

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: P163525

Luminaire Tested: **LDRL-SL3-E03-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163525
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-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: (63) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4258.2 lumens
Efficiency: N/A
Efficacy: 56.6 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): 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

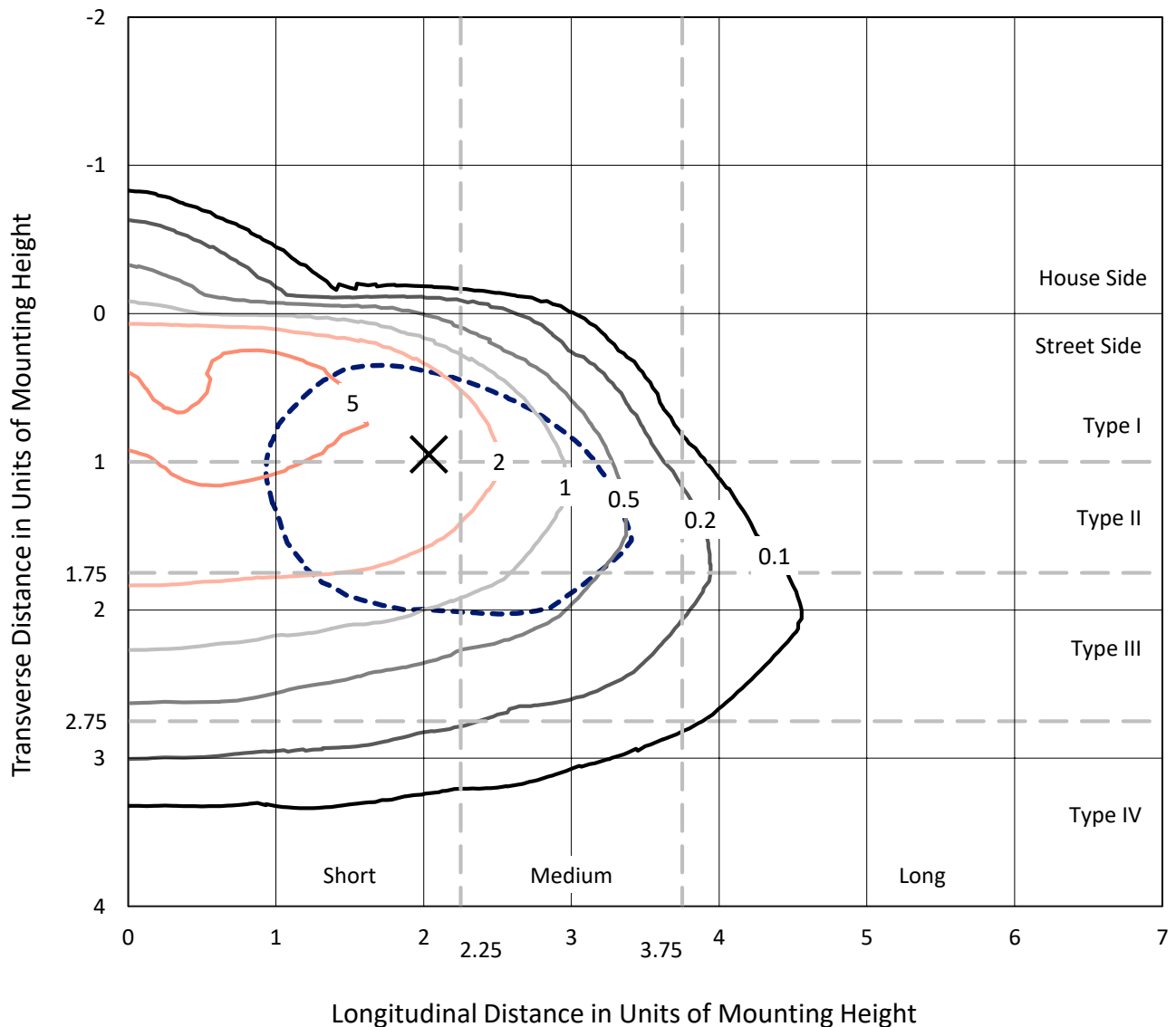


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Iso-Footcandle Lines of Horizontal Illumination

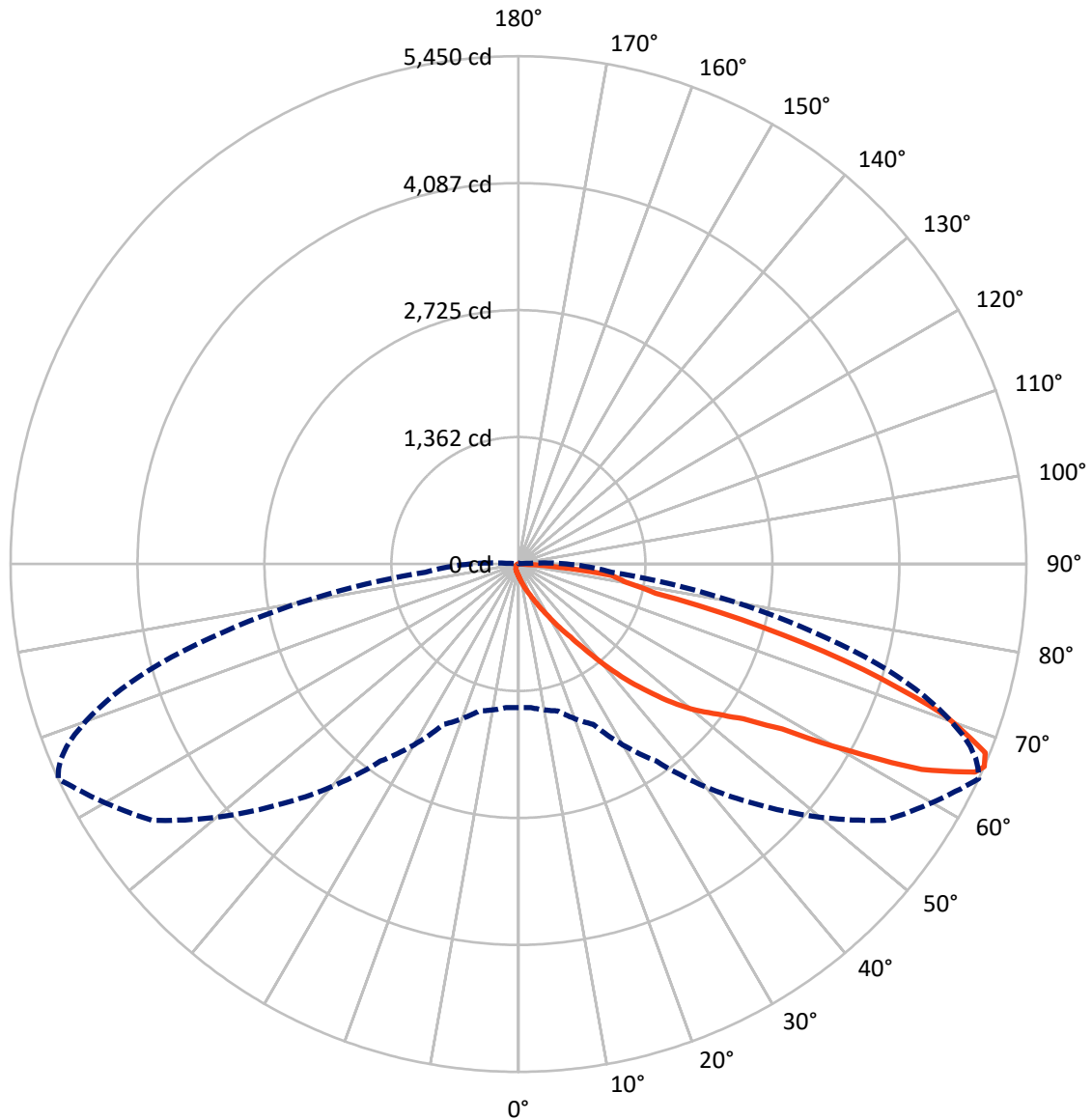
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 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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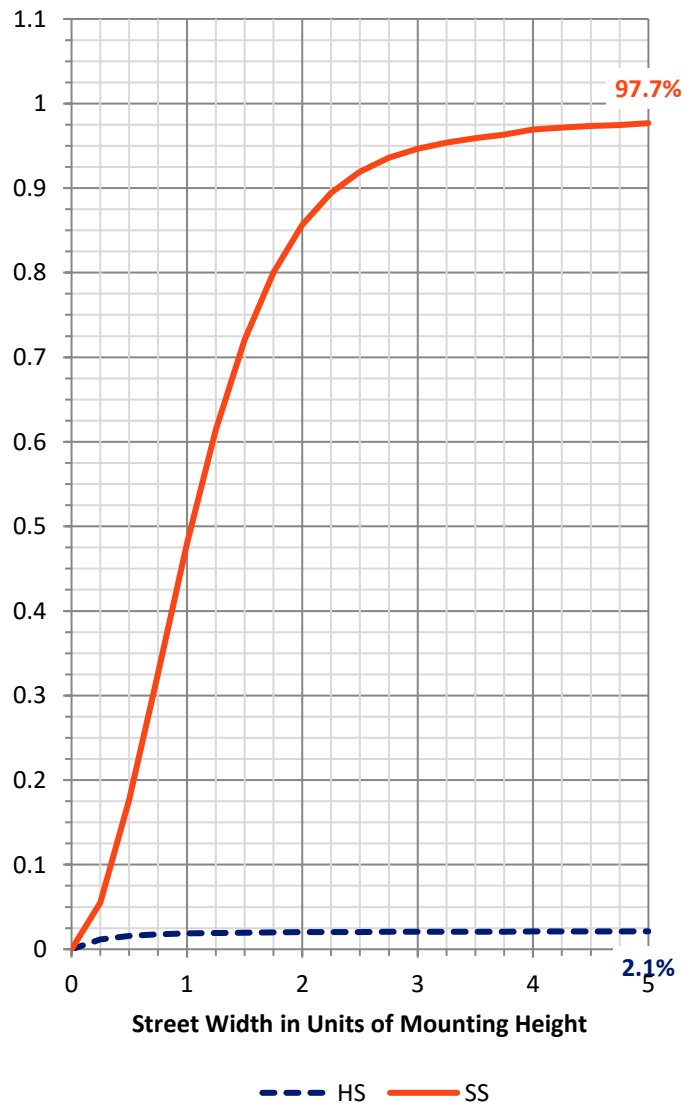
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	92.2	0.0	92.2
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	4166.0	0.0	4166.0
	% Fixture	97.8	0.0	97.8
Total	Lumens	4258.2	0.0	4258.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.4	0.3
10°-20°	61.0	1.4
20°-30°	131.6	3.1
30°-40°	281.0	6.6
40°-50°	621.4	14.6
50°-60°	1053.1	24.7
60°-70°	1405.3	33.0
70°-80°	619.0	14.5
80°-90°	71.3	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°	4258.2	100.0
0°-180°	4258.2	100.0

