

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: P163830

Luminaire Tested: **LDRL-SL4-F05-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-F05-E-8030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (35) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6875.9 lumens
Efficiency: N/A
Efficacy: 51.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

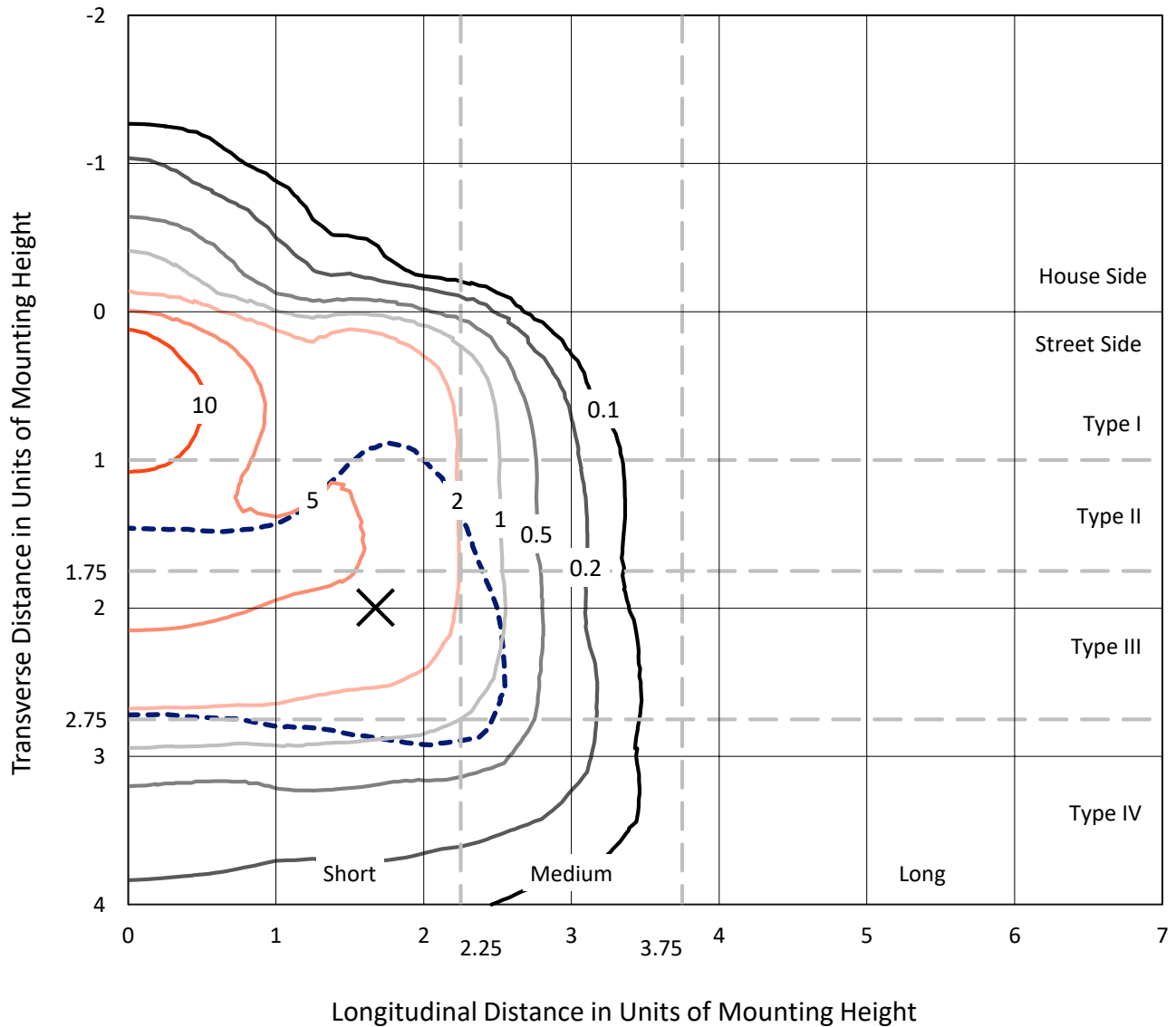
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

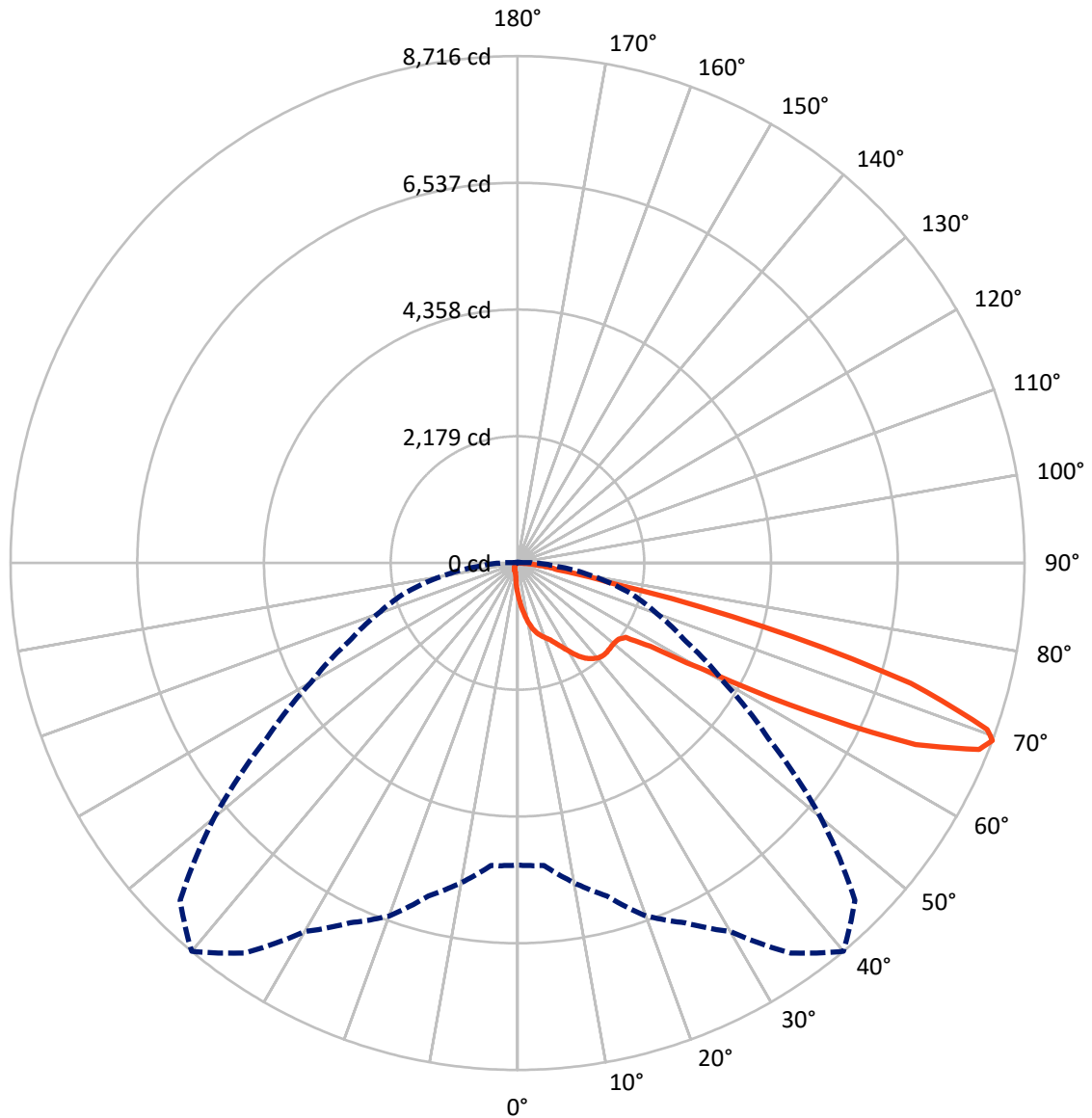


Based on 10 foot mounting height. Maximum calculated value = 15.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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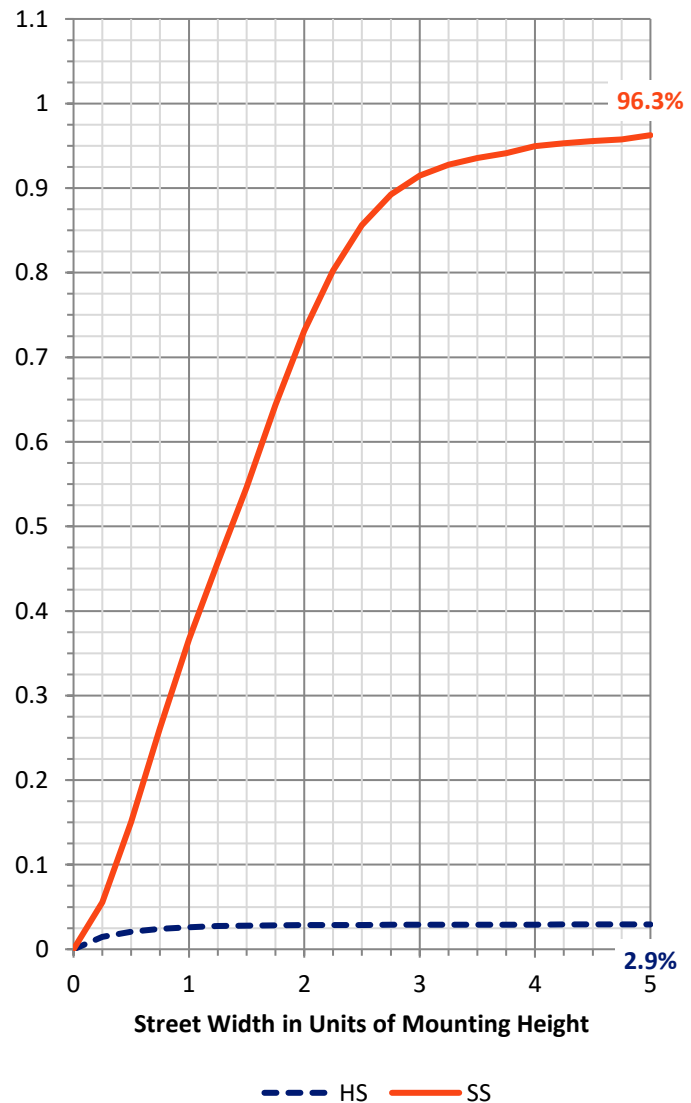
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	204.7	0.0	204.7
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	6671.1	0.0	6671.1
	% Fixture	97.0	0.0	97.0
Total	Lumens	6875.9	0.0	6875.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	0.8
10°-20°	184.0	2.7
20°-30°	352.2	5.1
30°-40°	585.7	8.5
40°-50°	792.6	11.5
50°-60°	1239.5	18.0
60°-70°	2548.3	37.1
70°-80°	1025.4	14.9
80°-90°	94.8	1.4
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°	6875.9	100.0
0°-180°	6875.9	100.0



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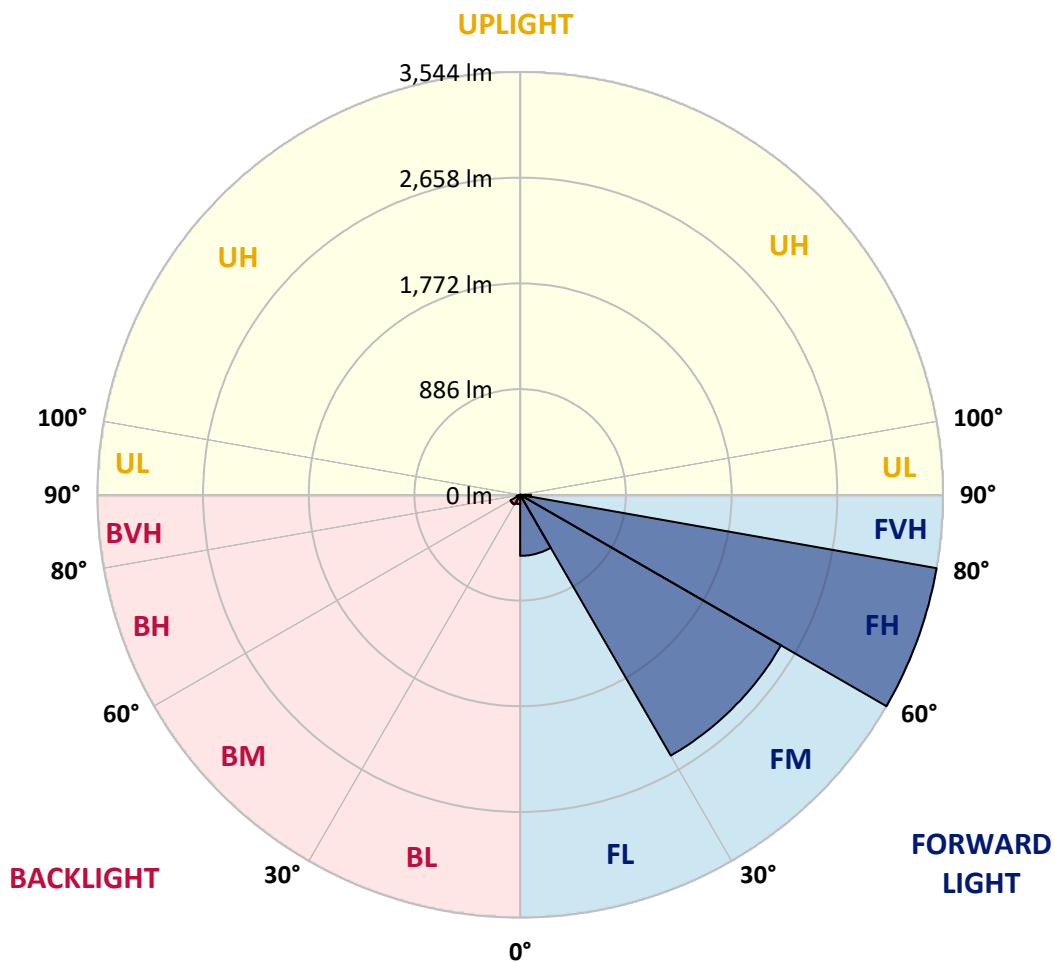
