

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: P144541

Luminaire Tested: **LDRL-RW-E03-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144541
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-E03-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (63) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9246.3 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

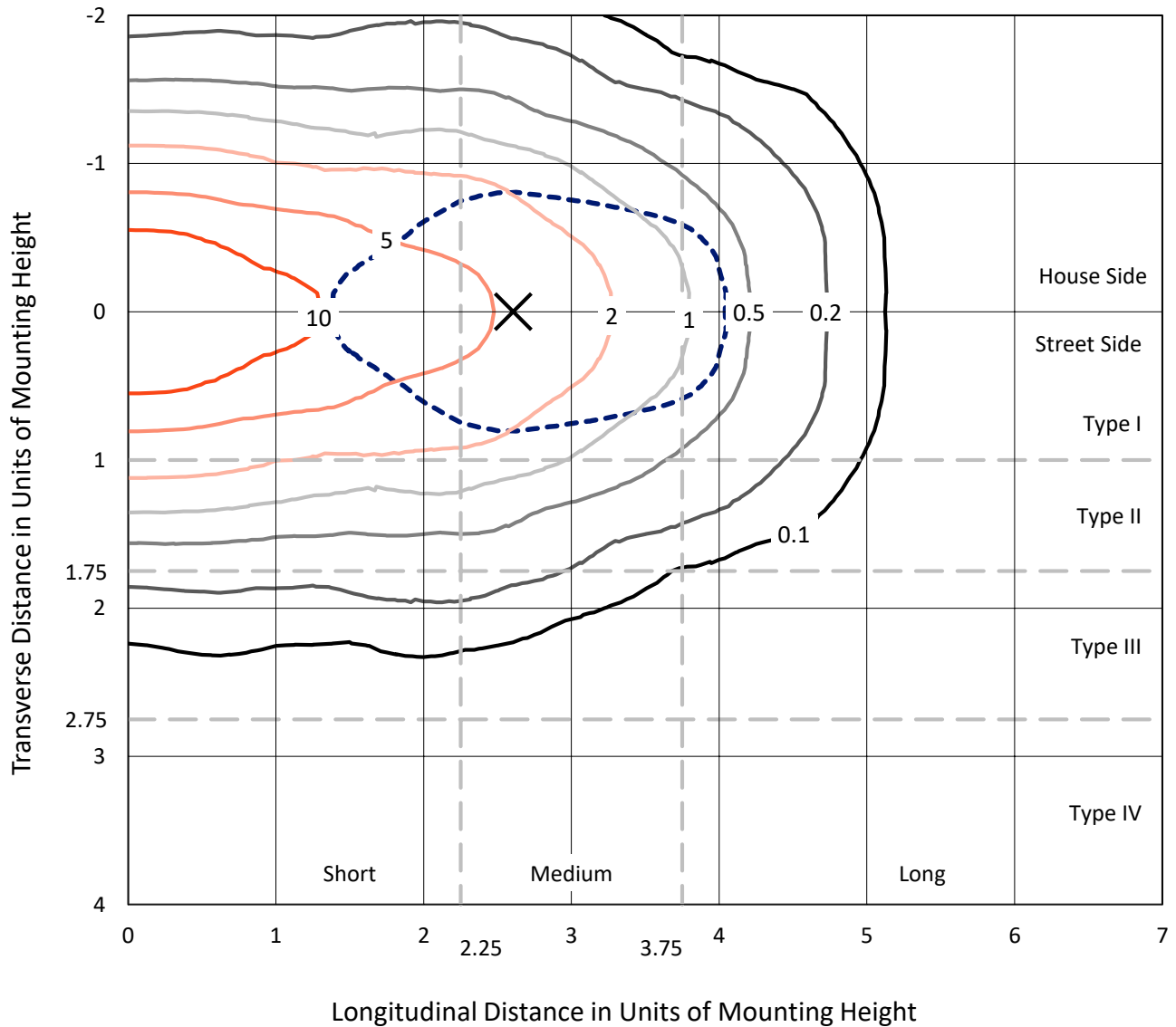
Input Watts (W): 75.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P144541
 CATALOG NUMBER: LDRL-RW-E03-E-7050

