

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: McGRAW-EDISON

Report Number: P301582

Luminaire Tested: **GLNA-AF-04-LED-E1-T2R-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301582
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-T2R-7050
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24925.9 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 225
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

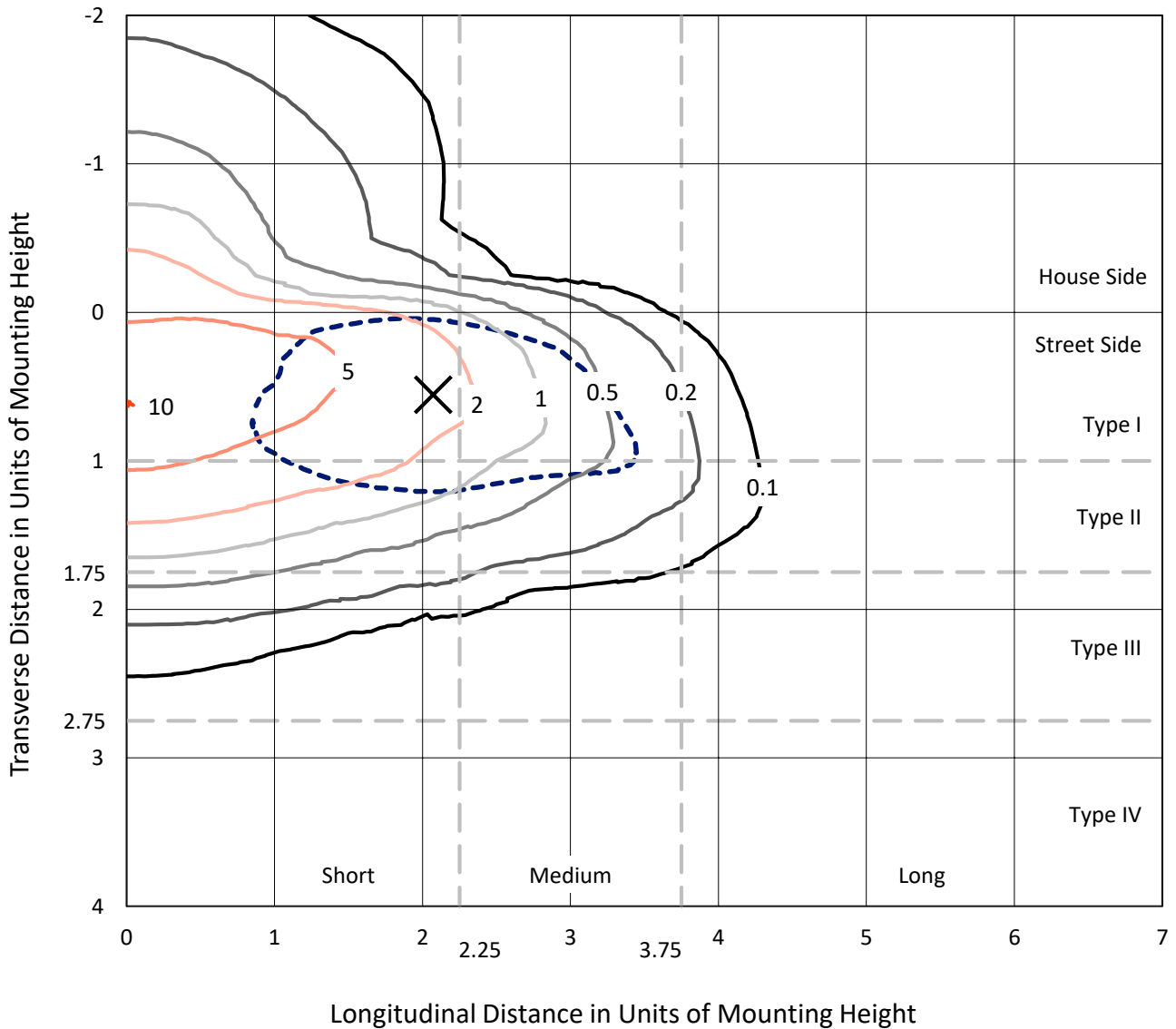


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Iso-Footcandle Lines of Horizontal Illumination

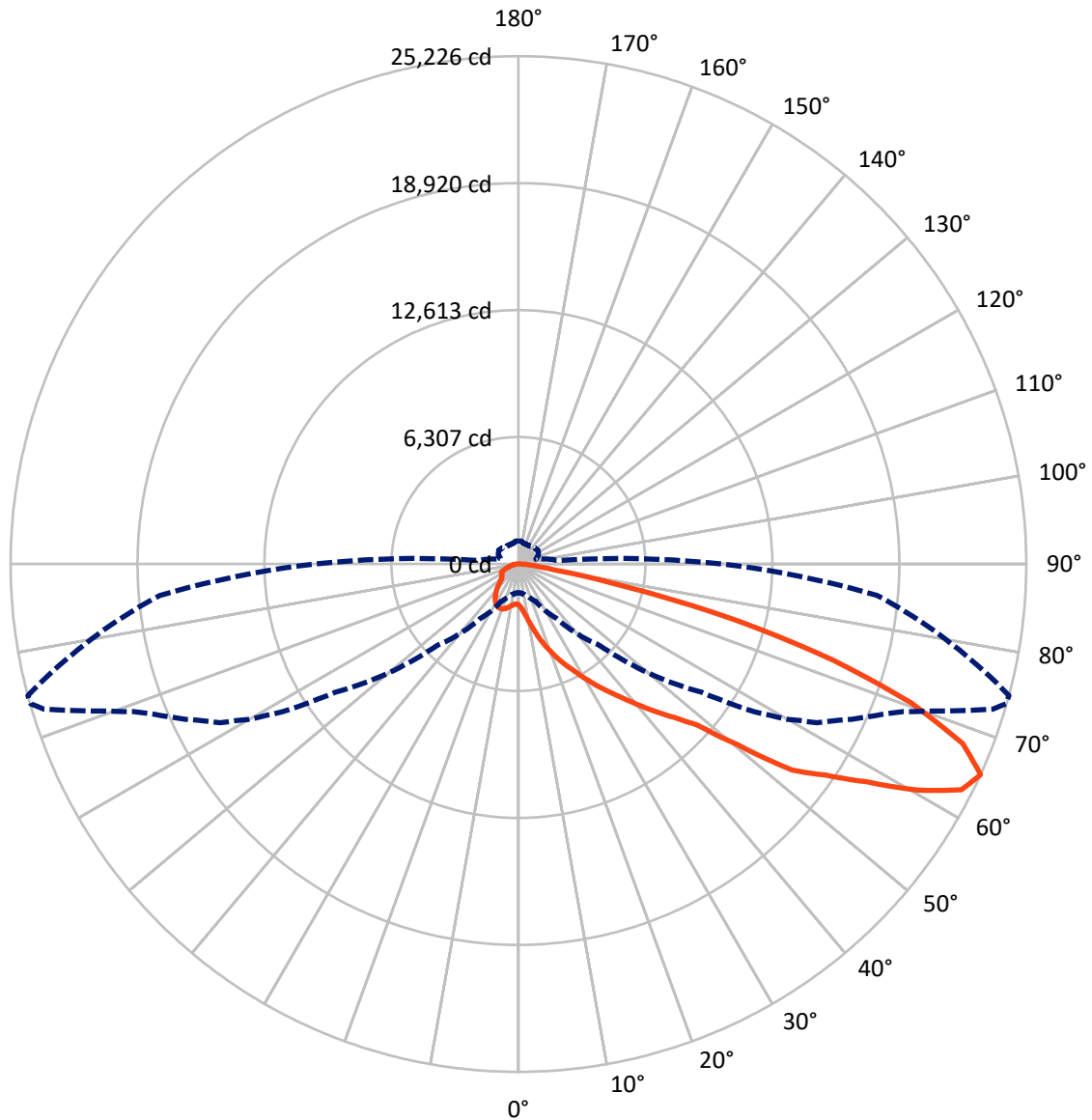
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3843.0	0.0	3843.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	21082.9	0.0	21082.9
	% Fixture	84.6	0.0	84.6
Total	Lumens	24925.9	0.0	24925.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.4	1.0
10°-20°	978.3	3.9
20°-30°	2007.2	8.1
30°-40°	3376.9	13.5
40°-50°	4666.0	18.7
50°-60°	5824.5	23.4
60°-70°	5241.5	21.0
70°-80°	2197.2	8.8
80°-90°	383.9	1.5
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°	24925.9	100.0
0°-180°	24925.9	100.0



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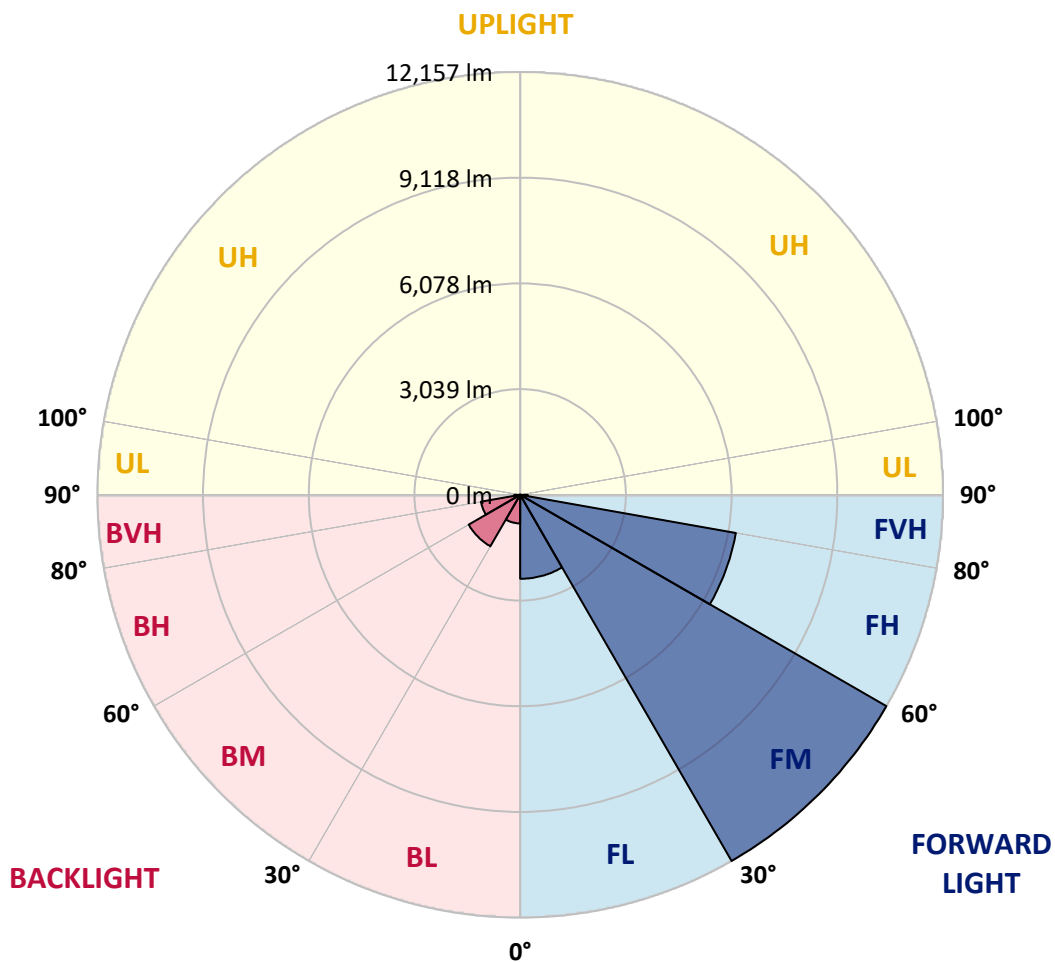
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2414.0	9.7			
FM	(30°-60°)	12156.9	48.8			
FH	(60°-80°)	6296.2	25.3			G3/7500
FVH	(80°-90°)	215.8	0.9			G2/225
BL	(0°-30°)	821.9	3.3	B2/1000		
BM	(30°-60°)	1710.5	6.9	B2/2500		
BH	(60°-80°)	1142.5	4.6	B3/2500		G3/2500
BVH	(80°-90°)	168.1	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7
2.5°	2572.0	2543.7	2550.7	2503.4	2445.7	2370.1	2286.4	2285.4	2286.4	2278.0	2247.6
5°	3566.3	3532.4	3519.4	3413.0	3257.3	3035.8	2795.0	2769.1	2758.2	2731.3	2668.6
