5	87.3	59.2	45.6	34.9	28.1
45°	1088.3	965.2	838.1	720.7	608.2	504.4	83.4	55.3	40.7	31.0	24.2
47.5°	1294.0	1136.8	993.2	845.8	712.0	587.8	78.5	52.4	36.8	27.2	21.4
50°	1505.4	1339.6	1158.2	990.4	831.3	671.2	73.7	47.5	33.0	24.2	17.5
52.5°	1733.4	1537.4	1352.2	1143.6	958.4	780.8	68.9	43.6	30.1	21.4	14.5
55°	2023.4	1804.2	1586.9	1353.1	1130.0	907.9	64.0	38.8	26.2	18.4	11.6
57.5°	2388.1	2128.1	1861.4	1597.6	1327.0	1074.7	60.1	34.0	22.3	15.5	9.7
60°	2732.5	2428.9	2105.8	1802.2	1496.7	1202.8	54.3	30.1	19.4	12.6	9.7
62.5°	2911.0	2564.6	2216.4	1881.8	1555.9	1248.4	48.5	25.2	16.5	10.7	8.7
65°	2867.3	2514.2	2176.7	1839.1	1520.0	1219.3	42.7	22.3	14.5	9.7	8.7
66°	2804.2	2455.0	2115.5	1794.5	1489.9	1188.2	39.8	21.4	13.6	9.7	7.7
67.5°	2666.5	2329.0	2005.0	1706.2	1407.5	1129.1	35.9	19.4	12.6	8.7	7.7
70°	2277.5	1971.0	1712.0	1446.2	1202.8	951.5	29.1	16.5	10.7	7.7	7.7
72.5°	1507.4	1298.8	1126.1	969.0	809.9	628.6	24.2	13.6	8.7	7.7	6.8
75°	568.4	514.1	441.4	396.7	346.3	303.6	19.4	8.7	6.8	6.8	6.8
77.5°	100.9	93.1	82.4	75.7	69.8	64.0	15.5	5.8	5.8	6.8	6.8
80°	67.9	63.1	57.2	52.4	48.5	43.6	10.7	4.9	5.8	5.8	6.8
82.5°	48.5	45.6	42.7	38.8	35.9	32.0	6.8	4.9	5.8	5.8	5.8
85°	29.1	27.2	25.2	23.3	20.3	19.4	4.9	4.9	4.9	5.8	5.8
87.5°	7.7	6.8	7.7	7.7	5.8	6.8	3.9	3.9	3.9	4.9	4.9
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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CATALOG NUMBER: LDRL-SL3-E03-E-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	152.3	152.3	152.3	152.3	152.3
2.5°	129.0	129.0	127.1	130.0	130.0
5°	111.5	111.5	110.6	111.5	111.5
7.5°	101.8	100.9	100.9	100.9	101.8
10°	93.1	92.2	92.2	92.2	92.2
12.5°	85.4	84.4	83.4	84.4	84.4
15°	78.5	76.6	76.6	76.6	76.6
17.5°	72.7	70.8	69.8	69.8	69.8
20°	66.9	64.0	64.0	64.0	64.0
22.5°	61.1	58.2	58.2	58.2	58.2
25°	55.3	52.4	52.4	52.4	52.4
27.5°	50.5	47.5	47.5	47.5	47.5
30°	44.6	42.7	42.7	43.6	42.7
32.5°	40.7	37.8	37.8	38.8	38.8
35°	35.9	34.0	34.0	34.0	34.0
37.5°	31.0	29.1	29.1	29.1	29.1
40°	27.2	25.2	24.2	25.2	25.2
42.5°	23.3	21.4	20.3	20.3	20.3
45°	20.3	17.5	16.5	17.5	17.5
47.5°	16.5	14.5	14.5	15.5	15.5
50°	12.6	12.6	13.6	15.5	15.5
52.5°	11.6	11.6	13.6	15.5	15.5
55°	10.7	11.6	13.6	14.5	15.5
57.5°	9.7	11.6	13.6	14.5	14.5
60°	9.7	10.7	12.6	14.5	14.5
62.5°	8.7	9.7	11.6	13.6	13.6
65°	8.7	9.7	11.6	13.6	13.6
66°	8.7	9.7	11.6	13.6	13.6
67.5°	8.7	9.7	11.6	13.6	13.6
70°	8.7	9.7	11.6	12.6	12.6
72.5°	7.7	8.7	10.7	12.6	12.6
75°	7.7	8.7	10.7	12.6	12.6
77.5°	7.7	8.7	10.7	12.6	12.6
80°	7.7	8.7	10.7	11.6	12.6
82.5°	6.8	8.7	9.7	11.6	11.6
85°	6.8	7.7	9.7	10.7	11.6
87.5°	5.8	6.8	7.7	9.7	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)