

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: P302931

Luminaire Tested: **GLNA-AF-09-LED-E1-T4W-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302931
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191569)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-T4W-7030-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33557.5 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

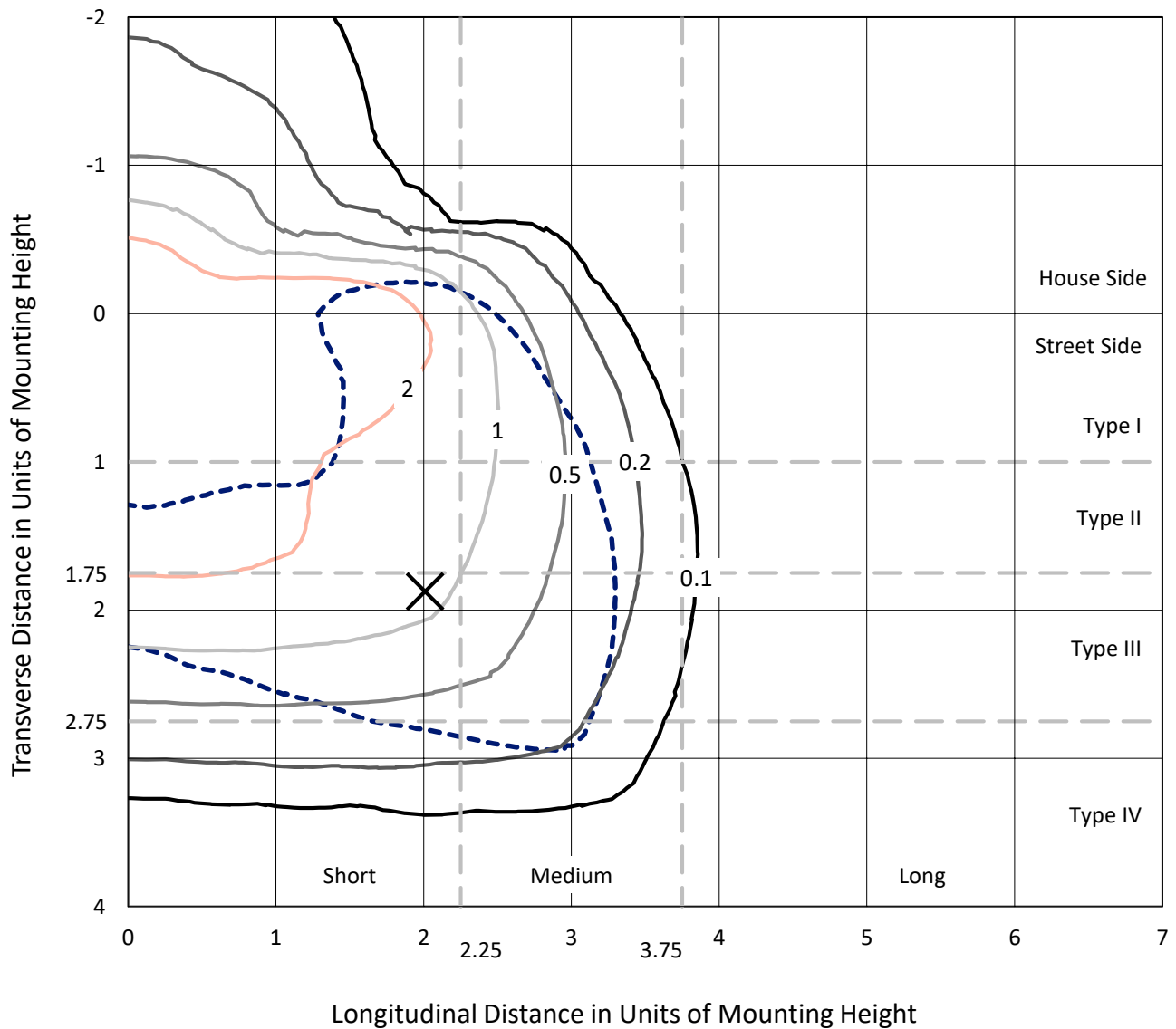
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

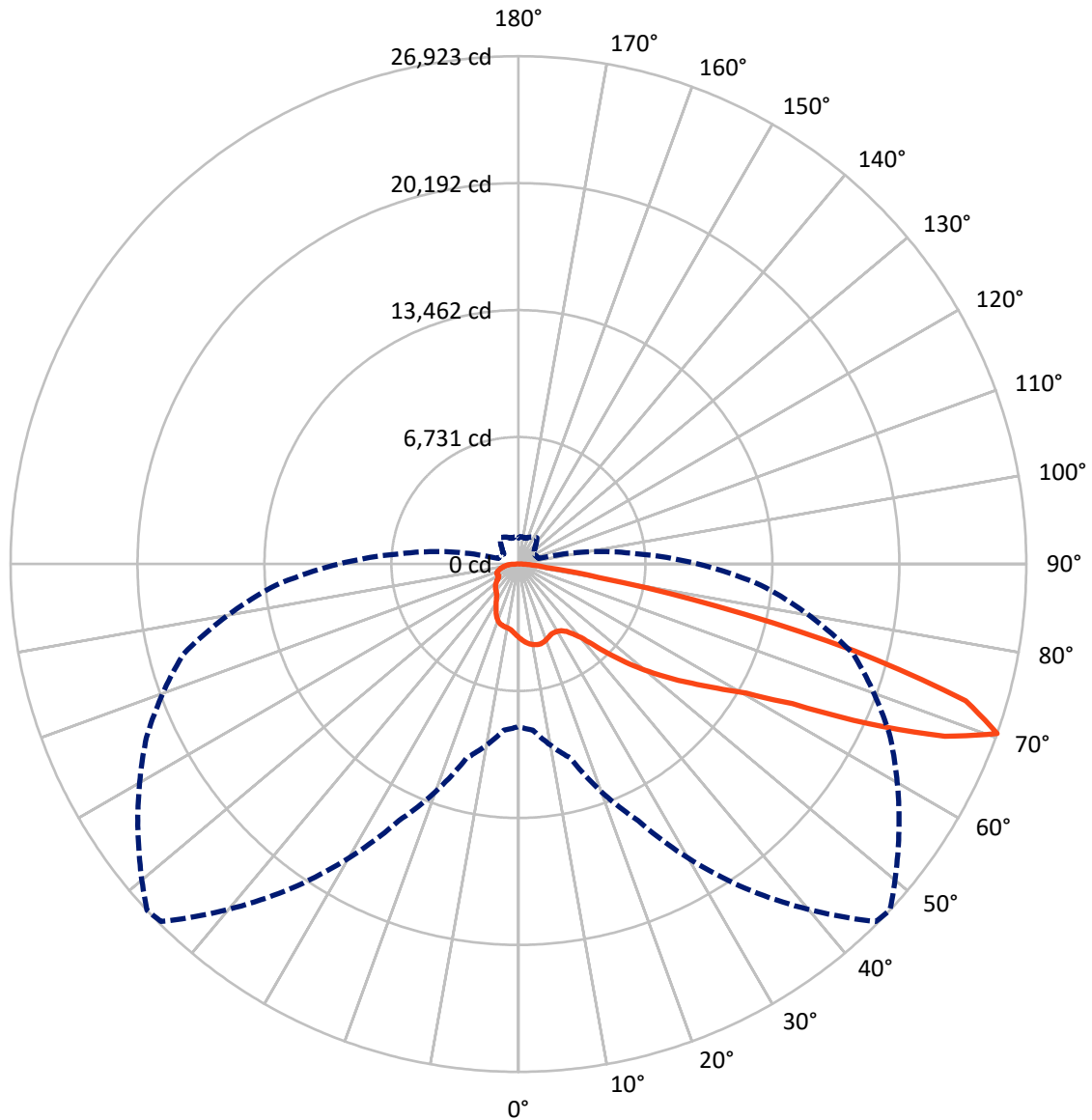
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7000.8	0.0	7000.8
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	26556.7	0.0	26556.7
	% Fixture	79.1	0.0	79.1
Total	Lumens	33557.5	0.0	33557.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.1	1.1
10°-20°	1094.5	3.3
20°-30°	1616.3	4.8
30°-40°	2349.3	7.0
40°-50°	4227.9	12.6
50°-60°	7324.4	21.8
60°-70°	10454.1	31.2
70°-80°	5366.5	16.0
80°-90°	751.3	2.2
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°	33557.5	100.0
0°-180°	33557.5	100.0

Coefficient of Utilization



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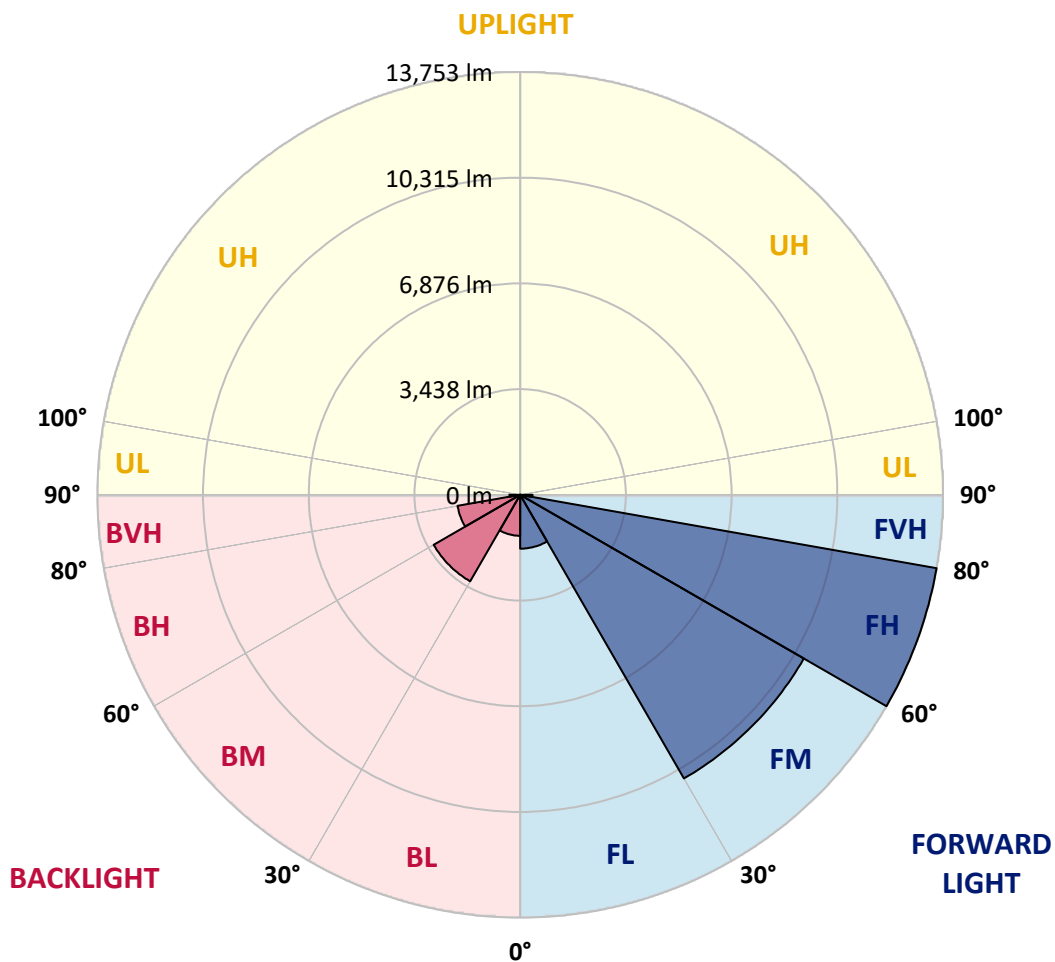
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1751.0	5.2			
FM	(30°-60°)	10652.1	31.7			
FH	(60°-80°)	13752.8	41.0			G5
FVH	(80°-90°)	400.9	1.2			G3/500
BL	(0°-30°)	1333.0	4.0	B3/2500		
BM	(30°-60°)	3249.5	9.7	B3/5000		
BH	(60°-80°)	2067.8	6.2	B3/2500		G3/2500