7.5°	4292.2	4273.3	4253.0	4172.9	4031.5	3783.7	3460.3	3405.0	3351.8	3338.8	3268.2
10°	4760.5	4755.6	4713.2	4691.9	4603.7	4388.8	4073.8	4020.6	3962.9	3942.9	3868.4
12.5°	5130.8	5129.7	5109.8	5115.7	5038.7	4883.3	4611.7	4563.4	4521.1	4459.5	4406.6
15°	5387.0	5388.0	5417.8	5450.6	5438.8	5333.8	5079.0	5057.6	5021.2	4978.9	4916.2
17.5°	5596.9	5602.9	5633.3	5693.5	5758.6	5750.2	5548.6	5530.8	5498.9	5441.2	5408.3
20°	6071.2	6093.6	6034.8	6034.8	6041.8	6073.6	5976.7	5962.7	5917.9	5887.1	5861.2
22.5°	6872.3	6898.2	6764.8	6629.4	6496.1	6399.1	6302.5	6320.0	6289.6	6268.2	6252.8
25°	7912.8	7933.1	7717.1	7488.3	7216.7	6862.8	6623.4	6612.6	6596.1	6583.2	6576.2
27.5°	8892.0	8900.4	8696.4	8361.1	8046.1	7537.6	6948.9	6936.0	6916.0	6891.2	6869.8
30°	9729.9	9727.5	9517.5	9197.6	8860.2	8297.4	7443.5	7403.2	7344.1	7276.9	7225.1
32.5°	10455.4	10451.9	10221.6	9890.2	9536.4	9050.2	8120.7	8038.1	7946.0	7814.8	7736.0
35°	11026.2	11024.1	10806.8	10461.4	10055.4	9759.3	8896.9	8795.4	8678.6	8502.9	8381.4
37.5°	11242.2	11242.2	11120.7	10884.9	10526.1	10323.1	9759.3	9636.5	9511.5	9312.0	9175.2
40°	11115.8	11118.3	11144.2	11100.8	10926.1	10770.4	10563.9	10490.8	10383.3	10204.1	10061.3
42.5°	10692.4	10705.3	10877.9	11088.9	11176.0	11151.5	11277.5	11244.6	11169.0	11031.1	10917.7
45°	10155.5	10195.7	10384.4	10783.4	11245.7	11480.5	11875.7	11879.2	11865.2	11791.0	11703.5
47.5°	9418.4	9474.8	9724.0	10262.9	11082.9	11800.4	12483.2	12515.1	12544.8	12496.5	12456.3
50°	8439.2	8506.4	8879.1	9594.1	10751.5	12131.8	13631.2	13775.4	13909.8	13893.3	13920.3
52.5°	7390.3	7469.4	7925.7	8722.3	10181.7	12208.5	14365.1	14599.9	14834.8	15026.9	15231.0
55°	6443.9	6401.6	6858.3	7696.8	9244.8	11862.7	15024.8	15307.9	15569.7	15805.6	16048.9
57.5°	5161.6	5231.2	5689.0	6518.5	8004.8	10887.0	15478.7	15893.1	16269.4	16659.9	17004.3