Coefficient of Utilization



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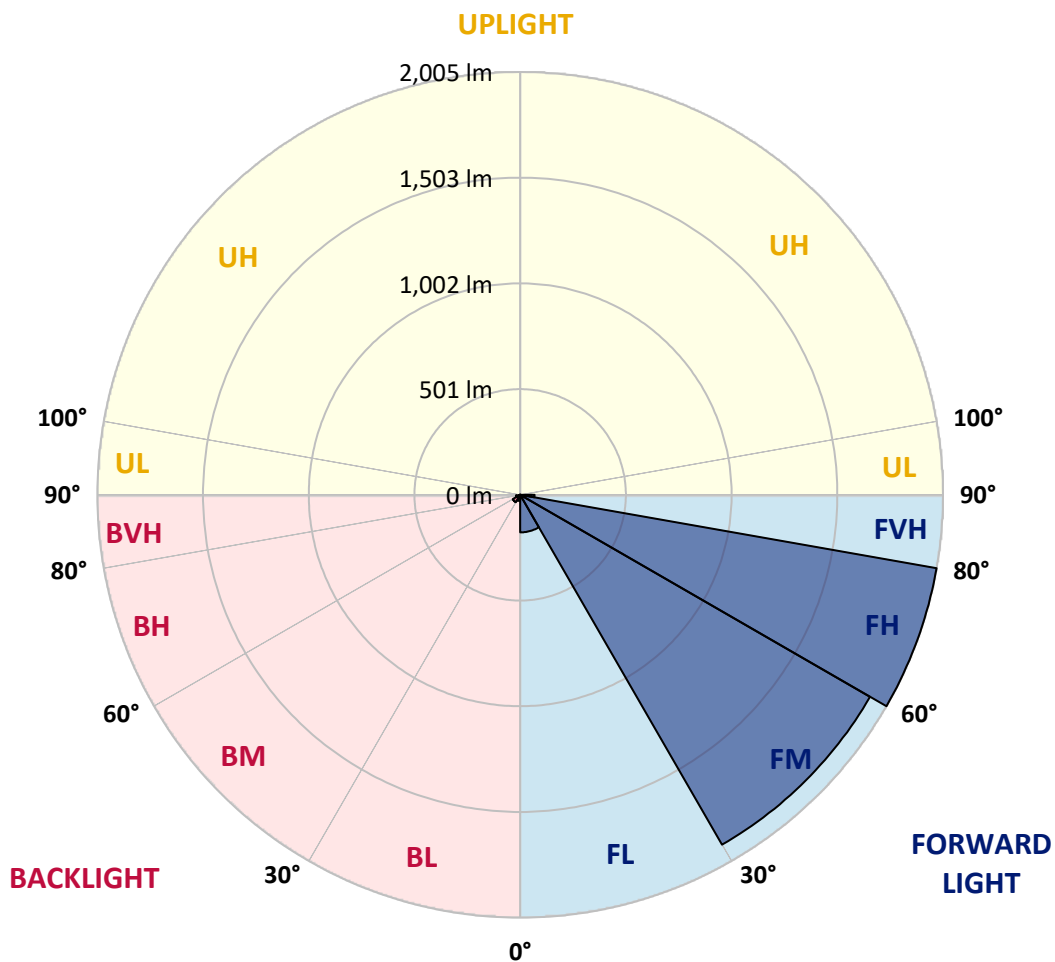
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	177.9	4.2			
FM	(30°-60°)	1915.1	45.0			
FH	(60°-80°)	2004.6	47.1			G2/5000
FVH	(80°-90°)	68.5	1.6			G1/100
BL	(0°-30°)	29.1	0.7	B0/110		
BM	(30°-60°)	40.5	1.0	B0/220		
BH	(60°-80°)	19.8	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°	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5
2.5°	162.1	161.3	158.0	158.0	153.1	149.8	145.7	141.6	141.6	140.8	140.0
5°	214.5	209.6	208.7	199.8	192.4	181.7	171.9	158.8	157.2	155.6	154.7
7.5°	272.6	271.8	264.4	253.8	239.1	219.4	199.8	178.5	175.2	173.5	170.3
10°	347.9	343.8	334.0	316.0	293.9	267.7	235.8	202.2	198.1	194.9	193.2
12.5°	420.0	412.6	406.9	383.9	356.1	317.7	279.2	230.9	227.6	223.5	216.9
15°	487.1	480.6	470.7	451.1	420.0	371.7	326.6	267.7	259.5	253.8	248.9
17.5°	539.5	535.4	524.0	501.8	468.3	425.7	371.7	305.4	298.8	291.4	282.4
20°	589.4	583.7	565.7	535.4	499.4	466.6	424.9	354.5	345.5	336.4	326.6
22.5°	636.9	631.2	601.7	551.8	513.3	499.4	484.7	410.1	396.3	388.9	379.0
25°	703.2	691.0	645.1	565.7	514.1	524.8	550.1	482.2	469.1	458.4	442.9
27.5°	792.5	776.1	704.0	586.2	517.4	552.6	625.4	569.8	555.9	543.6	526.4
30°	893.2	882.5	796.6	635.3	541.1	593.5	709.8	681.2	664.7	650.0	629.5
32.5°	994.7	979.9	894.8	728.6	605.0	672.9	815.4	810.5	789.2	775.3	753.2