BVH	(80°-90°)	350.4	1.0			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6
2.5°	4122.4	4114.3	4111.1	4104.5	4096.4	4055.2	4047.1	4017.8	3977.1	3934.3	3890.4
5°	4393.5	4391.9	4373.5	4341.0	4288.9	4198.9	4177.7	4106.2	4009.7	3916.4	3823.7
7.5°	4631.6	4616.9	4582.8	4517.2	4426.1	4303.5	4274.3	4174.5	4042.2	3914.8	3789.0
10°	4806.2	4798.0	4723.2	4633.2	4513.9	4378.4	4344.2	4233.1	4087.7	3926.2	3769.5
12.5°	4905.9	4889.7	4802.9	4695.6	4553.5	4421.2	4386.5	4274.3	4111.1	3926.2	3741.8
15°	4899.4	4888.0	4801.3	4683.6	4540.5	4424.5	4393.5	4280.8	4106.2	3909.9	3706.0
17.5°	4768.8	4773.6	4700.4	4584.4	4466.7	4378.4	4350.7	4246.6	4073.1	3877.4	3663.7
20°	4540.5	4563.3	4513.9	4411.4	4345.8	4285.6	4267.8	4179.4	4022.7	3830.2	3617.6
22.5°	4311.7	4332.8	4313.3	4226.5	4216.8	4181.0	4171.2	4107.8	3978.8	3800.9	3590.0
25°	4143.6	4163.1	4159.9	4084.5	4114.3	4112.7	4104.5	4073.1	3969.0	3800.9	3594.9
27.5°	4098.0	4104.5	4098.0	4029.2	4069.8	4102.9	4096.4	4091.0	3998.3	3848.1	3657.2
30°	4254.7	4245.0	4194.0	4055.2	4093.2	4138.7	4132.2	4135.5	4086.1	3972.2	3796.0
32.5°	4879.9	4835.4	4675.5	4285.6	4185.9	4210.3	4213.5	4267.8	4275.9	4163.1	4011.3
35°	5815.2	5766.4	5558.8	4902.7	4474.9	4390.3	4390.3	4471.6	4520.4	4437.5	4345.8
37.5°	6806.4	6752.2	6641.6	5758.3	5082.2	4702.1	4693.9	4750.9	4820.8	4840.9	4863.6
40°	7932.6	7875.6	7906.5	6718.0	5929.6	5242.1	5126.1	5085.4	5274.6	5400.4	5583.7
42.5°	9165.6	9139.0	9150.4	7787.3	6894.2	6050.5	5885.7	5674.8	5903.6	6127.0	6510.9
45°	10306.4	10329.1	10317.8	8931.9	7968.9	7036.3	6861.7	6453.4	6677.3	7060.7	7686.4