60°	3772.8	3842.5	4339.1	5181.5	6658.8	9407.6	15131.9	15759.8	16362.4	16960.6	17427.8
62.5°	2278.0	2330.2	2767.7	3570.2	5134.6	7653.4	13586.4	14409.9	15297.1	16012.1	16728.2
65°	1418.1	1447.5	1609.2	2050.6	3297.5	5713.8	11100.8	11998.5	12954.0	13861.5	14605.9
67.5°	1160.9	1171.4	1201.1	1295.3	1810.8	3725.9	8262.1	9057.2	9919.6	10797.4	11625.8
70°	1044.0	1037.0	1037.0	1043.0	1160.9	2003.3	5409.4	5927.3	6645.8	7409.2	8166.5
72.5°	942.5	935.5	922.6	905.1	947.4	1222.1	2796.0	3186.6	3704.6	4382.8	5108.4
75°	847.0	837.5	822.5	800.1	829.5	922.6	1342.5	1506.7	1759.0	2120.2	2524.8
77.5°	747.9	736.0	722.0	705.6	743.4	717.5	786.8	845.9	942.5	1058.4	1210.6
80°	635.9	625.4	620.5	612.5	657.3	546.3	555.8	592.2	648.9	711.5	782.2
82.5°	498.0	498.0	516.6	520.4	569.8	393.0	415.4	447.3	476.7	509.6	542.8
85°	327.9	330.4	394.1	418.9	449.4	264.2	311.5	322.0	345.8	364.7	378.7
87.5°	102.5	110.9	240.8	266.7	258.3	149.8	191.1	196.0	212.4	225.4	237.3
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7
2.5°	2247.6	2233.2	2220.3	2219.2	2209.8	2196.8	2201.4	2181.4	2182.5	2172.0	2160.1
5°	2642.7	2633.3	2586.0	2573.1	2537.7	2515.3	2511.8	2464.6	2458.6	2431.7	2401.9
7.5°	3211.5	3180.7	3114.5	3082.7	3022.5	2977.7	2956.7	2894.0	2863.2	2792.5	2760.7
10°	3807.1	3768.3	3686.7	3641.9	3584.2	3512.1	3473.2	3382.6	3346.9	3282.1	3204.5
12.5°	4359.4	4320.6	4236.6	4202.3	4125.6	4049.0	4006.6	3904.1	3857.9	3753.9	3692.7
15°	4870.0	4831.2	4758.0	4722.7	4646.0	4583.4	4526.7	4425.5	4371.3	4274.4	4194.2
17.5°	5365.6	5324.3	5260.6	5228.8	5154.6	5090.9	5029.6	4933.7	4878.4	4781.8	4709.7
20°	5825.8	5795.0	5749.2	5706.5	5632.3	5574.5	5501.4	5418.8	5338.7	5267.6	5199.4
22.5°	6226.9	6215.0	6165.7	6146.8	6083.1	6033.4	5969.7	5888.5	5830.4	5740.8	5677.1