35°	1083.9	1076.5	1013.5	881.7	750.7	812.1	956.2	961.9	943.1	928.4	903.8
37.5°	1144.5	1144.5	1132.2	1046.3	982.4	1028.2	1163.3	1164.2	1145.3	1111.7	1099.5
40°	1175.6	1184.6	1228.8	1245.2	1241.9	1300.9	1435.1	1420.4	1404.8	1387.6	1346.7
42.5°	1239.5	1247.7	1341.8	1454.8	1528.5	1606.2	1698.7	1693.8	1675.0	1643.9	1606.2
45°	1347.5	1358.2	1470.3	1649.6	1801.0	1911.6	1970.5	1947.6	1928.8	1899.3	1879.6
47.5°	1485.1	1505.5	1632.4	1854.3	2036.8	2219.4	2280.8	2220.2	2203.8	2180.9	2149.0
50°	1631.6	1651.3	1786.3	2040.1	2246.4	2464.2	2566.5	2464.2	2440.4	2433.1	2397.1
52.5°	1758.5	1774.9	1905.0	2183.4	2406.9	2662.3	2811.3	2676.2	2659.0	2634.5	2608.2
55°	1833.8	1846.9	1968.9	2252.1	2515.8	2840.8	3047.9	2929.2	2903.8	2894.0	2856.3
57.5°	1859.2	1872.3	1982.0	2261.2	2574.7	3003.7	3335.2	3339.3	3309.0	3273.8	3262.4
60°	1859.2	1873.9	1966.4	2239.0	2632.0	3177.2	3718.4	4059.8	3994.2	3987.7	3946.0
62.5°	1782.2	1796.1	1889.5	2171.1	2709.0	3411.4	4252.1	4854.7	4835.9	4793.3	4724.5
65°	1615.2	1623.4	1715.1	1997.5	2679.5	3626.7	4714.7	5383.5	5353.2	5269.7	5181.3
66°	1539.9	1546.5	1632.4	1898.5	2582.9	3656.2	4796.6	5449.8	5399.9	5329.5	5229.6
67.5°	1431.0	1442.5	1503.1	1714.3	2351.2	3553.8	4745.0	5403.2	5359.8	5274.7	5174.7
70°	955.4	947.2	1160.9	1315.6	1791.2	2895.6	4257.1	4851.4	4852.2	4812.1	4772.0
72.5°	453.5	458.4	520.7	809.7	1172.3	1934.5	3388.4	3872.3	3928.0	3855.9	3806.0