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	511.7	7.4			
FM (30°-60°)	2524.2	36.7			
FH (60°-80°)	3543.9	51.5			G2/5000
FVH (80°-90°)	91.3	1.3			G1/100
BL (0°-30°)	77.9	1.1	B0/110		
BM (30°-60°)	93.5	1.4	B0/220		
BH (60°-80°)	29.9	0.4	B0/110		G0/110
BVH (80°-90°)	3.5	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3
2.5°	692.7	684.8	675.8	675.8	664.5	664.5	657.8	639.8	637.5	627.4	617.2
5°	884.2	877.5	866.2	856.1	847.0	831.3	820.0	798.6	775.0	752.4	732.1
7.5°	1071.2	1067.8	1047.5	1044.1	1029.5	1003.6	981.1	949.5	909.0	877.5	840.3
10°	1244.6	1236.8	1232.2	1213.1	1191.7	1163.5	1128.6	1090.3	1043.0	993.5	940.5
12.5°	1382.0	1377.6	1357.3	1349.4	1326.9	1298.7	1254.8	1205.2	1157.9	1093.7	1031.8
15°	1484.5	1476.7	1463.1	1450.7	1423.7	1399.0	1358.4	1304.4	1246.9	1177.1	1102.7
17.5°	1570.2	1555.5	1552.1	1533.0	1504.8	1475.5	1430.5	1380.9	1313.3	1243.5	1162.4
20°	1685.1	1664.8	1658.0	1629.9	1597.2	1556.6	1504.8	1442.9	1371.9	1295.3	1212.0
22.5°	1820.2	1805.6	1791.0	1766.2	1724.5	1667.0	1591.6	1524.0	1433.9	1349.4	1259.3
25°	2011.7	1999.4	1975.7	1941.9	1890.0	1821.3	1730.1	1631.0	1525.1	1417.0	1311.1
27.5°	2197.6	2186.3	2169.4	2143.5	2084.9	2009.5	1896.8	1770.7	1636.6	1506.0	1388.8
30°	2372.2	2362.0	2345.1	2319.2	2267.4	2193.0	2065.8	1930.6	1763.9	1611.8	1471.0
32.5°	2560.2	2556.9	2537.7	2500.6	2455.5	2355.2	2216.7	2071.4	1902.4	1726.7	1562.3