47.5°	11305.7	11210.8	11357.7	10182.2	9172.1	8140.2	7924.4	7377.9	7604.5	8077.9	9135.7
50°	12518.6	12505.6	12290.3	11851.1	10626.3	9248.5	8966.0	8332.7	8685.2	9343.4	10963.0
52.5°	13793.9	13556.9	13359.6	13148.6	12169.4	10385.0	10038.5	9284.3	9955.6	10783.0	13189.9
55°	14054.7	13949.0	14193.5	14548.1	13656.7	11565.4	11162.0	10477.7	11385.9	12429.1	15757.8
57.5°	14613.2	14611.5	15118.0	15749.6	15187.9	12817.4	12410.7	11919.5	12993.6	14314.4	18484.0
60°	14990.5	15096.3	16037.0	17263.0	16691.5	14264.0	13889.8	13583.0	14822.5	16422.0	21024.3
62.5°	15187.9	15331.6	16615.0	17876.7	18816.9	16671.9	16298.4	15855.9	17241.8	18734.0	22509.9
65°	14367.0	14648.9	16525.0	18407.6	20678.3	20575.3	20407.2	19630.3	20266.8	20560.7	21973.1
67.5°	12094.0	12383.0	14567.6	17912.5	22007.3	24340.4	24376.2	23048.9	22128.2	20717.4	18474.3
70°	8616.8	8843.5	10651.2	15018.2	20995.0	26800.5	26923.0	24624.0	21757.3	18372.9	12907.4
72.5°	4091.0	4229.8	5941.0	9774.5	16660.6	24555.7	24792.7	22613.0	18500.3	13602.5	7041.2
75°	1503.6	1545.8	2007.8	4158.2	9663.3	18108.8	18388.0	16210.0	12263.8	6772.2	2682.3
77.5°	901.2	928.8	1126.7	1755.1	3800.9	10350.8	10763.5	8815.8	5359.8	2520.7	1319.2
80°	630.1	649.6	807.9	1092.0	1795.8	3944.6	4311.7	3598.1	2135.2	1595.2	959.7
82.5°	426.2	435.9	568.2	738.0	1193.4	1408.7	1519.8	1600.1	1440.1	1186.9	608.9
85°	279.2	289.0	385.5	486.4	759.1	728.2	744.5	941.8	1051.3	806.3	337.8
