

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: P144563

Luminaire Tested: **LDRL-RW-F05-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144563
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-F05-E-8030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (35) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10463.8 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

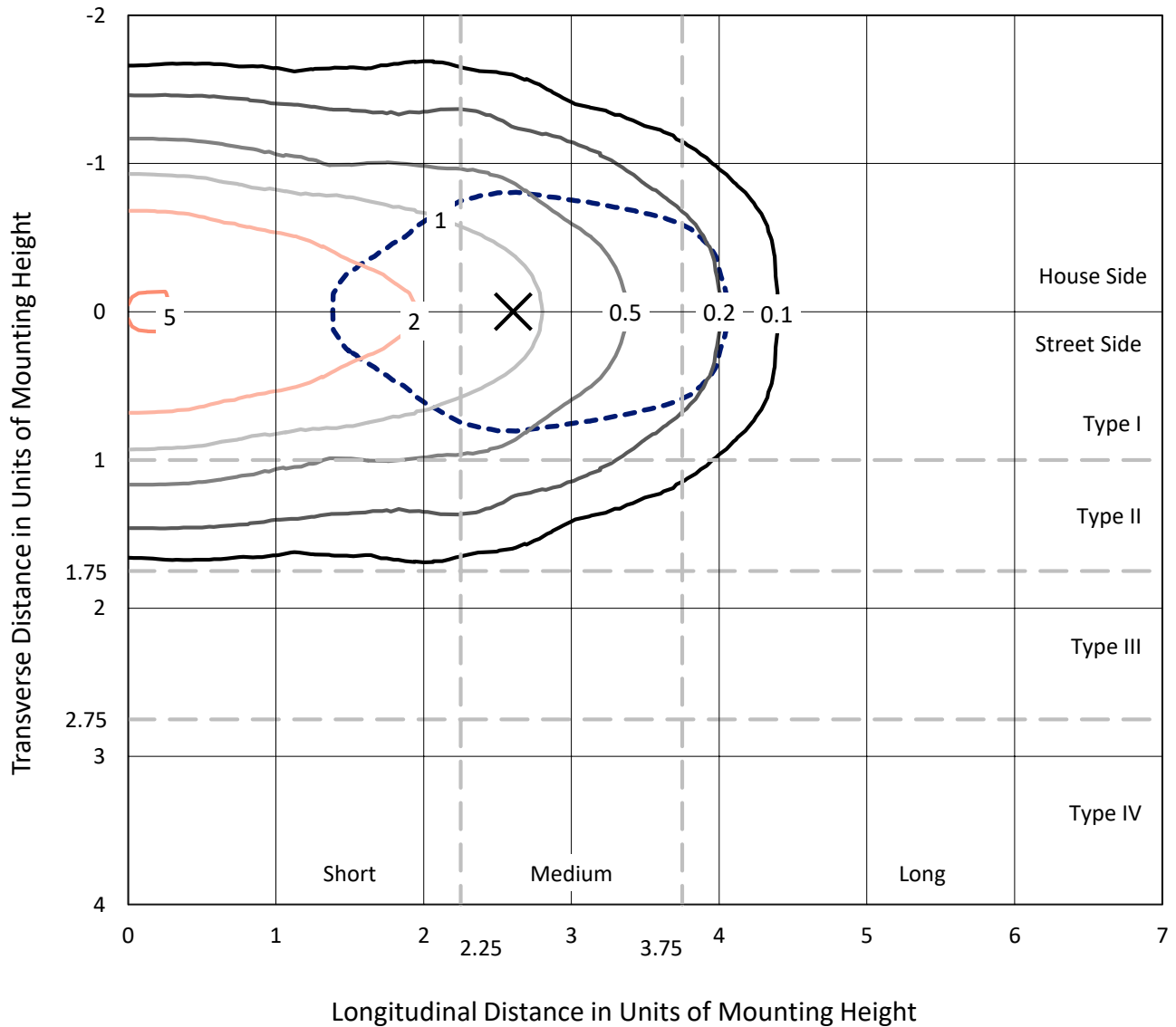
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

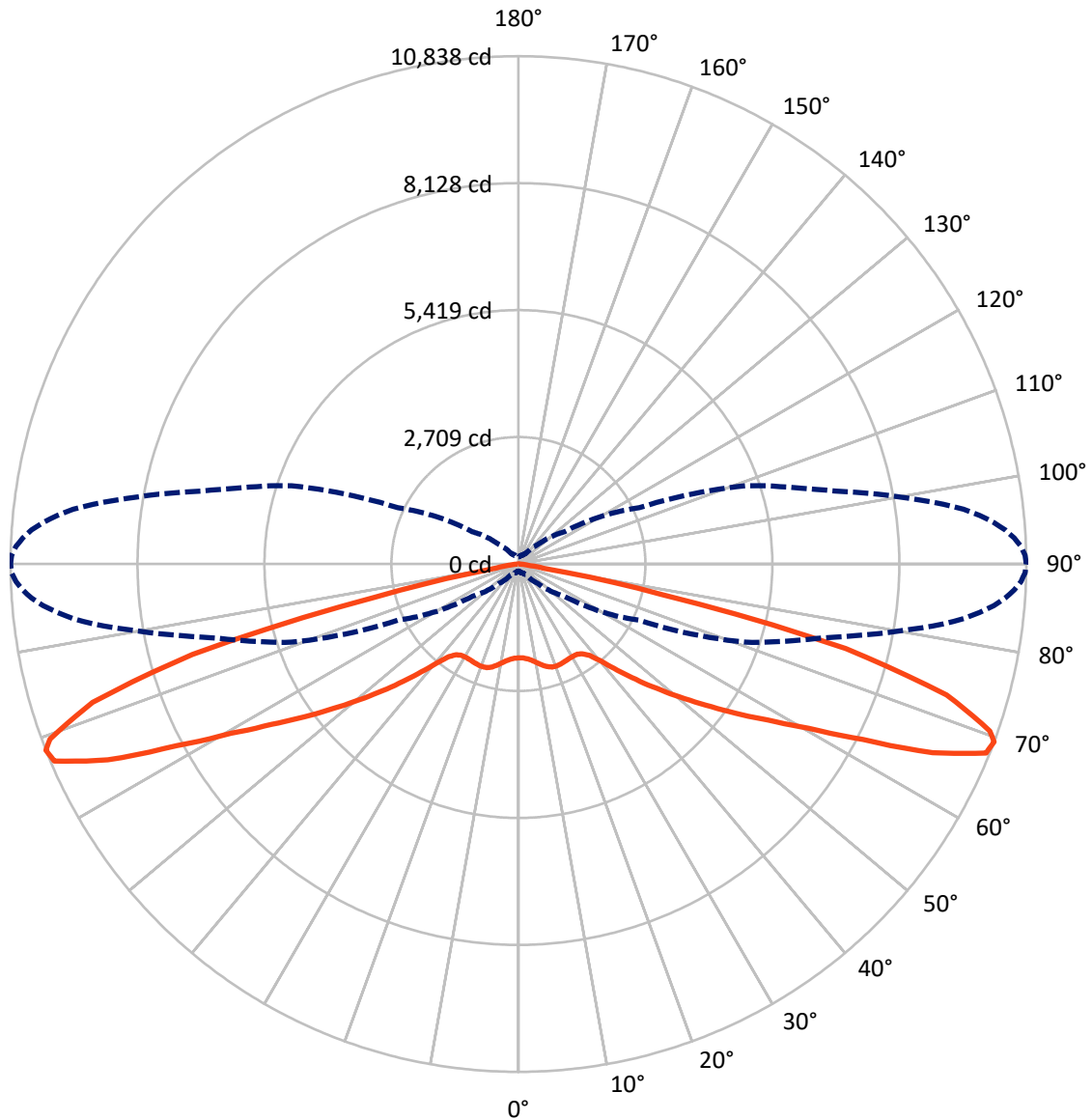
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.1 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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CATALOG NUMBER: LDRL-RW-F05-E-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5231.9	0.0	5231.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5231.9	0.0	5231.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	10463.8	0.0	10463.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.1	1.9
10°-20°	617.4	5.9
20°-30°	1000.0	9.6
30°-40°	1245.8	11.9
40°-50°	1550.8	14.8
50°-60°	1902.9	18.2
60°-70°	2346.9	22.4
70°-80°	1459.0	13.9
80°-90°	144.9	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°	10463.8	100.0
0°-180°	10463.8	100.0



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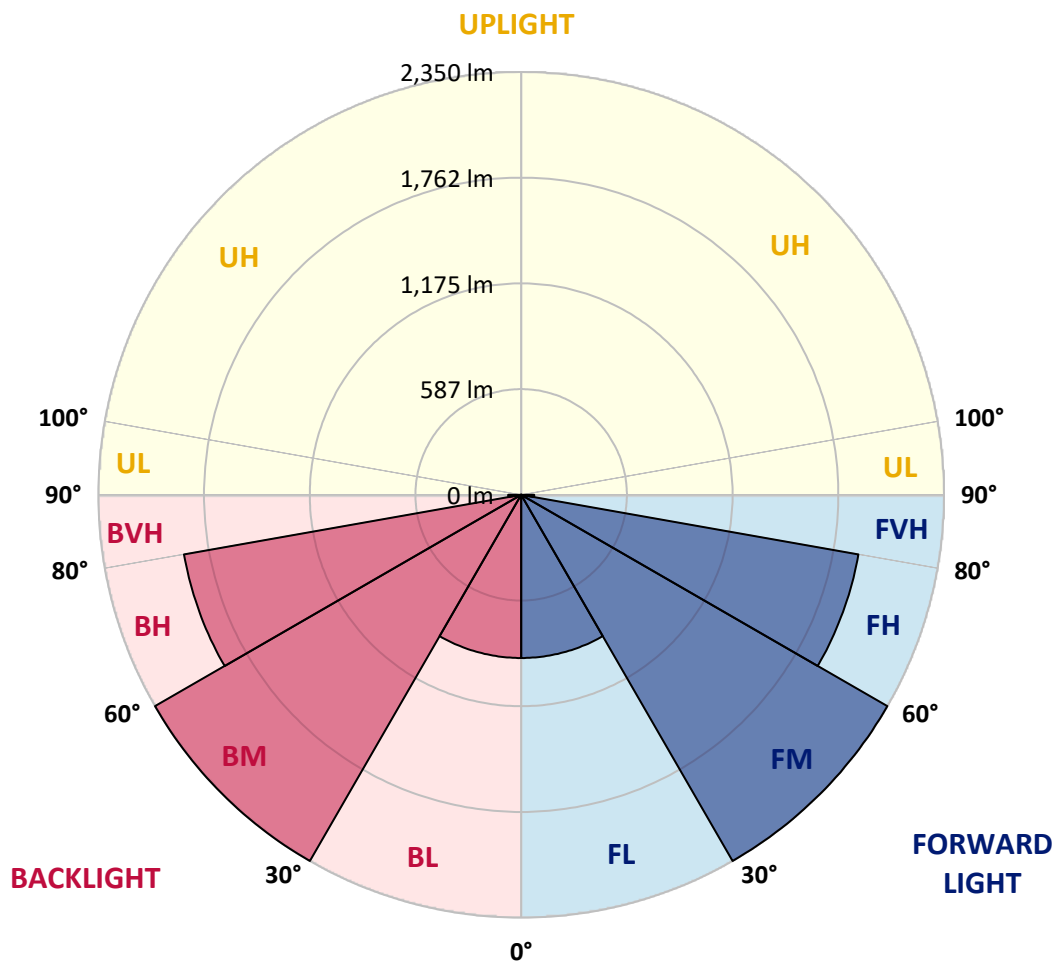
CATALOG NUMBER: LDRL-RW-F05-E-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	906.7	8.7			
FM	(30°-60°)	2349.8	22.5			
FH	(60°-80°)	1902.9	18.2			G2/5000
FVH	(80°-90°)	72.5	0.7			G1/100