35°	2773.1	2747.2	2729.2	2692.0	2615.5	2508.5	2346.3	2187.4	2009.5	1829.2	1645.6
37.5°	2953.4	2928.6	2906.1	2858.8	2765.3	2629.0	2445.3	2270.8	2087.2	1903.6	1716.6
40°	3085.1	3072.7	3045.7	2983.8	2879.1	2716.9	2518.6	2328.2	2143.5	1958.8	1774.0
42.5°	3183.2	3164.0	3133.6	3069.4	2945.4	2760.7	2547.9	2351.9	2169.4	1992.6	1811.2
45°	3219.2	3203.5	3175.2	3105.4	2971.4	2773.1	2546.7	2345.1	2170.5	2002.7	1836.0
47.5°	3197.8	3182.0	3157.3	3091.9	2960.2	2758.5	2526.4	2326.0	2159.3	2006.1	1858.5
50°	3126.8	3117.8	3098.7	3043.5	2925.2	2730.4	2508.5	2315.8	2157.0	2023.0	1890.0
52.5°	3120.1	3114.4	3090.8	3035.6	2915.1	2721.3	2506.2	2321.5	2176.2	2044.4	1912.6
55°	3812.8	3732.8	3553.7	3401.7	3151.6	2854.2	2619.9	2412.7	2257.3	2128.9	2036.5
57.5°	5419.0	5299.6	5064.2	4774.7	4200.3	3635.9	3184.3	2857.6	2696.6	2638.0	2672.9
60°	6171.4	6150.0	6112.9	5975.4	5681.5	5196.0	4655.3	4070.7	3836.4	3816.2	3887.2
62.5°	6528.5	6515.0	6526.3	6509.3	6418.1	6276.2	6120.8	5868.4	5636.4	5486.6	5168.9
65°	6692.9	6702.0	6766.1	6816.9	6828.1	6865.3	6979.1	7293.3	7523.1	7136.7	6254.8
67.5°	6275.1	6328.0	6475.5	6660.3	6876.5	7086.0	7423.9	8086.2	8558.2	8104.3	6851.8
69°	5194.9	5220.8	5581.2	5929.2	6457.6	6827.0	7317.0	8185.4	8715.9	8203.4	6804.5
70°	4089.9	4113.5	4499.9	4972.9	5866.2	6341.5	6982.4	8017.5	8568.4	8071.6	6561.2
