

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: P302813

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302813
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
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 52663.3 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G5

Input Watts (W): 501
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

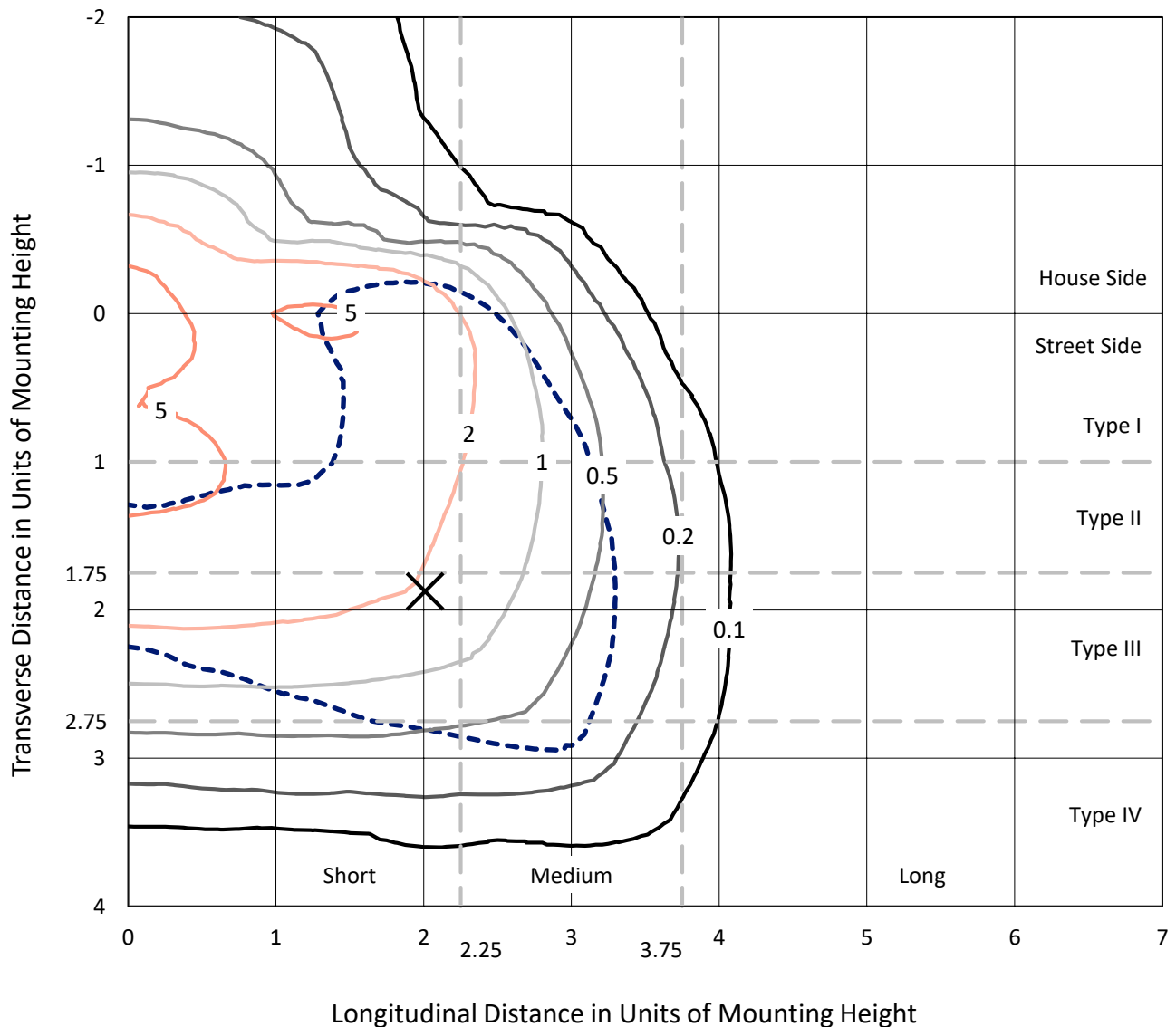


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

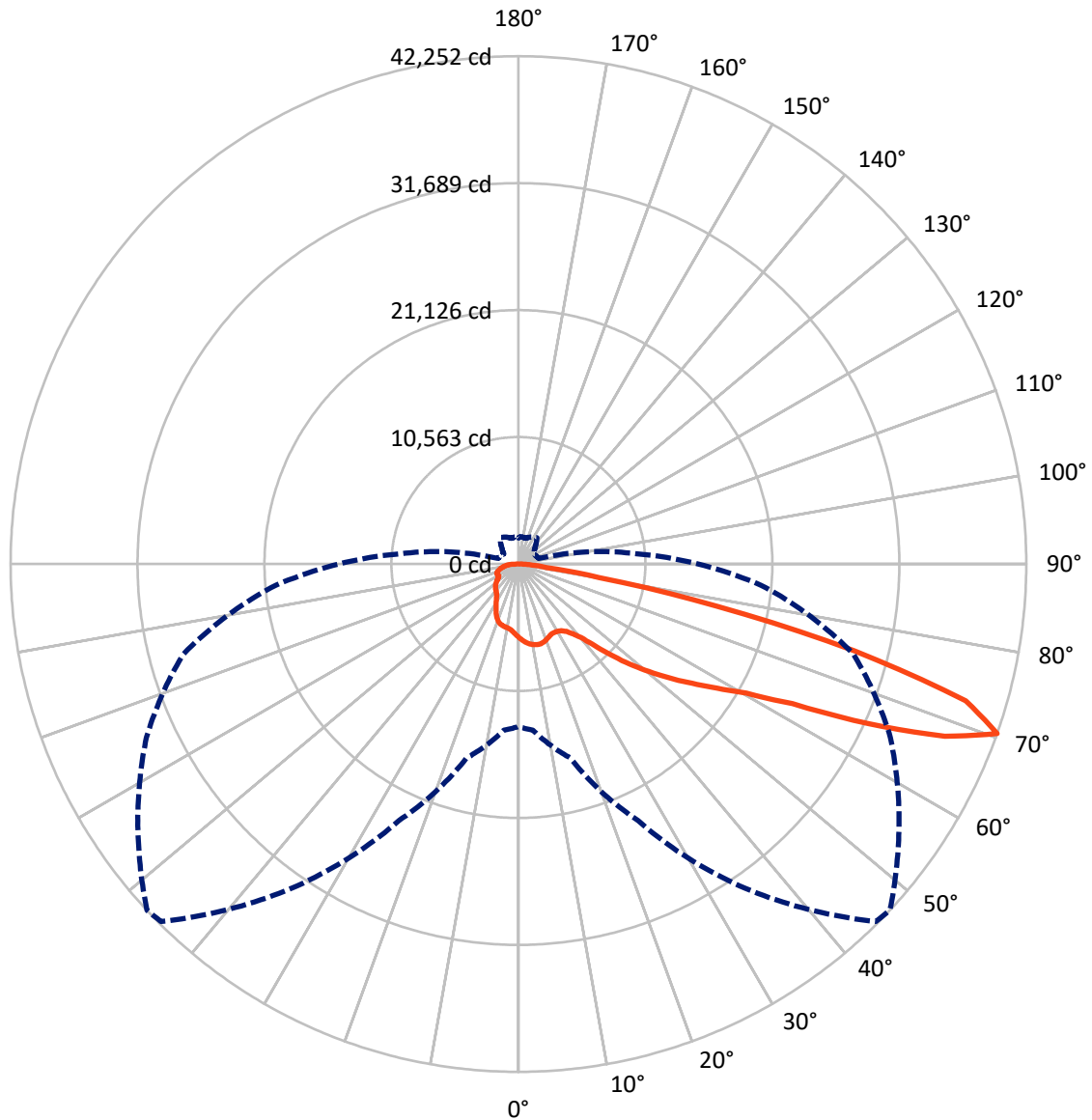


Based on 30 foot mounting height. Maximum calculated value = 7.8 fc
 Type IV - Short - Semi-Cutoff

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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	10986.6	0.0	10986.6
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	41676.7	0.0	41676.7
	% Fixture	79.1	0.0	79.1
Total	Lumens	52663.3	0.0	52663.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	585.5	1.1
10°-20°	1717.7	3.3
20°-30°	2536.6	4.8
30°-40°	3686.9	7.0
40°-50°	6635.0	12.6
50°-60°	11494.5	21.8
60°-70°	16406.0	31.2
70°-80°	8421.9	16.0
80°-90°	1179.1	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°	52663.3	100.0
0°-180°	52663.3	100.0