Iso-Footcandle Lines of Horizontal Illumination

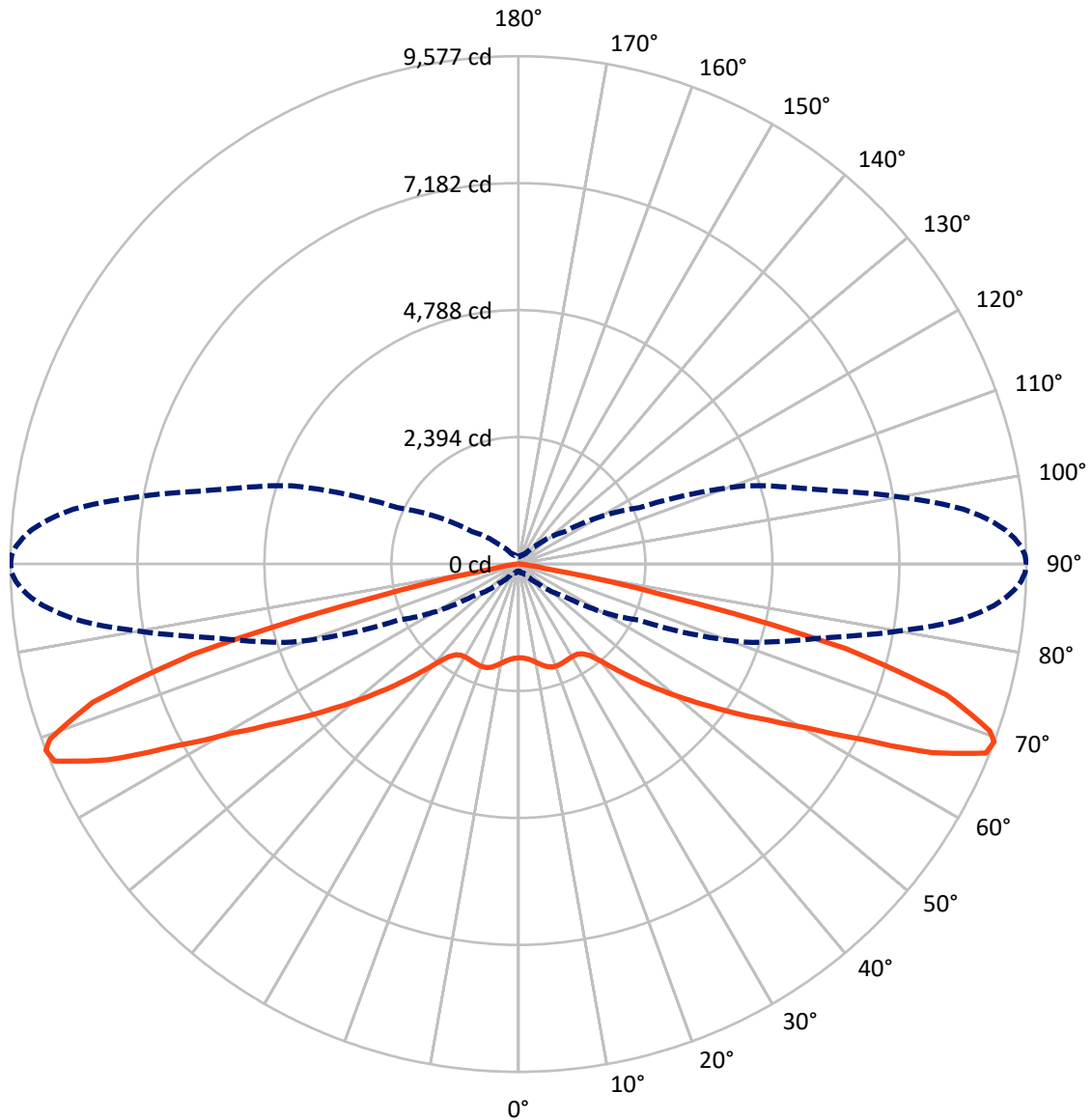
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.1 fc
 Type I - Short - Full Cutoff