25°	6572.7	6569.2	6545.4	6539.4	6494.7	6447.4	6433.4	6366.2	6313.0	6233.9	6168.1
27.5°	6869.8	6873.3	6867.7	6884.2	6872.3	6850.9	6852.3	6829.9	6799.1	6733.0	6675.2
30°	7200.2	7181.3	7192.2	7215.6	7222.6	7225.1	7263.9	7276.9	7274.8	7231.0	7202.7
32.5°	7667.4	7622.7	7581.4	7577.9	7601.3	7610.8	7676.9	7711.2	7740.6	7751.1	7756.0
35°	8263.1	8173.5	8087.4	8041.6	8001.3	8011.8	8059.1	8114.7	8179.5	8224.3	8277.5
37.5°	9013.5	8903.9	8751.7	8643.2	8615.9	8557.1	8587.6	8631.3	8695.0	8764.6	8856.7
40°	9923.1	9756.9	9585.7	9441.9	9364.2	9255.3	9254.3	9245.9	9285.1	9349.8	9479.7
42.5°	10798.8	10651.1	10469.4	10318.6	10217.1	10071.8	10042.4	9965.8	9983.3	10040.0	10166.3
45°	11618.4	11497.0	11386.0	11211.7	11125.3	10968.5	10918.8	10828.2	10777.4	10803.3	10929.6
47.5°	12412.5	12334.8	12219.0	12105.9	12039.8	11899.5	11835.8	11770.7	11705.9	11703.5	11835.8
50°	13960.5	13919.2	13782.4	13664.4	13696.3	13524.1	13534.6	13359.9	13439.0	13448.5	13725.7
52.5°	15415.0	15559.2	15660.7	15784.3	15864.8	15880.2	15933.0	16012.1	16107.7	16296.3	16553.5
55°	16248.0	16428.6	16533.6	16628.1	16783.8	16816.7	16905.3	17010.3	17093.9	17306.4	17524.7
57.5°	17238.1	17573.0	17735.8	17885.6	18095.6	18175.7	18323.4	18437.9	18546.3	18797.6	19061.9
60°	17847.8	18256.2	18587.6	18824.6	19087.8	19276.8	19499.7	19678.9	19933.7	20234.7	20628.8
62.5°	17363.1	17962.2	18402.5	18809.5	19166.9	19528.1	19847.6	20182.9	20569.6	21024.9	21636.4
65°	15431.8	16041.5	16795.4	17217.8	17691.0	18247.8	18733.9	19276.8	19803.8	20467.1	21370.7
67.5°	12423.4	13132.1	13979.4	14405.3	14949.2	15570.8	16116.1	16778.9	17394.9	18198.1	19315.6
70°	8954.7	9871.3	10583.9	11028.7	11663.6	12304.0	12830.4	13601.8	14111.4	14934.9	16090.2
