

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: P145429

Luminaire Tested: **LDRL-SL4-E02-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145429
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33703)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-E02-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (42) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5264.6 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

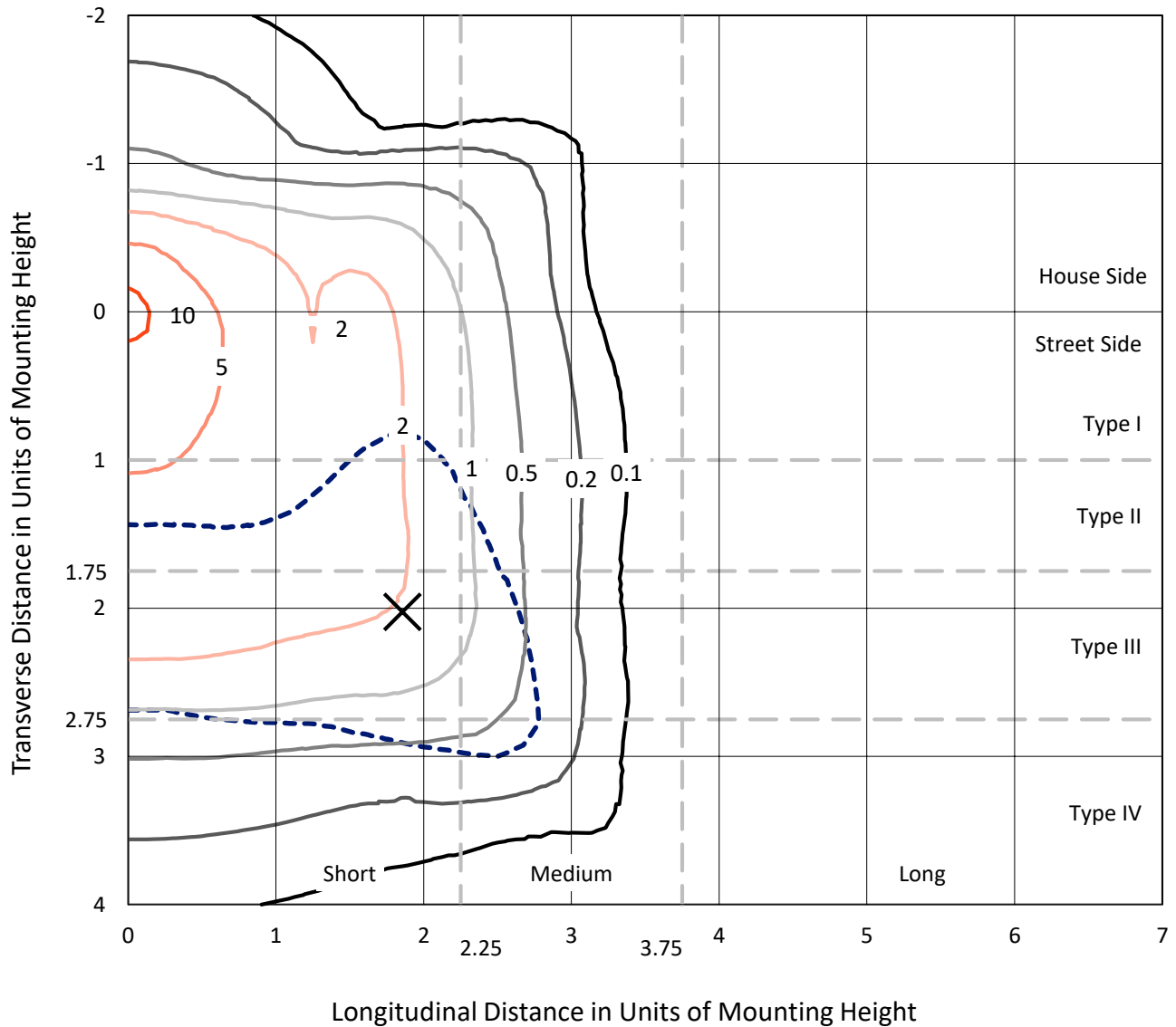
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P145429
 CATALOG NUMBER: LDRL-SL4-E02-E-7030