REPORT NUMBER: P144541
CATALOG NUMBER: LDRL-RW-E03-E-7050

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P144541

CATALOG NUMBER: LDRL-RW-E03-E-7050

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4623.1	0.0	4623.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4623.1	0.0	4623.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	9246.3	0.0	9246.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.2	1.9
10°-20°	545.6	5.9
20°-30°	883.6	9.6
30°-40°	1100.8	11.9
40°-50°	1370.4	14.8
50°-60°	1681.5	18.2
60°-70°	2073.8	22.4
70°-80°	1289.2	13.9
80°-90°	128.1	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°	9246.3	100.0
0°-180°	9246.3	100.0



REPORT NUMBER: P144541

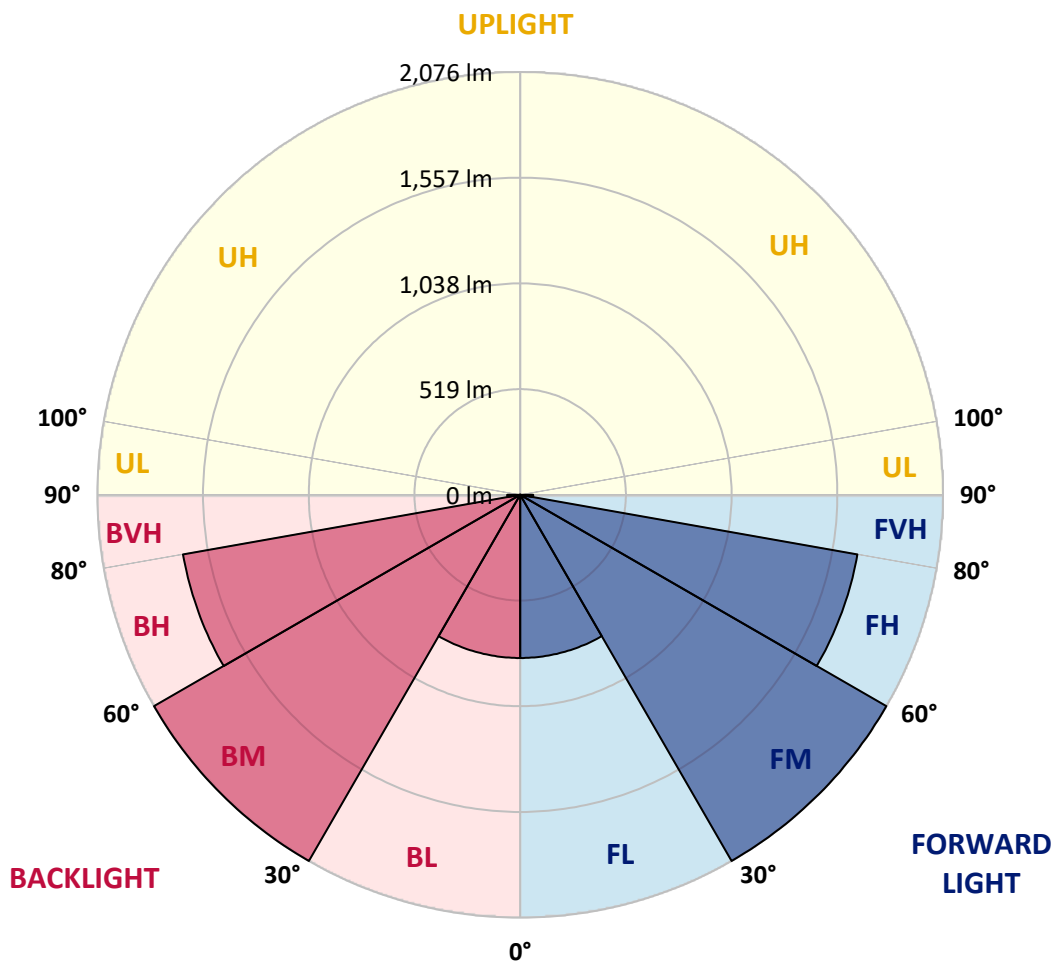
CATALOG NUMBER: LDRL-RW-E03-E-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	801.2	8.7			
FM	(30°-60°)	2076.3	22.5			
FH	(60°-80°)	1681.5	18.2			G1/1800
FVH	(80°-90°)	64.0	0.7			G1/100
BL	(0°-30°)	801.2	8.7	B2/1000		
BM	(30°-60°)	2076.3	22.5	B2/2500		
BH	(60°-80°)	1681.5	18.2	B3/2500		G3/2500
BVH	(80°-90°)	64.0	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type I Short