72.5°	5670.1	6393.2	7266.4	7826.7	8390.5	9039.7	9577.7	10243.0	10718.3	11468.6	12515.1
75°	3048.7	3581.7	4348.6	4880.9	5484.9	6039.3	6669.3	7115.2	7466.9	8060.5	8909.9
77.5°	1428.6	1753.1	2141.2	2550.7	2960.2	3387.1	3802.6	4163.4	4314.6	4654.4	5155.6
80°	867.3	972.3	1085.3	1211.6	1382.8	1520.7	1703.7	1835.7	1845.1	1952.6	2105.9
82.5°	579.2	618.1	652.4	684.2	728.0	762.3	801.1	847.0	865.9	890.7	940.4
85°	395.1	414.0	421.0	441.3	436.4	448.3	463.7	479.1	487.2	486.1	508.5
87.5°	242.9	252.3	257.2	261.8	258.3	253.7	260.7	269.1	271.2	264.2	266.7
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7
2.5°	2162.6	2152.1	2141.2	2134.2	2131.8	2069.5	2042.2	2024.7	1986.9	1956.1	1931.2
5°	2385.5	2363.1	2345.6	2324.2	2312.3	2154.2	2096.4	2056.5	1990.4	1951.5	1915.8
7.5°	2744.2	2681.6	2645.2	2603.9	2568.5	2282.9	2187.4	2124.8	2032.7	1980.9	1940.7
10°	3151.3	3086.5	3028.4	2964.7	2909.4	2454.1	2314.8	2217.8	2096.4	2029.2	1976.0
12.5°	3605.5	3541.8	3468.7	3387.1	3316.4	2671.1	2477.5	2339.6	2173.1	2083.5	2009.3
15°	4142.4	4030.1	3941.5	3847.4	3764.8	2930.8	2667.6	2476.5	2254.6	2133.2	2034.1
17.5°	4641.1	4523.2	4403.1	4320.6	4225.0	3222.0	2858.7	2615.4	2321.8	2165.0	2038.7
20°	5128.7	4999.9	4896.3	4785.3	4684.9	3524.0	3062.7	2738.3	2365.5	2166.1	2009.3
22.5°	5558.1	5477.6	5362.1	5241.7	5140.2	3826.0	3253.8	2842.2	2382.0	2139.1	1957.1
25°	6046.3	5961.6	5819.9	5718.4	5605.3	4134.0	3441.4	2922.4	2372.5	2088.4	1877.0
27.5°	6567.8	6473.7	6328.4	6222.4	6085.5	4453.5	3613.6	2980.1	2337.2	2005.8	1769.5
30°	7111.7	7025.6	6882.8	6775.7	6637.4	4792.3	3806.1	3019.0	2266.5	1891.3	1644.6
32.5°	7695.8	7623.7	7482.3	7370.3	7222.6	5159.1	3985.3	3030.9	2159.1	1755.5	1512.6
35°	8250.2	8200.8	8081.5	7976.5	7823.2	5505.9	4175.3	3024.9	2031.7	1606.8	1392.2