Iso-Footcandle Lines of Horizontal Illumination

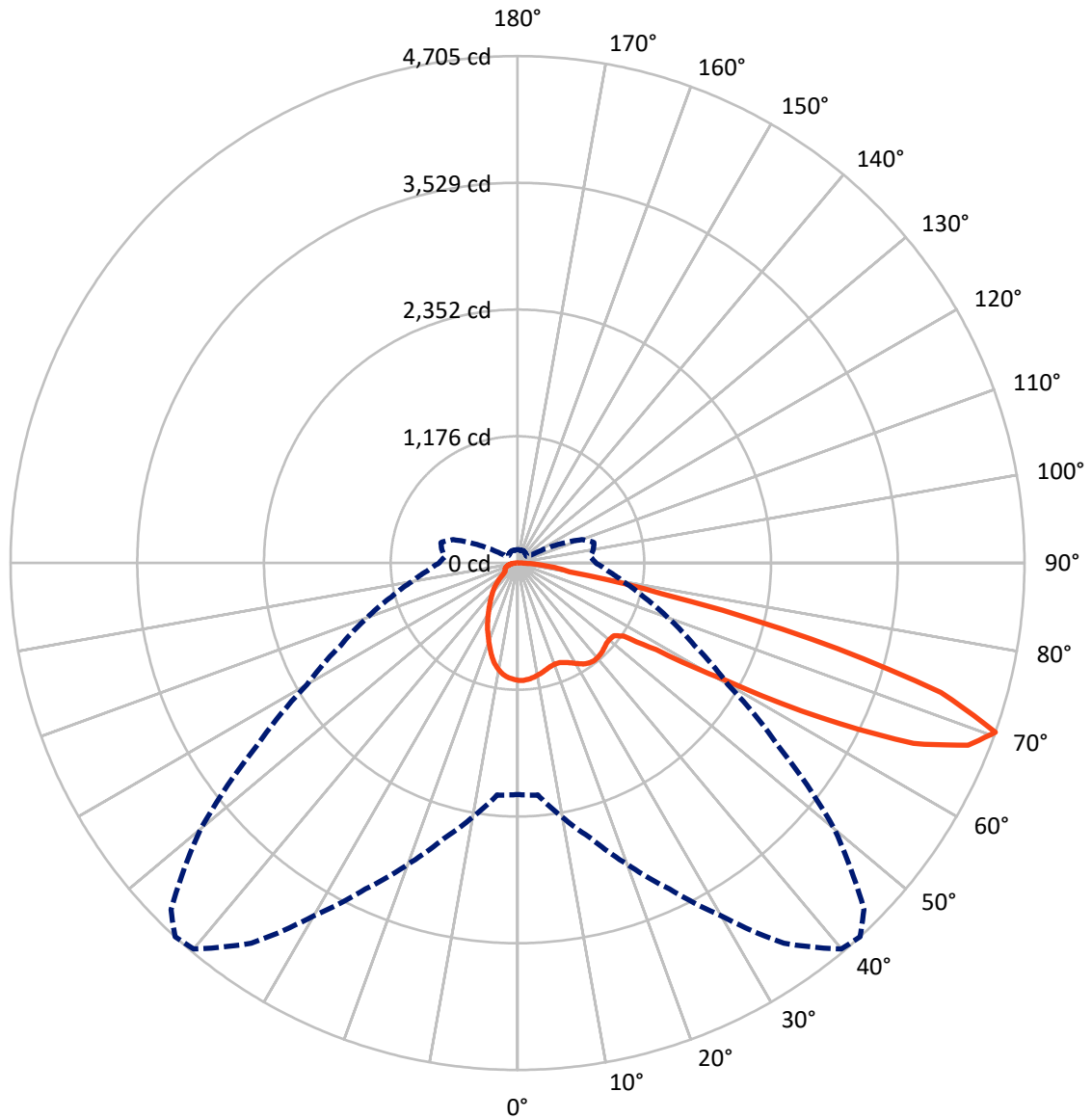
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P145429
CATALOG NUMBER: LDRL-SL4-E02-E-7030

Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P145429

CATALOG NUMBER: LDRL-SL4-E02-E-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1137.3	0.0	1137.3
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	4127.4	0.0	4127.4
	% Fixture	78.4	0.0	78.4
Total	Lumens	5264.6	0.0	5264.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	1.9
10°-20°	272.9	5.2
20°-30°	398.0	7.6
30°-40°	507.7	9.6
40°-50°	592.5	11.3
50°-60°	906.2	17.2
60°-70°	1642.6	31.2
70°-80°	730.4	13.9
80°-90°	113.0	2.1
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°	5264.6	100.0
0°-180°	5264.6	100.0

Coefficient of Utilization



REPORT NUMBER: P145429

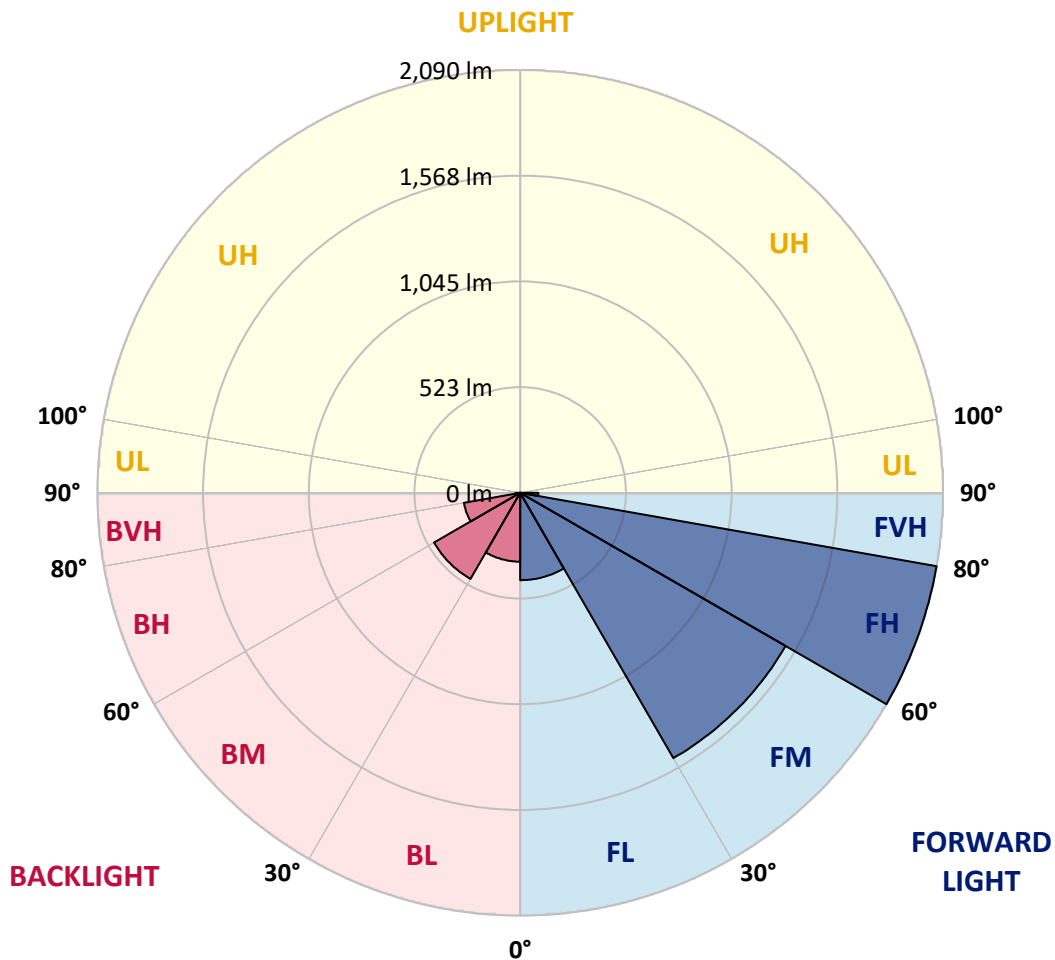
CATALOG NUMBER: LDRL-SL4-E02-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	431.8	8.2			
FM	(30°-60°)	1514.8	28.8			
FH	(60°-80°)	2090.5	39.7			G2/5000
FVH	(80°-90°)	90.3	1.7			G1/100
BL	(0°-30°)	340.4	6.5	B1/500		
BM	(30°-60°)	491.6	9.3	B1/1000		
BH	(60°-80°)	282.5	5.4	B1/500		G1/500
BVH	(80°-90°)	22.7	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