75°	325.8	333.2	370.8	495.3	699.1	1160.9	2196.5	2708.1	2709.8	2582.1	2468.3
77.5°	94.9	99.1	139.2	305.4	524.0	783.4	1261.6	1505.5	1470.3	1378.6	1292.7
80°	39.3	39.3	40.9	97.4	210.4	532.1	882.5	1159.2	1155.1	1119.9	1069.2
82.5°	14.7	15.5	19.6	40.1	49.9	131.0	588.6	1006.2	1003.7	953.7	917.7
85°	1.6	1.6	4.9	17.2	18.8	24.6	117.9	443.7	441.3	443.7	388.9
87.5°	0.0	0.0	0.8	1.6	2.4	3.3	4.9	17.2	18.8	18.0	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°	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5
2.5°	140.0	138.3	138.3	137.5	137.5	137.5	136.7	135.9	135.9	135.1	134.2
5°	153.1	151.5	150.7	149.0	148.2	147.4	145.7	144.9	143.3	142.4	141.6
7.5°	168.6	165.4	164.5	162.1	159.6	158.0	156.4	153.9	152.3	149.0	148.2
10°	188.3	184.2	180.9	177.6	175.2	171.1	168.6	165.4	162.1	159.6	157.2
12.5°	213.6	207.9	203.0	199.8	194.0	189.1	184.2	181.7	175.2	171.9	167.8
15°	241.5	235.0	229.2	222.7	218.6	210.4	203.8	196.5	193.2	187.5	180.9
17.5°	277.5	266.9	257.9	251.3	243.1	235.0	227.6	220.2	210.4	203.8	195.7
20°	316.0	307.0	294.7	283.3	273.5	263.6	252.9	243.1	234.2	223.5	213.6
22.5°	365.1	352.0	337.3	325.8	312.7	302.1	287.3	274.3	259.5	245.6	234.2
25°	427.3	410.1	396.3	379.8	364.3	347.9	329.9	313.6	294.7	281.6	262.0
27.5°	504.3	487.9	469.1	447.8	432.3	407.7	383.9	363.5	341.4	320.9	298.8
30°	602.6	578.8	559.2	538.7	507.6	483.8	456.0	428.2	397.9	377.4	343.8