87.5°	160.0	166.5	232.1	259.7	372.5	308.5	311.8	496.1	672.9	543.8	205.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6	3893.6
2.5°	3879.0	3857.8	3810.7	3780.8	3753.2	3746.7	3735.3	3733.7	3732.0	3732.0	3727.2
5°	3792.2	3756.4	3683.2	3642.0	3607.9	3604.6	3603.0	3611.1	3614.4	3617.6	3612.8
7.5°	3736.9	3688.1	3596.5	3537.9	3497.3	3487.0	3503.8	3541.2	3565.6	3575.3	3570.5
10°	3702.8	3642.0	3536.3	3472.3	3438.2	3433.3	3454.4	3498.9	3549.3	3568.8	3567.2
12.5°	3663.7	3594.9	3482.1	3415.4	3395.9	3405.6	3433.3	3474.0	3526.5	3557.5	3559.1
15°	3624.1	3544.4	3428.4	3369.8	3361.7	3374.7	3400.8	3431.7	3472.3	3503.8	3507.0
17.5°	3577.0	3493.5	3378.0	3317.3	3310.7	3317.3	3318.9	3335.1	3361.7	3391.0	3399.1
20°	3526.5	3441.4	3320.5	3260.3	3231.0	3205.0	3175.2	3178.4	3186.6	3216.4	3222.9
22.5°	3490.2	3405.6	3276.6	3193.1	3115.0	3036.4	2977.8	2969.7	2972.9	2997.3	3005.5
25°	3493.5	3404.0	3265.2	3121.5	2950.2	2824.4	2745.8	2732.7	2731.1	2749.0	2760.9
27.5°	3557.5	3467.4	3307.5	3047.8	2770.7	2584.2	2501.2	2491.5	2478.5	2483.3	2496.3
30°	3699.5	3616.0	3410.5	2972.9	2576.1	2349.4	2262.7	2252.9	2235.0	2226.9	2236.6
32.5°	3931.0	3862.7	3560.7	2900.8	2381.9	2148.2	2060.4	2039.3	2027.9	2018.1	2026.2
35°	4316.6	4287.3	3761.3	2822.8	2210.6	1993.2	1913.5	1880.9	1864.7	1882.6	1895.6
37.5°	4920.6	4936.8	4024.3	2700.2	2078.3	1890.7	1823.5	1786.0	1761.6	1776.3	1790.9
40°	5776.2	5787.6	4314.9	2527.3	1963.9	1830.0	1758.4	1724.2	1689.5	1663.5	1661.9
42.5°	6899.1	6783.6	4600.7	2339.6	1831.6	1792.6	1712.8	1670.0	1618.0	1545.8	1531.2