REPORT NUMBER: P145429

CATALOG NUMBER: LDRL-SL4-E02-E-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7
2.5°	1093.8	1092.7	1093.5	1094.2	1094.2	1094.6	1091.3	1091.6	1090.2	1090.5	1090.9
5°	1089.8	1088.7	1089.4	1089.4	1089.4	1089.1	1084.7	1084.3	1082.5	1082.5	1081.8
7.5°	1082.1	1078.1	1080.3	1080.7	1079.9	1078.1	1075.6	1073.0	1071.9	1071.9	1069.4
10°	1070.4	1066.1	1067.2	1067.9	1067.5	1063.9	1062.8	1060.2	1057.3	1056.2	1053.3
12.5°	1055.5	1052.5	1054.0	1053.6	1053.6	1050.4	1048.5	1044.9	1041.2	1039.4	1035.7
15°	1046.0	1042.3	1043.8	1043.8	1042.3	1039.0	1036.5	1029.9	1023.7	1021.5	1016.7
17.5°	1051.8	1048.2	1049.6	1048.5	1046.0	1039.0	1032.5	1021.9	1012.0	1006.1	999.9
20°	1075.2	1071.5	1072.6	1071.9	1068.3	1056.9	1044.9	1026.6	1008.3	999.6	990.1
22.5°	1112.5	1109.5	1111.4	1110.3	1104.4	1089.8	1071.9	1045.6	1018.2	1005.1	991.5
25°	1167.6	1166.9	1169.8	1166.5	1158.1	1136.2	1110.3	1074.8	1039.0	1022.6	1003.6
27.5°	1234.1	1227.9	1232.3	1229.4	1223.5	1195.8	1160.7	1115.7	1070.1	1048.5	1025.9
30°	1294.0	1288.6	1296.6	1295.1	1286.4	1257.9	1213.7	1161.1	1109.5	1082.1	1056.2
32.5°	1363.4	1356.5	1362.7	1362.7	1349.6	1311.2	1260.8	1200.5	1146.4	1117.2	1086.2
35°	1436.2	1428.8	1434.7	1432.9	1409.5	1358.7	1295.5	1230.1	1170.5	1140.6	1108.8
37.5°	1503.7	1502.6	1504.1	1492.0	1459.5	1394.5	1318.9	1245.8	1182.6	1151.2	1117.9
40°	1571.3	1568.8	1562.6	1541.4	1493.9	1415.7	1330.9	1251.3	1183.3	1150.5	1116.8
42.5°	1613.7	1609.0	1598.4	1569.5	1510.0	1420.8	1327.3	1242.9	1174.6	1141.0	1108.1
45°	1628.3	1623.6	1610.8	1578.3	1510.3	1412.8	1313.0	1226.1	1158.1	1127.4	1094.2
47.5°	1616.3	1613.3	1601.7	1569.1	1498.6	1397.8	1295.1	1209.3	1142.4	1112.5	1081.4
50°	1595.8	1594.0	1583.7	1553.8	1487.7	1388.7	1286.7	1201.2	1138.0	1110.3	1081.0
52.5°	1647.0	1641.5	1623.2	1587.8	1510.7	1405.1	1299.9	1213.3	1148.3	1120.1	1090.2
55°	2275.7	2235.2	2144.5	1974.7	1736.8	1552.3	1397.1	1292.6	1222.4	1195.0	1166.5
57.5°	2992.9	2950.5	2912.9	2783.2	2500.8	2152.2	1838.8	1655.4	1529.7	1517.6	1506.3
60°	3269.1	3282.6	3279.3	3231.1	3086.4	2920.9	2658.6	2441.9	2201.9	2192.0	2206.3
62.5°	3459.4	3470.7	3472.2	3457.6	3410.5	3355.3	3300.5	3231.1	3185.4	3165.7	3038.2
65°	3538.0	3554.4	3590.6	3617.6	3625.3	3644.3	3694.0	3882.8	4040.3	4039.2	3889.8
67.5°	3238.0	3257.7	3394.7	3529.2	3642.1	3772.9	3974.2	4281.4	4518.5	4511.2	4388.8
70°	2148.9	2161.4	2394.1	2647.3	2975.7	3338.8	3778.7	4308.5	4676.0	4704.9	4547.0
72.5°	1318.1	1346.6	1422.6	1525.3	1700.7	2037.1	2691.1	3596.4	4135.7	4108.6	3982.9
75°	890.0	891.4	889.2	900.2	910.1	978.0	1241.4	1977.6	2801.4	2816.0	2762.0
77.5°	608.3	616.3	620.7	617.8	627.7	624.7	640.1	677.7	1073.7	1370.4	1259.3
80°	531.6	534.9	539.6	532.7	514.4	504.2	518.4	504.9	475.7	491.4	470.6
82.5°	336.5	346.3	347.4	371.6	407.4	408.8	427.1	413.6	376.3	351.8	321.9
85°	241.9	245.5	252.1	253.5	241.1	230.5	237.1	225.8	203.5	190.3	168.4
87.5°	141.0	144.7	151.3	147.2	134.8	119.5	107.8	92.8	73.4	68.7	60.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P145429