32.5°	720.4	695.0	665.6	636.1	607.5	573.9	539.5	505.1	471.6	433.9	399.5
35°	864.5	834.2	800.7	768.7	724.5	688.5	645.1	597.6	560.0	516.6	473.2
37.5°	1055.3	1005.3	975.8	942.3	882.5	833.4	785.1	737.6	671.3	625.4	564.1
40°	1294.3	1264.8	1216.5	1162.5	1108.4	1043.8	978.3	915.3	838.3	774.5	703.2
42.5°	1575.1	1531.7	1482.6	1404.8	1350.0	1273.8	1199.3	1115.8	1021.7	939.8	856.3
45°	1838.7	1787.1	1749.5	1671.7	1614.4	1524.3	1434.3	1345.9	1237.0	1131.4	1034.8
47.5°	2123.6	2081.0	2018.8	1955.8	1897.7	1796.1	1698.7	1591.5	1476.8	1351.6	1226.3
50°	2374.1	2340.6	2298.0	2221.9	2157.2	2072.0	1957.4	1840.3	1695.5	1571.0	1428.6
52.5°	2587.0	2560.8	2501.0	2447.0	2388.9	2308.7	2206.3	2094.1	1937.8	1801.0	1638.9
55°	2838.3	2819.5	2767.1	2733.5	2681.9	2605.0	2509.2	2405.2	2239.9	2090.9	1907.5
57.5°	3250.1	3235.4	3189.5	3175.6	3124.9	3057.7	2939.8	2828.5	2635.3	2450.2	2240.7
60°	3932.1	3902.6	3835.4	3801.0	3693.8	3603.8	3450.7	3297.6	3064.2	2828.5	2576.3
62.5°	4662.3	4579.6	4451.9	4342.2	4189.9	4033.5	3828.9	3594.7	3321.3	3041.4	2751.5
65°	5056.0	4915.3	4754.0	4579.6	4382.3	4152.2	3894.4	3613.6	3319.7	3024.1	2718.0
66°	5101.1	4942.3	4771.1	4577.1	4357.7	4112.9	3851.0	3556.3	3250.9	2962.8	2656.5
67.5°	5044.6	4878.4	4697.5	4482.2	4244.8	3991.0	3715.9	3409.7	3115.8	2823.6	2525.6
70°	4649.2	4483.8	4322.5	4095.8	3842.8	3587.4	3327.1	2984.8	2706.5	2438.0	2172.7