BL	(0°-30°)	906.7	8.7	B2/1000		
BM	(30°-60°)	2349.8	22.5	B2/2500		
BH	(60°-80°)	1902.9	18.2	B3/2500		G3/2500
BVH	(80°-90°)	72.5	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8
2.5°	2009.0	2007.0	2010.8	2014.2	2013.2	2014.0	2012.6	2010.8	2010.9	2011.0	2011.2
5°	2024.7	2022.6	2026.1	2029.2	2030.3	2032.7	2033.4	2032.4	2032.9	2033.4	2033.9
7.5°	2043.6	2041.8	2046.3	2050.5	2058.6	2062.7	2066.9	2071.0	2071.4	2071.8	2072.1
10°	2061.3	2060.2	2067.6	2076.6	2089.5	2099.2	2111.1	2122.6	2123.5	2124.4	2125.3
12.5°	2072.8	2072.8	2084.0	2100.3	2122.6	2142.5	2162.6	2182.2	2184.0	2185.8	2187.6
15°	2072.1	2073.4	2090.6	2120.6	2158.9	2194.0	2218.8	2240.0	2241.8	2243.5	2245.2
17.5°	2057.9	2058.2	2082.5	2130.2	2190.2	2242.4	2274.5	2286.0	2286.6	2287.3	2287.9
20°	2017.7	2020.6	2055.0	2124.4	2214.6	2286.6	2317.0	2312.1	2311.1	2310.0	2309.0
22.5°	1949.2	1952.6	1998.6	2091.6	2219.1	2315.3	2346.6	2324.6	2321.3	2318.0	2314.6
25°	1853.6	1859.6	1909.4	2028.6	2188.4	2323.6	2365.8	2330.6	2325.4	2320.1	2314.9
27.5°	1743.2	1746.0	1804.9	1930.0	2117.0	2295.8	2374.5	2342.8	2336.2	2329.7	2323.1
30°	1615.4	1622.7	1684.0	1814.6	2016.4	2231.0	2371.0	2366.4	2359.1	2351.8	2344.5
32.5°	1488.2	1494.5	1554.8	1695.5	1900.4	2140.8	2353.6	2402.4	2396.2	2390.1	2384.0
35°	1360.0	1367.6	1429.7	1580.9	1785.0	2038.3	2326.0	2453.6	2450.9	2448.3	2445.6
37.5°	1247.5	1252.4	1313.4	1470.4	1684.0	1944.6	2290.2	2522.2	2528.2	2534.2	2540.2
40°	1132.9	1137.8	1201.5	1362.4	1591.0	1864.5	2257.1	2608.6	2625.0	2641.3	2657.7