CATALOG NUMBER: LDRL-SL4-E02-E-7030

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7
2.5°	1091.3	1089.4	1088.0	1087.3	1088.7	1087.3	1085.8	1085.1	1083.6	1084.0	1082.1
5°	1081.0	1078.5	1076.3	1074.5	1075.9	1073.4	1071.2	1069.7	1067.9	1067.5	1065.7
7.5°	1066.8	1062.8	1059.9	1056.6	1052.9	1050.7	1048.2	1045.6	1041.6	1041.2	1040.5
10°	1048.2	1044.9	1039.0	1033.9	1028.8	1023.3	1017.8	1013.8	1009.1	1007.2	1004.7
12.5°	1029.5	1023.0	1016.0	1008.0	1001.8	993.0	985.7	978.0	971.1	966.7	961.9
15°	1007.6	1000.7	990.8	983.1	974.4	964.5	955.0	943.7	932.3	925.4	918.8
17.5°	988.6	979.8	971.8	960.8	952.1	940.8	926.5	914.4	900.9	889.6	877.5
20°	974.0	964.1	954.6	944.8	934.2	921.4	905.7	888.5	871.3	855.3	837.4
22.5°	968.2	952.4	941.8	932.7	921.8	907.1	889.6	868.4	847.2	826.8	805.9
25°	973.3	949.9	933.4	923.2	913.4	898.4	878.6	854.5	829.7	803.7	778.9
27.5°	987.1	957.6	934.2	918.1	906.8	892.2	870.2	845.0	816.9	787.7	761.0
30°	1007.2	970.3	941.1	918.1	901.3	884.5	860.7	832.2	802.7	772.0	742.0
32.5°	1029.2	984.6	949.5	919.2	893.3	872.1	847.2	819.5	788.0	755.5	723.4
35°	1045.6	994.8	953.2	915.2	881.9	855.3	828.6	801.6	770.9	738.0	705.8
37.5°	1052.5	998.8	952.4	906.8	866.2	837.0	809.2	782.2	752.6	721.5	692.0
40°	1052.9	998.8	948.1	895.4	849.8	818.0	788.8	763.6	735.8	709.1	682.8
42.5°	1046.0	993.7	940.0	884.9	837.7	801.9	772.0	746.0	723.7	700.0	677.7
45°	1033.5	983.5	932.7	879.0	833.3	797.9	765.8	741.3	721.2	700.0	680.6
47.5°	1024.0	977.7	933.1	887.4	843.9	807.4	772.7	746.8	729.6	712.8	698.9
50°	1025.9	979.8	937.5	894.0	851.2	814.3	780.7	758.4	748.2	742.7	739.4
52.5°	1035.4	988.6	956.5	927.6	913.7	891.1	872.4	855.6	858.2	845.0	828.2
55°	1133.3	1117.6	1154.5	1181.1	1194.3	1217.3	1250.6	1218.8	1214.4	1173.8	1053.3
57.5°	1521.6	1558.9	1615.5	1655.7	1659.7	1652.8	1625.4	1599.1	1556.3	1495.3	1326.6
60°	2173.0	2164.3	2111.7	2041.2	1986.4	1914.4	1842.0	1781.0	1712.3	1618.8	1439.1
62.5°	2858.1	2646.9	2459.5	2299.8	2164.3	2044.1	1934.8	1843.1	1748.9	1614.4	1423.0
65°	3411.2	3004.9	2674.7	2417.8	2216.2	2046.3	1905.2	1778.8	1652.8	1497.2	1311.6
67.5°	3806.5	3162.0	2663.7	2302.4	2019.6	1785.8	1580.5	1436.5	1307.2	1184.8	1101.1
70°	3837.9	2944.6	2253.4	1811.4	1485.1	1210.4	997.4	840.3	727.8	677.0	713.1
72.5°	3279.7	2178.5	1498.3	1108.8	880.1	683.9	549.8	439.5	348.9	304.3	310.5
75°	1931.6	1046.0	674.8	502.7	410.6	328.1	283.9	239.7	211.5	169.5	135.5
77.5°	735.4	454.8	340.5	282.8	201.7	145.0	114.4	98.6	90.6	89.5	84.8
80°	423.8	333.6	233.5	152.7	111.8	94.6	81.1	69.4	64.7	63.6	65.4
82.5°	267.8	207.9	128.2	98.3	81.5	70.1	58.5	50.8	46.8	45.3	47.9
85°	138.5	104.1	78.2	67.2	62.5	57.0	46.8	39.1	38.7	40.6	46.8
87.5°	51.1	44.6	35.1	30.3	32.5	30.3	21.9	19.0	17.2	22.7	32.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P145429