72.5°	3712.6	3600.5	3440.8	3246.8	3000.4	2700.8	2483.8	2177.6	1936.1	1675.8	1470.3
75°	2320.1	2162.1	1964.8	1717.5	1529.3	1286.1	1159.2	926.7	789.2	668.8	552.6
77.5°	1186.2	1067.5	929.2	790.0	656.6	524.0	405.2	286.5	193.2	134.2	99.9
80°	979.9	875.2	760.6	633.7	515.8	400.3	288.2	196.5	125.2	81.9	63.9
82.5°	809.7	721.3	618.9	501.0	398.7	314.4	218.6	142.4	88.4	57.3	45.0
85°	344.7	312.7	241.5	191.6	144.1	106.4	74.5	49.9	35.2	28.7	26.2
87.5°	14.7	16.4	15.5	12.3	9.0	9.0	8.2	6.5	6.5	6.5	6.5
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5
2.5°	134.2	133.4	132.6	132.6	131.8	131.0	126.1	122.0	117.1	113.8	110.5
5°	140.0	139.2	137.5	136.7	135.1	134.2	123.6	114.6	107.3	101.5	97.4
7.5°	145.7	144.9	142.4	140.0	139.2	137.5	120.3	108.9	99.1	92.5	88.4
10°	153.1	150.7	148.2	144.9	142.4	140.0	117.1	102.3	91.7	85.9	81.9
12.5°	163.7	159.6	155.6	151.5	148.2	144.1	115.4	96.6	85.9	79.4	75.3
15°	176.0	170.3	165.4	160.5	154.7	150.7	112.2	91.7	81.0	74.5	69.6
17.5°	187.5	180.9	173.5	166.2	160.5	154.7	108.9	86.8	76.1	69.6	64.7
20°	203.8	194.0	185.0	176.0	167.8	160.5	104.0	81.9	72.1	64.7	59.8
22.5°	221.9	210.4	198.9	186.7	176.0	166.2	99.9	77.8	68.0	60.6	54.8
25°	244.8	230.9	215.3	199.8	187.5	174.4	95.8	73.7	63.9	56.5	50.7
27.5°	276.7	257.0	239.9	220.2	201.4	186.7	92.5	70.4	59.8	52.4	46.6
30°	320.1	291.4	264.4	243.1	221.0	199.8	89.2	66.3	56.5	48.3	41.7