REPORT NUMBER: P144541

CATALOG NUMBER: LDRL-RW-E03-E-7050

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6
2.5°	1775.2	1773.4	1776.8	1779.8	1779.0	1779.6	1778.4	1776.8	1776.9	1777.0	1777.2
5°	1789.1	1787.2	1790.4	1793.2	1794.0	1796.2	1796.8	1795.9	1796.3	1796.8	1797.2
7.5°	1805.8	1804.2	1808.2	1811.9	1819.0	1822.7	1826.4	1830.0	1830.4	1830.7	1831.0
10°	1821.4	1820.5	1827.0	1835.0	1846.4	1855.0	1865.4	1875.6	1876.4	1877.2	1878.0
12.5°	1831.6	1831.6	1841.4	1855.9	1875.6	1893.2	1911.0	1928.2	1929.8	1931.5	1933.0
15°	1831.0	1832.2	1847.3	1873.8	1907.6	1938.7	1960.6	1979.4	1980.9	1982.4	1984.0
17.5°	1818.4	1818.7	1840.2	1882.4	1935.4	1981.6	2009.8	2020.0	2020.6	2021.1	2021.7
20°	1783.0	1785.4	1815.9	1877.2	1956.9	2020.6	2047.4	2043.1	2042.2	2041.2	2040.3
22.5°	1722.3	1725.4	1766.0	1848.2	1960.9	2045.8	2073.6	2054.2	2051.2	2048.2	2045.3
25°	1638.0	1643.2	1687.2	1792.6	1933.8	2053.2	2090.4	2059.4	2054.8	2050.2	2045.5
27.5°	1540.4	1542.9	1594.9	1705.4	1870.6	2028.6	2098.2	2070.2	2064.4	2058.6	2052.8
30°	1427.4	1433.9	1488.1	1603.5	1781.8	1971.4	2095.1	2091.1	2084.6	2078.2	2071.7
32.5°	1315.1	1320.6	1373.8	1498.2	1679.2	1891.6	2079.8	2122.8	2117.4	2112.0	2106.6
35°	1201.8	1208.6	1263.4	1397.0	1577.3	1801.2	2055.4	2168.0	2165.7	2163.4	2161.0
37.5°	1102.4	1106.6	1160.6	1299.4	1488.1	1718.4	2023.7	2228.7	2234.0	2239.3	2244.6
40°	1001.1	1005.4	1061.8	1203.9	1405.8	1647.5	1994.4	2305.0	2319.5	2334.0	2348.5
42.5°	903.8	907.5	962.0	1103.9	1314.4	1586.2	1976.9	2397.4	2425.2	2452.9	2480.7
45°	804.0	806.5	857.6	995.8	1210.1	1514.8	1972.3	2501.2	2541.2	2581.3	2621.4
47.5°	705.8	711.7	764.3	895.5	1091.0	1412.6	1965.5	2616.0	2669.1	2722.2	2775.3
50°	612.0	618.4	672.6	797.0	975.8	1291.4	1931.0	2746.2	2810.9	2875.7	2940.5
52.5°	516.2	522.7	576.9	695.7	869.0	1154.7	1835.0	2882.8	2959.9	3036.9	3113.9
55°	414.0	416.5	472.2	591.3	762.2	1040.2	1682.0	3008.1	3101.4	3194.7	3287.9
57.5°	301.1	309.4	364.5	475.2	653.2	938.9	1487.4	3072.2	3188.6	3305.0	3421.4
60°	217.4	222.8	271.2	358.3	529.8	839.4	1314.8	3025.4	3180.8	3336.2	3491.6
62.5°	171.8	178.0	215.2	270.0	409.8	730.2	1202.1	2897.0	3115.0	3333.0	3551.0
65°	152.0	157.6	192.1	219.2	313.4	617.8	1131.3	2769.9	3064.1	3358.3	3652.5
67.5°	138.8	144.6	174.8	193.3	258.8	545.4	1097.7	2673.8	3013.6	3353.4	3693.2
69°	132.6	137.9	165.6	182.9	244.1	520.8	1061.7	2511.2	2848.1	3185.0	3522.0
70°	129.3	133.9	159.2	176.4	238.2	500.6	1008.4	2318.0	2643.1	2968.1	3293.2
72.5°	119.8	122.8	144.0	160.1	218.0	399.6	760.6	1635.6	1911.1	2186.7	2462.2
75°	106.2	109.9	128.7	143.4	166.2	240.1	476.2	949.4	1138.2	1327.0	1515.8
77.5°	91.1	95.4	110.8	134.2	133.9	156.4	289.0	545.2	636.9	728.7	820.4
80°	78.2	81.9	95.8	132.7	112.0	123.8	215.4	406.6	443.6	480.5	517.5
82.5°	61.2	64.3	80.4	109.6	89.6	94.2	164.0	370.3	395.4	420.4	445.5
85°	38.5	39.7	58.5	75.8	63.7	57.0	105.6	285.0	303.3	321.5	339.7
87.5°	15.4	18.8	28.3	27.1	27.4	22.8	34.2	102.8	112.2	121.5	130.9
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: P144541