CATALOG NUMBER: LDRL-SL4-E02-E-7030

CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7	1088.7
2.5°	1082.1	1081.4	1081.8	1081.0	1081.0	1082.1	1080.7	1079.6	1081.4	1081.4	1082.5
5°	1065.3	1066.1	1066.1	1065.7	1066.4	1068.3	1067.9	1067.9	1070.8	1071.9	1073.4
7.5°	1038.7	1039.8	1040.1	1041.2	1041.6	1044.1	1046.0	1048.2	1052.5	1053.6	1056.9
10°	1002.5	1001.8	1004.3	1004.0	1007.2	1009.4	1010.9	1015.6	1022.2	1025.9	1029.2
12.5°	959.7	959.7	961.2	961.6	964.5	967.4	969.2	975.1	980.6	985.3	992.6
15°	914.4	913.0	909.7	909.3	910.4	913.4	917.4	921.8	930.2	937.1	943.3
17.5°	867.0	862.6	858.5	853.4	853.1	852.7	854.9	858.2	871.3	878.3	887.0
20°	824.9	815.4	805.9	795.3	789.1	786.2	787.3	791.7	804.1	813.2	822.4
22.5°	787.3	773.1	758.1	741.3	731.0	724.8	725.6	727.4	736.5	742.0	746.8
25°	755.2	735.4	714.6	693.1	678.8	669.3	668.9	668.9	664.9	665.6	663.1
27.5°	733.2	705.8	679.2	654.0	635.3	625.8	613.0	603.9	595.9	584.9	580.2
30°	712.0	683.9	653.6	625.8	603.5	584.9	561.2	541.4	525.7	510.7	498.0
32.5°	693.1	663.8	635.0	604.6	573.9	541.8	510.7	488.1	465.8	442.8	427.4
35°	676.2	648.8	620.0	585.6	542.5	500.5	465.4	434.8	408.5	380.7	358.4
37.5°	666.7	641.9	611.9	565.2	511.1	463.3	424.2	389.8	354.7	321.5	294.1
40°	662.0	640.1	603.5	544.4	483.0	431.8	388.4	347.1	305.8	266.7	238.2
42.5°	661.3	640.1	591.1	523.2	458.9	404.1	355.5	305.8	255.7	217.7	192.5
45°	667.8	639.3	578.0	504.2	437.3	379.2	320.8	262.3	210.8	177.6	163.7
47.5°	686.8	641.9	567.7	488.1	416.9	351.8	281.3	214.1	170.2	155.3	154.9
50°	717.5	653.6	565.5	476.4	396.8	317.5	234.9	171.3	150.2	149.4	153.4
52.5°	766.1	675.5	571.0	468.4	372.6	272.9	186.0	148.0	143.9	148.0	153.1
55°	873.2	714.6	578.3	454.1	333.6	216.3	153.1	140.3	142.1	146.9	151.6
57.5°	1067.9	795.7	586.0	422.0	270.4	166.2	137.7	137.4	140.7	144.7	149.1
60°	1191.4	895.8	604.6	374.5	204.2	137.4	131.9	135.5	139.6	142.5	146.1
62.5°	1195.4	922.1	614.5	323.7	152.0	125.7	126.8	133.7	138.5	139.6	141.4
65°	1118.3	872.4	569.9	263.4	126.0	119.1	123.1	129.3	134.1	134.8	136.3
67.5°	976.9	769.4	483.0	198.7	114.7	114.0	118.4	123.1	126.4	129.3	131.5
70°	735.8	635.0	388.4	154.2	107.8	107.0	111.4	115.4	118.4	122.0	125.7
72.5°	373.0	439.5	294.5	126.0	98.3	99.0	103.8	107.4	109.6	112.9	116.5
75°	127.1	191.8	186.3	101.9	87.7	90.6	92.8	96.8	100.1	102.3	104.1
77.5°	79.6	83.3	96.1	82.2	77.5	78.2	81.8	85.5	89.1	90.6	91.3
80°	66.5	66.9	67.2	65.8	66.1	68.3	70.5	74.5	78.2	78.9	79.3
82.5°	52.6	56.3	55.9	55.5	57.4	59.6	61.0	62.5	63.9	64.7	65.8
85°	46.4	45.7	46.0	47.1	45.7	44.2	43.8	43.8	46.0	48.6	49.7
87.5°	42.4	36.2	27.0	25.6	25.6	24.8	23.4	23.4	25.6	27.8	28.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P145429