32.5°	368.4	334.8	303.7	271.8	244.0	219.4	85.9	63.0	52.4	44.2	38.5
35°	428.2	385.6	343.8	307.0	273.5	240.7	82.7	59.8	49.1	40.1	34.4
37.5°	514.1	460.9	406.1	358.6	315.2	271.8	80.2	56.5	45.0	36.0	30.3
40°	632.0	563.3	496.1	431.4	374.9	320.9	77.0	53.2	41.7	32.8	27.0
42.5°	759.7	676.2	587.8	515.0	437.2	369.2	73.7	49.9	38.5	29.5	23.7
45°	918.5	814.6	707.3	608.3	513.3	425.7	70.4	46.6	34.4	26.2	20.5
47.5°	1092.1	959.5	838.3	713.9	600.9	496.1	66.3	44.2	31.1	22.9	18.0
50°	1270.5	1130.6	977.5	835.9	701.6	566.5	62.2	40.1	27.9	20.5	14.7
52.5°	1463.0	1297.6	1141.2	965.2	808.9	659.0	58.1	36.8	25.4	18.0	12.3
55°	1707.7	1522.7	1339.3	1142.0	953.7	766.3	54.0	32.8	22.1	15.5	9.8
57.5°	2015.6	1796.1	1571.0	1348.3	1119.9	907.1	50.7	28.7	18.8	13.1	8.2
60°	2306.2	2049.9	1777.3	1521.1	1263.2	1015.1	45.8	25.4	16.4	10.6	8.2
62.5°	2456.8	2164.5	1870.6	1588.2	1313.1	1053.6	40.9	21.3	13.9	9.0	7.3
65°	2420.0	2122.0	1837.1	1552.2	1282.8	1029.0	36.0	18.8	12.3	8.2	7.3
66°	2366.7	2072.0	1785.5	1514.5	1257.5	1002.9	33.6	18.0	11.4	8.2	6.5
67.5°	2250.5	1965.6	1692.2	1440.0	1187.9	952.9	30.3	16.4	10.6	7.3	6.5
70°	1922.2	1663.5	1444.9	1220.6	1015.1	803.1	24.6	13.9	9.0	6.5	6.5
72.5°	1272.2	1096.2	950.5	817.8	683.6	530.5	20.5	11.4	7.3	6.5	5.7
75°	479.8	433.9	372.5	334.8	292.2	256.2	16.4	7.3	5.7	5.7	5.7
77.5°	85.1	78.6	69.6	63.9	58.9	54.0	13.1	4.9	4.9	5.7	5.7
80°	57.3	53.2	48.3	44.2	40.9	36.8	9.0	4.1	4.9	4.9	5.7