72.5°	1845.0	1811.2	1947.5	2200.9	3171.9	3926.5	5047.3	6495.8	7069.1	6466.5	4908.8
75°	1288.5	1273.9	1288.5	1289.7	1440.6	1858.5	2345.1	3521.0	4354.6	3757.6	2345.1
77.5°	998.0	987.8	977.7	966.4	984.5	1102.7	1150.0	1249.2	1622.0	1534.1	894.3
80°	789.6	780.6	805.4	797.5	797.5	811.0	802.0	764.8	695.0	644.3	576.7
82.5°	367.2	369.5	369.5	401.0	483.2	564.3	590.2	553.1	491.1	417.9	336.8
85°	34.9	39.4	66.5	102.5	203.9	229.8	230.9	191.5	191.5	150.9	121.7
87.5°	0.0	1.1	1.1	1.1	10.1	28.1	23.6	6.8	3.3	3.3	5.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3
2.5°	599.3	595.8	582.3	568.8	556.4	542.9	530.5	518.2	504.6	494.5	482.1
5°	700.6	675.8	647.7	620.7	593.6	565.5	536.1	510.2	483.2	458.5	434.8
7.5°	803.1	754.7	716.4	668.0	624.0	580.1	539.6	497.9	459.6	423.5	389.8
10°	889.9	831.3	771.6	709.6	646.6	588.0	531.7	482.1	431.4	387.5	345.8
12.5°	960.8	886.5	813.2	735.5	664.5	590.2	520.4	460.7	401.0	351.4	308.7
15°	1025.0	939.4	851.6	761.5	671.3	586.9	509.1	434.8	373.9	317.6	269.2
17.5°	1076.8	978.8	879.7	778.3	681.5	582.3	494.5	416.8	345.8	287.2	239.9
20°	1121.9	1019.4	912.4	798.6	688.2	581.2	482.1	394.2	321.0	259.0	212.9
22.5°	1163.5	1061.1	946.2	824.5	698.3	580.1	470.9	377.4	299.6	237.7	191.5
25°	1210.9	1102.7	982.2	851.6	716.4	584.6	464.1	363.8	280.4	217.4	174.6
27.5°	1263.8	1150.0	1025.0	885.3	740.0	593.6	461.8	349.2	263.6	198.2	161.1