CATALOG NUMBER: LDRL-SL4-E02-E-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1088.7	1088.7	1088.7	1088.7	1088.7
2.5°	1082.1	1082.5	1082.1	1082.1	1084.0
5°	1074.1	1075.6	1074.8	1075.9	1077.0
7.5°	1057.7	1061.3	1062.0	1065.0	1063.9
10°	1033.9	1036.5	1040.1	1043.0	1042.0
12.5°	996.3	1002.5	1008.0	1011.3	1010.5
15°	948.4	957.2	964.5	967.1	964.1
17.5°	897.3	902.8	911.5	913.4	916.3
20°	832.6	832.2	839.9	839.9	838.5
22.5°	748.2	753.7	753.7	748.6	746.0
25°	662.0	663.8	658.3	659.4	652.5
27.5°	575.4	570.7	566.3	568.1	563.0
30°	492.8	482.6	478.2	479.0	473.5
32.5°	413.6	401.5	397.1	391.3	386.5
35°	341.6	322.6	311.3	308.3	311.6
37.5°	271.1	257.6	244.0	234.2	235.3
40°	214.5	200.6	191.8	187.8	187.1
42.5°	177.2	169.2	167.3	167.7	167.7
45°	160.7	161.1	162.6	164.0	164.4
47.5°	157.5	159.7	162.2	164.0	164.4
50°	157.1	159.3	161.1	163.3	164.0
52.5°	156.7	158.2	159.3	160.4	161.5
55°	155.3	156.0	155.6	156.4	157.5
57.5°	151.6	152.0	151.3	151.6	153.8
60°	148.3	148.7	147.2	149.1	149.4
62.5°	144.3	143.9	143.2	144.3	144.3
65°	138.5	136.3	137.0	138.1	138.5
67.5°	131.5	129.3	129.3	130.1	131.2
70°	122.8	121.7	121.7	123.1	124.6
72.5°	112.9	113.6	115.8	118.0	120.2
75°	104.9	106.7	108.9	114.4	117.6
77.5°	94.6	95.0	96.8	102.3	108.1
80°	80.4	80.0	80.4	81.1	82.2
82.5°	63.6	62.8	60.6	61.4	59.9
85°	46.8	45.7	43.1	41.3	40.9
87.5°	27.0	27.0	25.9	24.5	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)