CATALOG NUMBER: LDRL-RW-E03-E-7050

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6
2.5°	1777.3	1777.4	1776.8	1775.8	1776.8	1775.9	1776.2	1777.1	1776.8	1776.8	1776.2
5°	1797.6	1798.0	1798.0	1796.2	1797.2	1797.4	1797.8	1797.1	1797.4	1798.0	1796.8
7.5°	1831.3	1831.6	1832.6	1833.4	1832.8	1833.2	1833.8	1833.2	1832.2	1834.4	1832.8
10°	1878.8	1879.6	1879.6	1882.4	1881.2	1882.0	1884.8	1884.9	1883.4	1885.5	1884.8
12.5°	1934.6	1936.2	1936.0	1935.6	1936.9	1937.8	1940.9	1941.5	1942.1	1945.5	1944.3
15°	1985.5	1987.0	1988.3	1988.9	1991.0	1991.6	1993.5	1994.8	1995.6	1996.9	1997.5
17.5°	2022.2	2022.8	2024.6	2023.6	2026.8	2026.2	2028.3	2029.2	2030.2	2031.7	2032.6
20°	2039.4	2038.4	2038.8	2037.8	2037.8	2038.4	2038.8	2040.0	2039.4	2040.9	2042.2
22.5°	2042.4	2039.4	2037.6	2035.4	2034.4	2032.6	2032.6	2033.2	2031.1	2032.6	2034.4
25°	2040.9	2036.3	2033.0	2029.2	2025.8	2022.8	2021.0	2020.3	2018.8	2018.8	2020.3
27.5°	2047.0	2041.2	2036.3	2030.2	2025.8	2021.6	2017.6	2014.4	2011.4	2010.8	2010.8
30°	2065.2	2058.8	2053.2	2045.6	2038.8	2033.2	2027.7	2023.4	2017.6	2015.0	2012.3
32.5°	2101.2	2095.8	2088.0	2081.2	2073.2	2066.5	2059.1	2052.4	2045.6	2039.4	2036.9
35°	2158.7	2156.4	2152.0	2147.4	2139.8	2131.1	2125.0	2117.0	2109.2	2100.4	2097.8
37.5°	2249.9	2255.2	2252.7	2249.3	2247.2	2244.4	2236.0	2230.8	2225.6	2218.2	2216.7
40°	2362.9	2377.4	2391.8	2401.4	2398.0	2409.4	2411.2	2412.2	2407.6	2413.7	2415.0
42.5°	2508.5	2536.2	2562.4	2581.4	2603.6	2620.3	2641.8	2651.0	2668.6	2686.8	2697.2
45°	2661.5	2701.6	2739.0	2778.2	2816.6	2858.8	2899.8	2928.8	2970.9	3002.3	3022.0
47.5°	2828.5	2881.6	2926.6	2985.0	3040.8	3090.6	3162.4	3219.9	3271.4	3320.2	3371.7
50°	3005.2	3070.0	3125.4	3196.8	3264.6	3342.8	3426.8	3500.0	3580.7	3658.6	3727.8
52.5°	3190.9	3268.0	3342.8	3416.0	3498.2	3583.2	3674.3	3780.2	3876.8	3994.2	4078.2
55°	3381.2	3474.5	3554.2	3630.9	3718.0	3812.2	3920.6	4045.8	4168.6	4297.0	4424.4
57.5°	3537.8	3654.2	3741.4	3831.0	3924.8	4018.1	4152.6	4281.0	4436.8	4594.4	4753.8
60°	3647.0	3802.4	3908.0	4021.2	4129.8	4243.2	4388.2	4550.4	4745.2	4936.1	5152.8
62.5°	3769.0	3987.0	4135.1	4286.2	4418.3	4554.4	4748.3	4935.2	5185.4	5405.2	5678.0
65°	3946.8	4241.0	4459.0	4662.7	4840.0	5025.4	5255.3	5489.0	5775.2	6079.0	6421.1
67.5°	4033.0	4372.8	4658.1	4909.6	5136.2	5372.2	5609.6	5886.0	6208.6	6574.4	6949.9
69°	3858.8	4195.8	4523.9	4778.2	5016.7	5268.8	5522.8	5801.7	6119.4	6499.0	6897.0
70°	3618.3	3943.4	4292.1	4547.0	4787.7	5049.4	5308.0	5589.6	5893.4	6284.4	6687.0
72.5°	2737.8	3013.4	3352.0	3621.3	3874.4	4138.8	4405.1	4649.5	4957.6	5333.8	5704.8
75°	1704.7	1893.5	2197.9	2468.5	2672.0	2898.6	3148.5	3380.0	3689.3	3956.0	4312.8
77.5°	912.1	1003.8	1181.4	1375.4	1488.6	1599.2	1762.0	1887.6	2017.8	2172.0	2319.5
80°	554.4	591.4	652.0	693.8	678.2	632.9	618.4	573.2	589.5	561.8	541.8
82.5°	470.5	495.6	532.6	557.8	539.3	467.0	385.1	324.2	281.0	239.8	203.8
85°	357.9	376.2	395.2	406.7	405.8	369.8	293.7	227.5	177.3	137.2	114.2
87.5°	140.2	149.6	163.4	161.3	168.4	169.6	132.7	102.5	72.9	49.2	43.1
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: P144541