37.5°	8874.5	8844.8	8786.0	8652.7	8465.1	5976.7	4403.1	3000.1	1875.9	1459.4	1300.2
40°	9539.9	9542.3	9478.6	9387.6	9213.0	6547.8	4674.4	2951.8	1705.8	1329.6	1216.2
42.5°	10244.0	10280.8	10250.0	10185.2	10017.6	7123.6	4998.8	2893.0	1541.0	1203.2	1133.9
45°	11051.1	11095.9	11143.1	11047.6	10884.9	7883.4	5425.8	2816.3	1362.5	1098.2	1077.3
47.5°	11982.1	12052.7	12095.1	12096.5	11933.8	8824.8	6119.5	2770.1	1204.6	1027.6	1050.0
50°	13946.2	13968.9	14069.0	14243.6	14118.7	11003.8	7331.1	2741.8	1097.2	983.8	1030.0
52.5°	16776.5	17023.2	17196.8	17184.9	17014.8	12387.7	7998.9	2595.5	1033.5	967.4	1020.6
55°	17929.3	18237.3	18558.2	18642.9	18511.0	13568.9	8630.3	2449.2	1002.7	979.3	1024.1
57.5°	19465.4	19984.4	20424.7	20609.9	20418.8	15080.1	9460.8	2372.5	993.3	1011.1	1046.5
60°	21259.8	21901.6	22479.8	22812.3	22812.3	16816.7	10322.1	2340.7	980.3	1058.4	1084.3
62.5°	22412.6	23355.1	24228.3	24715.5	24701.2	18025.9	10704.3	2232.2	950.9	1091.2	1136.0
65°	22417.2	23538.2	24650.4	25198.1	25226.1	17877.5	10073.2	1971.5	896.7	1096.1	1188.2
67.5°	20548.6	21743.5	23040.1	23652.6	23794.0	16456.9	8719.8	1621.1	808.1	1048.9	1207.1
70°	17354.7	18521.5	19845.1	20447.1	20698.4	14028.8	7023.1	1249.4	695.1	945.0	1167.9
72.5°	13672.5	14816.9	15738.4	16178.4	16374.3	10723.2	5114.3	943.9	569.8	796.2	1062.9
75°	9680.2	10539.1	11028.7	11126.7	11157.1	6464.2	3107.5	702.1	469.7	619.5	897.7
77.5°	5463.6	5831.8	5791.5	5835.3	5472.0	2495.4	1353.4	502.6	387.1	470.7	696.1
80°	2133.2	2199.3	2066.0	2024.7	1857.0	928.5	597.1	350.3	309.0	356.3	487.2
82.5°	940.4	970.9	942.5	949.9	908.6	479.1	357.3	253.7	235.9	260.7	323.4
85°	518.0	527.4	525.0	540.4	518.0	191.1	169.7	155.7	165.2	177.1	207.5
87.5°	252.3	254.8	246.7	259.7	251.3	96.6	83.6	88.5	96.6	99.0	99.0
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):