45°	8231.3	7825.2	4817.6	2123.8	1683.0	1747.0	1661.9	1603.3	1521.4	1443.4	1435.2
47.5°	9766.3	8943.2	4923.8	1900.5	1544.2	1679.8	1600.1	1506.8	1403.8	1364.7	1359.9
50°	11640.2	10270.6	4974.3	1683.0	1423.8	1591.9	1510.1	1400.5	1314.3	1306.2	1301.3
52.5°	13774.4	11867.4	4991.1	1505.2	1324.1	1477.5	1436.9	1330.6	1261.7	1268.8	1268.8
55°	16007.7	13516.3	4768.8	1376.1	1232.4	1359.9	1387.5	1302.9	1245.5	1272.0	1281.8
57.5°	18057.8	14977.5	4069.8	1276.9	1146.2	1270.4	1369.6	1329.0	1289.9	1395.7	1402.2
60°	19631.9	15840.7	3039.6	1186.9	1082.3	1239.0	1417.3	1428.7	1438.5	1691.2	1725.9
62.5°	19961.5	15553.9	2089.7	1117.0	1053.0	1265.5	1503.6	1505.2	1493.8	1670.0	1691.2
65°	18448.2	13736.4	1519.8	1077.4	1028.6	1312.7	1577.3	1542.6	1467.8	1601.7	1562.1
67.5°	14650.6	10349.2	1265.5	1048.1	992.8	1309.4	1655.4	1577.3	1453.1	1569.2	1505.2
70°	9509.9	6257.7	1126.7	1023.7	950.0	1247.1	1700.9	1574.0	1410.3	1459.6	1384.3
72.5°	4639.7	2798.4	1033.5	987.9	906.0	1160.9	1699.3	1544.2	1366.4	1363.1	1322.5
75°	1815.3	1281.8	948.3	933.7	831.2	1062.7	1653.7	1501.9	1314.3	1261.7	1247.1
77.5°	1062.7	914.2	841.0	854.0	741.2	964.6	1587.1	1428.7	1242.2	1180.4	1164.1
80°	773.7	684.3	716.8	738.0	633.3	867.0	1497.0	1338.7	1162.5	1193.4	1170.6
82.5°	496.1	440.8	581.3	602.4	527.6	767.2	1398.9	1243.8	1049.7	953.2	930.4
85°	253.2	279.2	432.7	458.7	406.7	630.1	1280.2	1118.6	922.3	793.3	806.3
87.5°	142.1	190.9	276.0	308.5	287.4	484.7	1038.3	922.3	752.6	612.2	539.0
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)