CATALOG NUMBER: LDRL-RW-E03-E-7050

CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6	1770.6
2.5°	1775.0	1774.6	1775.0	1775.9	1775.8	1776.5	1775.8	1776.2	1775.3	1774.3	1775.0
5°	1796.8	1796.2	1796.8	1797.4	1797.4	1796.8	1798.4	1798.4	1797.8	1796.8	1797.1
7.5°	1834.4	1834.6	1833.8	1836.8	1834.0	1834.4	1836.2	1835.9	1835.3	1835.6	1835.9
10°	1886.7	1886.4	1887.0	1888.9	1886.1	1888.0	1890.1	1890.7	1889.2	1889.2	1889.5
12.5°	1944.6	1947.0	1947.4	1948.6	1948.6	1950.1	1950.4	1950.8	1952.0	1952.3	1950.4
15°	2000.0	2001.8	2003.1	2004.3	2002.8	2004.9	2007.4	2007.4	2007.0	2008.3	2006.4
17.5°	2034.2	2035.6	2037.8	2037.6	2037.8	2039.7	2041.2	2041.8	2042.4	2042.4	2042.8
20°	2045.0	2045.8	2047.1	2048.3	2049.0	2050.8	2052.0	2052.9	2053.6	2053.0	2053.2
22.5°	2036.3	2037.5	2040.0	2041.0	2041.2	2044.0	2045.2	2046.2	2046.8	2047.4	2046.5
25°	2021.6	2022.8	2025.2	2026.2	2026.8	2029.2	2030.8	2033.0	2033.6	2033.8	2034.2
27.5°	2011.4	2012.0	2013.8	2015.0	2015.4	2018.2	2020.3	2021.8	2022.2	2022.4	2022.5
30°	2011.7	2011.7	2013.8	2014.2	2013.8	2016.3	2017.6	2018.4	2019.1	2019.1	2019.4
32.5°	2032.9	2031.7	2033.5	2030.8	2031.1	2030.8	2030.4	2031.4	2030.8	2031.1	2029.8
35°	2093.0	2089.6	2086.8	2088.0	2083.7	2077.6	2081.0	2079.4	2076.0	2076.3	2077.2
37.5°	2208.0	2204.7	2207.8	2205.0	2205.9	2197.3	2199.4	2191.8	2189.6	2192.4	2184.4
40°	2412.5	2411.0	2416.8	2414.4	2415.9	2418.4	2420.5	2413.1	2400.8	2411.9	2412.2
42.5°	2695.7	2709.5	2715.1	2722.8	2731.1	2727.4	2734.8	2736.9	2723.4	2733.6	2736.0