30°	1338.2	1206.3	1067.8	919.1	761.5	603.7	459.6	340.1	246.6	183.6	147.6
32.5°	1403.4	1261.5	1115.1	954.0	785.1	613.9	458.5	327.7	230.9	169.0	137.4
35°	1472.2	1312.2	1155.7	987.8	805.4	625.1	457.3	318.8	216.3	154.3	127.3
37.5°	1531.8	1355.0	1187.2	1017.1	827.9	635.3	458.5	310.9	202.8	141.9	118.2
40°	1582.6	1399.0	1222.1	1044.1	851.6	651.0	459.6	303.0	189.2	130.6	110.4
42.5°	1627.6	1440.6	1259.3	1074.6	878.6	669.1	466.3	296.3	177.9	120.5	102.5
45°	1662.6	1479.0	1299.8	1117.4	922.5	698.3	478.7	291.7	166.7	111.5	95.7
47.5°	1698.6	1535.3	1368.5	1184.9	986.7	744.5	500.1	290.6	157.7	104.7	90.1
50°	1748.1	1591.6	1429.4	1253.6	1045.3	791.8	526.0	291.7	146.5	98.0	84.4
52.5°	1784.2	1649.0	1508.2	1373.1	1184.9	936.0	626.3	312.0	140.8	92.4	77.7
55°	1997.1	1973.4	1976.8	1999.4	1854.0	1592.7	1047.5	450.6	165.5	104.7	76.6
57.5°	2815.9	2899.3	2947.7	2946.6	2706.7	2244.9	1406.8	579.0	184.7	121.7	91.2
60°	3892.7	3829.7	3740.7	3521.0	3202.3	2562.5	1573.6	622.9	160.0	96.8	83.3
62.5°	4844.5	4475.1	4147.3	3791.4	3373.5	2672.9	1607.4	619.5	139.7	73.2	58.6
65°	5438.2	4773.6	4244.2	3798.1	3305.9	2580.5	1520.6	568.8	118.2	59.7	48.4
67.5°	5580.1	4612.5	3863.5	3294.7	2761.9	2008.3	1116.2	428.0	92.4	49.5	42.8
69°	5270.3	4100.0	3201.2	2555.8	2009.5	1332.5	690.5	270.3	70.9	45.1	39.4
70°	4848.0	3566.1	2607.5	2051.1	1487.9	936.0	483.2	190.3	57.4	41.7	36.0