	135°	145°	155°	165°	175°	180°
0°	2025.7	2025.7	2025.7	2025.7	2025.7	2025.7
2.5°	1913.7	1904.3	1905.3	1902.9	1898.3	1898.3
5°	1897.3	1887.8	1887.8	1885.4	1879.4	1880.5
7.5°	1913.7	1898.3	1892.4	1884.0	1875.9	1875.9
10°	1932.6	1905.3	1888.9	1874.9	1864.0	1864.0
12.5°	1946.6	1904.3	1877.0	1858.1	1847.6	1847.6
15°	1951.5	1895.9	1858.1	1835.7	1826.2	1825.2
17.5°	1936.1	1864.0	1818.2	1792.3	1780.4	1776.9
20°	1888.9	1806.3	1751.0	1721.2	1704.8	1698.8
22.5°	1818.2	1723.7	1658.9	1628.1	1606.8	1603.3
25°	1719.1	1617.6	1553.9	1524.2	1512.6	1508.8
27.5°	1603.3	1508.8	1454.5	1435.6	1425.1	1424.1
30°	1493.7	1413.2	1373.3	1359.0	1346.0	1343.9
32.5°	1390.8	1340.1	1325.0	1304.7	1274.3	1270.8
35°	1317.7	1313.1	1302.6	1257.5	1220.0	1209.2
37.5°	1272.9	1316.6	1262.4	1173.8	1146.9	1144.4
40°	1247.0	1280.2	1186.8	1156.3	1158.4	1156.3
42.5°	1188.2	1222.1	1189.2	1175.2	1184.3	1186.8
45°	1129.0	1166.8	1207.1	1197.6	1220.0	1220.0
47.5°	1096.1	1152.5	1205.7	1205.7	1238.9	1250.5
50°	1058.4	1140.9	1186.8	1203.2	1229.5	1220.0
52.5°	1055.9	1120.6	1159.8	1189.2	1201.1	1190.3
55°	1059.4	1104.2	1132.5	1165.8	1179.8	1180.8
57.5°	1064.3	1094.7	1113.6	1129.0	1171.4	1171.4
60°	1075.9	1086.7	1097.2	1105.6	1160.9	1161.9
62.5°	1094.7	1078.3	1075.9	1084.3	1154.9	1150.4
65°	1124.5	1066.4	1048.9	1057.0	1149.0	1135.0
67.5°	1164.4	1048.9	1014.6	1020.6	1144.4	1113.6
70°	1201.1	1020.6	972.3	966.3	1099.6	1045.4
72.5°	1204.6	987.7	913.1	895.6	955.8	903.7
75°	1145.5	964.9	848.4	796.2	789.2	782.2
77.5°	1032.5	952.0	772.8	691.2	677.2	681.8
80°	863.8	903.7	681.8	585.2	661.8	653.8
82.5°	645.4	797.6	579.2	518.0	516.6	456.7
85°	358.7	621.9	471.8	388.1	270.2	261.8
87.5°	100.4	345.8	330.4	219.4	149.8	155.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)