42.5°	1022.8	1027.0	1088.6	1249.2	1487.6	1795.2	2237.2	2713.1	2744.5	2775.9	2807.4
45°	909.9	912.7	970.6	1126.9	1369.4	1714.4	2232.0	2830.5	2875.8	2921.2	2966.5
47.5°	798.8	805.4	865.0	1013.4	1234.6	1598.6	2224.4	2960.4	3020.5	3080.7	3140.8
50°	692.6	699.8	761.2	901.9	1104.3	1461.4	2185.4	3107.8	3181.1	3254.4	3327.7
52.5°	584.2	591.5	652.8	787.4	983.4	1306.8	2076.6	3262.4	3349.6	3436.8	3523.9
55°	468.6	471.4	534.4	669.2	862.6	1177.2	1903.5	3404.2	3509.8	3615.4	3720.9
57.5°	340.8	350.1	412.5	537.8	739.2	1062.6	1683.3	3476.7	3608.4	3740.2	3872.0
60°	246.0	252.2	306.9	405.5	599.6	950.0	1487.9	3423.8	3599.6	3775.5	3951.4
62.5°	194.4	201.4	243.5	305.6	463.7	826.4	1360.4	3278.4	3525.2	3771.9	4018.6
65°	172.1	178.4	217.4	248.0	354.6	699.2	1280.2	3134.6	3467.6	3800.5	4133.5
67.5°	157.1	163.7	197.9	218.8	293.0	617.3	1242.2	3025.9	3410.4	3795.0	4179.5
69°	150.2	156.1	187.4	206.9	276.2	589.4	1201.5	2842.0	3223.2	3604.5	3985.8
70°	146.3	151.6	180.1	199.6	269.6	566.4	1141.2	2623.2	2991.1	3359.0	3726.9
72.5°	135.6	139.0	163.0	181.2	246.6	452.2	860.8	1850.9	2162.8	2474.6	2786.4
75°	120.2	124.4	145.6	162.3	188.1	271.7	538.9	1074.4	1288.1	1501.8	1715.5
77.5°	103.1	108.0	125.4	151.9	151.6	177.0	327.2	617.0	720.8	824.6	928.4
80°	88.5	92.7	108.4	150.2	126.8	140.0	243.8	460.2	502.0	543.8	585.6
82.5°	69.4	72.8	91.0	124.0	101.4	106.6	185.7	419.1	447.5	475.8	504.2
85°	43.6	44.9	66.2	85.7	72.2	64.4	119.5	322.6	343.2	363.8	384.5
87.5°	17.4	21.2	32.0	30.6	31.0	25.8	38.7	116.4	127.0	137.6	148.2
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°	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8