72.5°	3118.9	1873.2	1281.8	892.1	613.9	372.8	189.2	85.6	43.9	34.9	29.3
75°	1209.7	692.7	502.3	381.8	298.5	207.3	114.9	55.2	37.1	29.3	22.5
77.5°	595.8	456.2	372.8	255.7	148.7	92.4	61.9	42.8	30.4	21.4	14.6
80°	470.9	313.1	187.0	116.0	87.9	66.5	47.3	34.9	22.5	13.5	10.1
82.5°	241.1	131.8	96.8	78.9	65.4	51.8	38.3	24.8	14.6	9.0	7.9
85°	75.5	55.2	49.5	48.4	45.1	37.1	27.0	15.7	9.0	5.6	5.6
87.5°	5.6	7.9	10.1	7.9	9.0	7.9	10.1	6.8	4.5	4.5	3.3
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3
2.5°	473.1	459.6	447.2	439.3	424.7	419.0	413.4	411.1	401.0	403.3	394.2
5°	413.4	389.8	371.7	353.7	336.8	324.4	314.2	301.9	291.7	287.2	278.2
7.5°	359.3	328.9	305.2	286.1	265.8	250.1	236.5	227.6	218.5	209.5	205.0
10°	312.0	279.3	252.3	233.1	214.0	200.5	190.3	183.6	177.9	174.6	173.5
12.5°	268.1	236.5	211.7	194.9	180.2	173.5	169.0	165.5	164.4	163.3	163.3
15°	234.3	202.8	183.6	171.2	164.4	161.1	160.0	157.7	155.4	154.3	154.3
17.5°	202.8	179.1	165.5	158.8	155.4	153.2	150.9	148.7	146.5	145.3	145.3
20°	181.4	162.2	155.4	150.9	147.6	145.3	141.9	139.7	138.5	137.4	136.3
22.5°	164.4	152.0	147.6	144.2	139.7	136.3	134.1	131.8	129.5	128.4	127.3
25°	152.0	144.2	140.8	136.3	131.8	128.4	125.0	121.7	119.4	118.2	116.0
27.5°	143.0	137.4	132.9	127.3	122.8	119.4	116.0	112.7	110.4	108.1	107.0