45°	3050.9	3065.7	3082.9	3088.2	3101.7	3103.6	3109.1	3110.6	3098.4	3099.6	3102.3
47.5°	3423.0	3450.2	3470.5	3484.6	3498.8	3501.6	3504.7	3498.8	3499.8	3502.6	3502.5
50°	3788.8	3846.6	3882.7	3910.7	3935.0	3922.4	3933.2	3934.1	3937.8	3930.1	3934.7
52.5°	4173.3	4250.0	4310.2	4357.4	4372.2	4417.0	4398.6	4412.8	4422.3	4408.2	4417.4
55°	4548.8	4658.1	4755.1	4823.4	4871.4	4917.0	4924.0	4960.8	4956.4	4970.2	4964.1
57.5°	4905.9	5058.6	5197.1	5298.4	5367.4	5436.9	5484.0	5524.0	5528.0	5567.8	5545.3
60°	5337.8	5550.5	5728.8	5879.6	5981.5	6084.9	6166.5	6232.0	6247.2	6315.2	6292.7
62.5°	5920.5	6180.0	6407.8	6584.8	6811.7	6921.0	7079.8	7179.0	7240.8	7257.8	7289.5
65°	6739.6	7077.7	7378.1	7661.3	7916.5	8093.5	8277.2	8425.0	8543.6	8533.7	8582.3
67.5°	7348.2	7733.6	8095.4	8434.9	8709.5	8937.3	9148.4	9308.2	9414.1	9481.5	9510.2
69°	7284.8	7698.6	8097.5	8460.1	8743.3	8998.0	9203.6	9360.8	9482.2	9555.4	9576.6
70°	7074.0	7499.1	7915.0	8270.8	8559.6	8839.1	9048.4	9223.6	9339.0	9419.0	9431.3
72.5°	6118.8	6579.3	6947.2	7335.3	7613.3	7896.2	8028.0	8245.0	8395.5	8444.1	8443.2
75°	4615.0	4999.2	5322.4	5609.3	5858.0	6049.8	6112.0	6266.5	6391.5	6390.0	6378.3
77.5°	2485.1	2575.6	2696.6	2737.2	2813.9	2812.6	2735.7	2760.0	2830.8	2693.6	2737.9
80°	533.2	525.2	518.4	514.4	512.2	513.2	516.0	498.4	515.6	508.0	475.3
82.5°	185.6	181.4	177.0	180.1	178.0	179.8	179.2	181.4	181.0	180.4	176.1
85°	104.4	100.6	98.5	100.0	96.6	93.6	91.4	90.5	90.2	88.1	86.8
87.5°	39.7	39.4	39.1	37.6	33.8	31.1	29.2	25.5	24.0	21.8	20.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)