2.5°	2011.3	2011.4	2010.8	2009.7	2010.8	2009.7	2010.0	2011.1	2010.8	2010.8	2010.0
5°	2034.4	2034.8	2034.8	2032.7	2033.8	2034.1	2034.4	2033.8	2034.1	2034.8	2033.4
7.5°	2072.4	2072.8	2073.8	2074.9	2074.2	2074.6	2075.2	2074.6	2073.5	2075.9	2074.1
10°	2126.2	2127.1	2127.1	2130.2	2128.8	2129.9	2133.0	2133.0	2131.3	2133.8	2133.0
12.5°	2189.4	2191.2	2190.8	2190.5	2192.0	2193.0	2196.4	2197.2	2197.8	2201.6	2200.3
15°	2247.0	2248.8	2250.1	2250.8	2253.2	2254.0	2256.0	2257.4	2258.5	2259.9	2260.6
17.5°	2288.5	2289.2	2291.2	2290.2	2293.6	2293.0	2295.4	2296.4	2297.5	2299.2	2300.2
20°	2307.9	2306.9	2307.2	2306.2	2306.2	2306.9	2307.2	2308.6	2308.0	2309.7	2311.1
22.5°	2311.3	2308.0	2305.8	2303.4	2302.4	2300.3	2300.3	2301.0	2298.5	2300.2	2302.4
25°	2309.7	2304.4	2300.6	2296.4	2292.6	2289.1	2287.0	2286.3	2284.6	2284.6	2286.4
27.5°	2316.6	2310.0	2304.4	2297.5	2292.6	2287.8	2283.2	2279.8	2276.2	2275.6	2275.6
30°	2337.2	2329.9	2323.6	2314.9	2307.2	2301.0	2294.6	2289.8	2283.2	2280.4	2277.3
32.5°	2377.8	2371.7	2363.0	2355.3	2346.2	2338.6	2330.2	2322.6	2314.9	2308.0	2305.2
35°	2443.0	2440.4	2435.4	2430.2	2421.5	2411.8	2404.8	2395.8	2387.0	2376.9	2374.1
37.5°	2546.2	2552.2	2549.4	2545.5	2543.0	2540.0	2530.6	2524.6	2518.7	2510.4	2508.6
40°	2674.1	2690.4	2706.8	2717.6	2713.8	2726.6	2728.8	2729.8	2724.6	2731.6	2733.0
42.5°	2838.8	2870.2	2899.8	2921.4	2946.5	2965.3	2989.7	3000.1	3020.0	3040.6	3052.4
45°	3011.9	3057.2	3099.8	3144.0	3187.5	3235.3	3281.6	3314.4	3362.1	3397.6	3419.9