30°	135.2	129.5	123.9	119.4	113.8	110.4	105.9	102.5	101.4	99.1	96.8
32.5°	127.3	121.7	116.0	110.4	104.7	100.3	98.0	93.5	91.2	90.1	87.9
35°	118.2	112.7	105.9	101.4	95.7	91.2	87.9	84.4	82.2	80.0	78.9
37.5°	110.4	103.6	96.8	91.2	86.7	82.2	78.9	75.5	73.2	70.9	69.8
40°	101.4	94.6	87.9	82.2	77.7	74.3	70.9	67.6	65.4	64.2	64.2
42.5°	93.5	85.6	78.9	74.3	70.9	66.5	63.1	59.7	58.6	57.4	58.6
45°	85.6	77.7	72.1	67.6	64.2	59.7	56.3	54.1	53.0	54.1	55.2
47.5°	78.9	70.9	65.4	61.9	58.6	55.2	51.8	49.5	49.5	51.8	54.1
50°	72.1	64.2	59.7	57.4	54.1	50.7	46.2	45.1	46.2	48.4	50.7
52.5°	65.4	56.3	53.0	51.8	48.4	45.1	41.7	40.6	41.7	43.9	42.8
55°	58.6	49.5	48.4	47.3	43.9	39.4	36.0	36.0	36.0	34.9	32.7
57.5°	56.3	43.9	42.8	41.7	38.3	33.8	31.6	29.3	28.1	24.8	23.6
60°	58.6	39.4	39.4	37.1	33.8	29.3	25.9	22.5	20.3	18.0	18.0
62.5°	47.3	36.0	34.9	32.7	28.1	23.6	20.3	16.9	15.7	14.6	14.6
65°	38.3	32.7	30.4	27.0	23.6	19.2	15.7	13.5	12.4	12.4	13.5
67.5°	34.9	29.3	25.9	22.5	19.2	14.6	12.4	11.3	11.3	12.4	12.4
69°	32.7	27.0	23.6	20.3	16.9	13.5	11.3	11.3	11.3	11.3	12.4
70°	30.4	25.9	22.5	19.2	14.6	11.3	10.1	10.1	11.3	11.3	12.4
72.5°	23.6	20.3	19.2	15.7	11.3	10.1	9.0	10.1	10.1	11.3	11.3
75°	18.0	14.6	14.6	12.4	9.0	7.9	7.9	9.0	9.0	10.1	10.1
77.5°	12.4	10.1	10.1	9.0	7.9	6.8	6.8	7.9	9.0	9.0	10.1
80°	9.0	7.9	6.8	7.9	6.8	5.6	6.8	7.9	7.9	9.0	9.0
82.5°	6.8	6.8	6.8	6.8	5.6	5.6	6.8	6.8	7.9	9.0	9.0