82.5°	40.9	38.5	36.0	32.8	30.3	27.0	5.7	4.1	4.9	4.9	4.9
85°	24.6	22.9	21.3	19.6	17.2	16.4	4.1	4.1	4.1	4.9	4.9
87.5°	6.5	5.7	6.5	6.5	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-E03-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	128.5	128.5	128.5	128.5	128.5
2.5°	108.9	108.9	107.3	109.7	109.7
5°	94.1	94.1	93.3	94.1	94.1
7.5°	85.9	85.1	85.1	85.1	85.9
10°	78.6	77.8	77.8	77.8	77.8
12.5°	72.1	71.2	70.4	71.2	71.2
15°	66.3	64.7	64.7	64.7	64.7
17.5°	61.4	59.8	58.9	58.9	58.9
20°	56.5	54.0	54.0	54.0	54.0
22.5°	51.6	49.1	49.1	49.1	49.1
25°	46.6	44.2	44.2	44.2	44.2
27.5°	42.6	40.1	40.1	40.1	40.1
30°	37.7	36.0	36.0	36.8	36.0
32.5°	34.4	31.9	31.9	32.8	32.8
35°	30.3	28.7	28.7	28.7	28.7
37.5°	26.2	24.6	24.6	24.6	24.6
40°	22.9	21.3	20.5	21.3	21.3
42.5°	19.6	18.0	17.2	17.2	17.2
45°	17.2	14.7	13.9	14.7	14.7
47.5°	13.9	12.3	12.3	13.1	13.1
50°	10.6	10.6	11.4	13.1	13.1
52.5°	9.8	9.8	11.4	13.1	13.1
55°	9.0	9.8	11.4	12.3	13.1
57.5°	8.2	9.8	11.4	12.3	12.3
60°	8.2	9.0	10.6	12.3	12.3
62.5°	7.3	8.2	9.8	11.4	11.4
65°	7.3	8.2	9.8	11.4	11.4
66°	7.3	8.2	9.8	11.4	11.4
67.5°	7.3	8.2	9.8	11.4	11.4
70°	7.3	8.2	9.8	10.6	10.6
72.5°	6.5	7.3	9.0	10.6	10.6
75°	6.5	7.3	9.0	10.6	10.6
77.5°	6.5	7.3	9.0	10.6	10.6
80°	6.5	7.3	9.0	9.8	10.6
82.5°	5.7	7.3	8.2	9.8	9.8
85°	5.7	6.5	8.2	9.0	9.8
87.5°	4.9	5.7	6.5	8.2	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)