47.5°	3200.9	3261.0	3312.0	3378.2	3441.2	3497.6	3578.8	3644.0	3702.1	3757.5	3815.6
50°	3401.0	3474.3	3537.0	3617.8	3694.4	3782.9	3878.0	3961.0	4052.2	4140.4	4218.8
52.5°	3611.1	3698.2	3782.9	3865.8	3958.8	4055.0	4158.1	4278.0	4387.4	4520.0	4615.2
55°	3826.4	3932.0	4022.2	4109.0	4207.6	4314.2	4436.8	4578.6	4717.6	4862.8	5007.1
57.5°	4003.7	4135.4	4234.0	4335.4	4441.7	4547.2	4699.5	4844.8	5021.0	5199.4	5379.8
60°	4127.2	4303.0	4422.5	4550.8	4673.7	4801.9	4966.0	5149.6	5370.1	5586.0	5831.4
62.5°	4265.3	4512.0	4679.6	4850.7	5000.1	5154.1	5373.6	5585.0	5868.2	6117.0	6425.6
65°	4466.5	4799.5	5046.1	5276.7	5477.4	5687.1	5947.3	6211.8	6535.7	6879.6	7266.6
67.5°	4564.0	4948.5	5271.5	5556.1	5812.5	6079.8	6348.3	6661.2	7026.2	7440.0	7865.1
69°	4367.0	4748.2	5119.6	5407.4	5677.4	5962.7	6250.0	6565.7	6925.2	7354.7	7805.2
70°	4094.7	4462.6	4857.3	5145.8	5418.2	5714.2	6006.9	6325.7	6669.5	7112.0	7567.6
72.5°	3098.3	3410.2	3793.4	4098.2	4384.5	4683.8	4985.1	5261.8	5610.4	6036.2	6456.0
75°	1929.2	2142.8	2487.4	2793.5	3023.8	3280.2	3563.1	3825.1	4175.2	4476.8	4880.6
77.5°	1032.2	1136.0	1337.0	1556.5	1684.7	1809.8	1994.1	2136.2	2283.6	2458.0	2625.0
80°	627.4	669.2	737.8	785.2	767.4	716.2	699.8	648.6	667.2	635.8	613.2
82.5°	532.5	560.9	602.7	631.2	610.3	528.4	435.8	366.8	318.0	271.4	230.6
85°	405.1	425.7	447.3	460.2	459.2	418.4	332.3	257.4	200.6	155.4	129.2
87.5°	158.8	169.4	185.0	182.6	190.6	192.0	150.2	116.0	82.6	55.8	48.8
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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CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8	2003.8