85°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	6.8	6.8	7.9	7.9
87.5°	3.3	3.3	3.3	4.5	4.5	5.6	5.6	5.6	5.6	6.8	6.8
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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CATALOG NUMBER: LDRL-SL4-F05-E-8030-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	519.3	519.3	519.3	519.3
2.5°	392.0	390.9	386.3	387.5
5°	274.9	268.1	272.6	271.4
7.5°	201.6	200.5	199.3	201.6
10°	172.3	172.3	171.2	172.3
12.5°	162.2	162.2	162.2	162.2
15°	154.3	154.3	153.2	153.2
17.5°	145.3	145.3	145.3	144.2
20°	136.3	135.2	135.2	135.2
22.5°	126.2	125.0	125.0	125.0
25°	116.0	114.9	114.9	114.9
27.5°	105.9	104.7	103.6	103.6
30°	95.7	94.6	93.5	93.5
32.5°	85.6	84.4	83.3	83.3
35°	76.6	76.6	75.5	74.3
37.5°	68.7	68.7	68.7	68.7
40°	63.1	64.2	64.2	64.2
42.5°	59.7	60.8	61.9	63.1
45°	57.4	59.7	60.8	60.8
47.5°	56.3	57.4	58.6	58.6
50°	51.8	50.7	50.7	50.7
52.5°	41.7	39.4	38.3	37.1
55°	30.4	29.3	27.0	27.0
57.5°	21.4	21.4	20.3	20.3
60°	16.9	16.9	15.7	16.9
62.5°	14.6	14.6	14.6	14.6
65°	13.5	13.5	13.5	13.5
67.5°	13.5	13.5	13.5	13.5
69°	12.4	12.4	12.4	12.4
70°	12.4	12.4	12.4	12.4
72.5°	11.3	11.3	11.3	11.3
75°	10.1	11.3	11.3	11.3
77.5°	10.1	10.1	10.1	10.1
80°	9.0	9.0	10.1	10.1
82.5°	9.0	9.0	9.0	9.0
85°	7.9	7.9	9.0	9.0
87.5°	6.8	6.8	7.9	7.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)