2.5°	2008.7	2008.4	2008.7	2009.8	2009.8	2010.4	2009.8	2010.1	2009.0	2008.0	2008.7
5°	2033.4	2032.7	2033.4	2034.1	2034.1	2033.4	2035.2	2035.2	2034.5	2033.4	2033.8
7.5°	2075.9	2076.2	2075.2	2078.7	2075.6	2075.9	2078.0	2077.7	2077.0	2077.4	2077.7
10°	2135.2	2134.8	2135.5	2137.6	2134.4	2136.6	2139.0	2139.7	2138.0	2138.0	2138.3
12.5°	2200.6	2203.4	2203.8	2205.2	2205.1	2206.9	2207.2	2207.6	2209.0	2209.4	2207.3
15°	2263.4	2265.4	2266.9	2268.2	2266.5	2268.9	2271.7	2271.8	2271.4	2272.8	2270.7
17.5°	2302.0	2303.8	2306.2	2305.9	2306.2	2308.3	2310.0	2310.8	2311.4	2311.4	2311.8
20°	2314.2	2315.2	2316.6	2318.0	2318.8	2320.8	2322.2	2323.2	2324.0	2323.2	2323.6
22.5°	2304.4	2305.9	2308.6	2309.6	2310.0	2313.1	2314.6	2315.6	2316.3	2317.0	2315.9
25°	2287.7	2289.1	2291.9	2293.0	2293.6	2296.4	2298.2	2300.6	2301.4	2301.6	2302.0
27.5°	2276.2	2277.0	2279.0	2280.4	2280.8	2283.9	2286.4	2288.0	2288.4	2288.8	2288.8
30°	2276.6	2276.6	2279.0	2279.4	2279.0	2281.8	2283.2	2284.2	2285.0	2285.0	2285.3
32.5°	2300.6	2299.2	2301.3	2298.2	2298.6	2298.1	2297.8	2298.9	2298.2	2298.5	2297.1
35°	2368.6	2364.7	2361.6	2363.0	2358.1	2351.2	2355.0	2353.2	2349.4	2349.8	2350.8
37.5°	2498.9	2495.0	2498.4	2495.4	2496.4	2486.6	2489.1	2480.4	2478.0	2481.0	2472.0
40°	2730.2	2728.4	2735.0	2732.2	2734.0	2736.8	2739.2	2730.8	2717.0	2729.4	2729.8
42.5°	3050.6	3066.4	3072.6	3081.4	3090.7	3086.5	3094.9	3097.3	3082.0	3093.5	3096.3
45°	3452.7	3469.4	3489.0	3494.8	3510.2	3512.2	3518.5	3520.2	3506.4	3507.7	3510.9
47.5°	3873.8	3904.5	3927.5	3943.5	3959.5	3962.7	3966.2	3959.6	3960.6	3963.8	3963.7
50°	4287.7	4353.2	4394.0	4425.7	4453.2	4438.9	4451.1	4452.2	4456.4	4447.6	4452.8
52.5°	4722.8	4809.6	4877.8	4931.2	4947.8	4998.7	4977.8	4993.8	5004.6	4988.6	4999.1
55°	5147.8	5271.5	5381.2	5458.6	5512.9	5564.5	5572.5	5614.0	5609.0	5624.8	5617.8
57.5°	5551.9	5724.7	5881.5	5996.1	6074.2	6152.9	6206.2	6251.4	6256.0	6300.9	6275.5
60°	6040.7	6281.4	6483.1	6653.8	6769.2	6886.2	6978.5	7052.7	7069.8	7146.8	7121.3
62.5°	6700.2	6993.8	7251.6	7452.0	7708.7	7832.4	8012.1	8124.3	8194.3	8213.5	8249.3
65°	7627.2	8009.6	8349.7	8670.2	8959.0	9159.3	9367.3	9534.5	9668.6	9657.4	9712.5
67.5°	8315.9	8752.0	9161.4	9545.6	9856.4	10114.2	10353.2	10534.0	10653.8	10730.1	10762.5
69°	8244.2	8712.4	9163.8	9574.2	9894.7	10182.8	10415.5	10593.5	10730.8	10813.7	10837.7
70°	8005.4	8486.6	8957.2	9360.0	9686.7	10003.0	10240.0	10438.2	10568.8	10659.4	10673.3
72.5°	6924.5	7445.6	7862.0	8301.2	8615.8	8936.0	9085.1	9330.7	9501.0	9556.0	9555.0
75°	5222.8	5657.5	6023.3	6348.0	6629.4	6846.4	6916.8	7091.8	7233.2	7231.4	7218.2
77.5°	2812.4	2914.8	3051.7	3097.6	3184.4	3183.0	3096.0	3123.4	3203.6	3048.2	3098.4
80°	603.4	594.3	586.6	582.1	579.7	580.7	583.9	564.0	583.5	574.8	537.9
82.5°	210.1	205.2	200.3	203.8	201.4	203.4	202.8	205.2	204.8	204.2	199.3
85°	118.1	113.9	111.4	113.2	109.4	105.9	103.4	102.4	102.1	99.6	98.2
87.5°	45.0	44.6	44.2	42.5	38.3	35.2	33.0	29.0	27.2	24.8	23.0
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)