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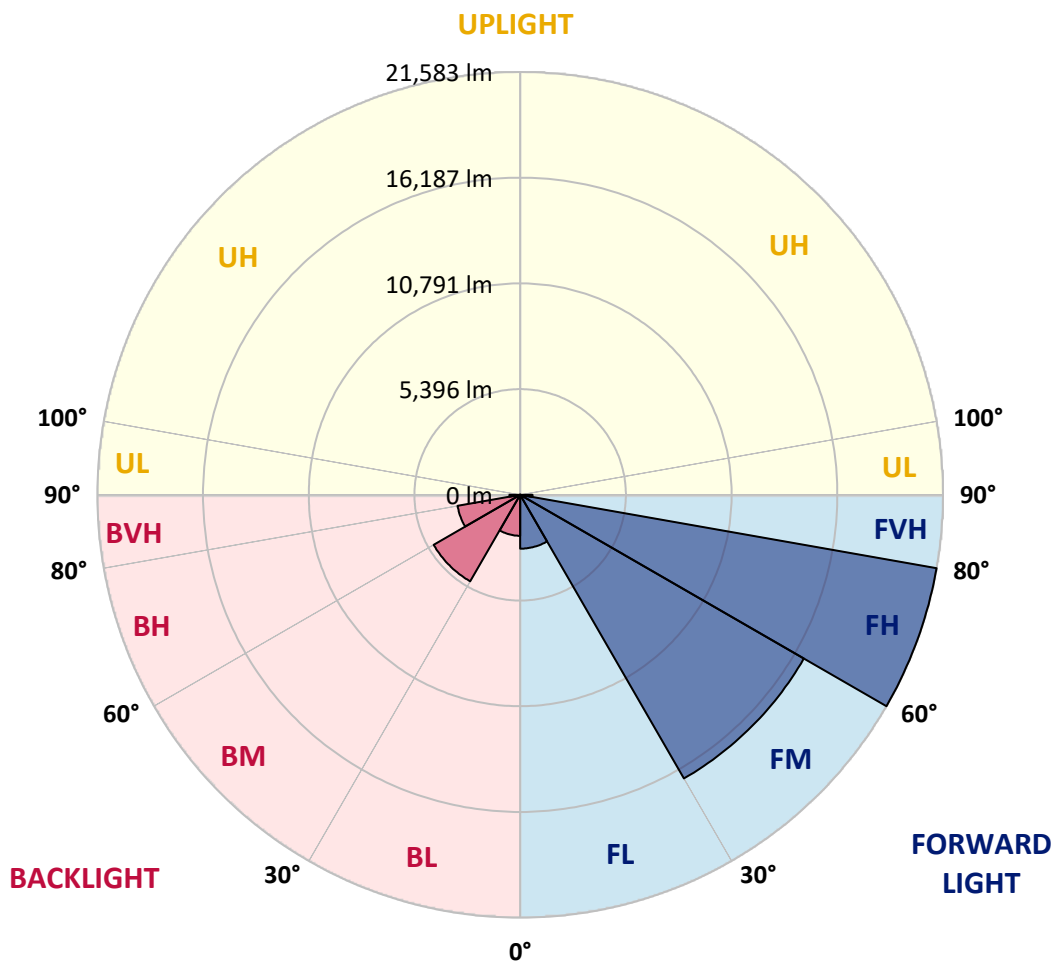
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2747.9	5.2			
FM	(30°-60°)	16716.8	31.7			
FH	(60°-80°)	21582.8	41.0			G5
FVH	(80°-90°)	629.2	1.2			G4/750
BL	(0°-30°)	2091.9	4.0	B3/2500		
BM	(30°-60°)	5099.6	9.7	B4/8500		
BH	(60°-80°)	3245.1	6.2	B4/5000		G4/5000
BVH	(80°-90°)	549.9	1.0			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4
2.5°	6469.5	6456.8	6451.7	6441.4	6428.7	6364.0	6351.3	6305.3	6241.5	6174.3	6105.3
5°	6895.0	6892.4	6863.5	6812.4	6730.8	6589.5	6556.3	6444.0	6292.5	6146.2	6000.7
7.5°	7268.5	7245.6	7192.0	7089.0	6946.0	6753.7	6707.8	6551.2	6343.6	6143.6	5946.2
10°	7542.5	7529.8	7412.3	7271.1	7083.9	6871.2	6817.6	6643.1	6415.1	6161.5	5915.6
12.5°	7699.1	7673.6	7537.4	7368.9	7146.0	6938.4	6883.9	6707.8	6451.7	6161.5	5872.2
15°	7688.9	7671.0	7534.9	7350.2	7125.6	6943.5	6895.0	6718.0	6444.0	6136.0	5816.0
17.5°	7483.8	7491.5	7376.6	7194.5	7009.9	6871.2	6827.8	6664.4	6392.1	6084.9	5749.7
20°	7125.6	7161.3	7083.9	6923.1	6820.1	6725.7	6697.6	6558.9	6313.0	6010.9	5677.3
22.5°	6766.5	6799.7	6769.1	6632.9	6617.6	6561.4	6546.1	6446.6	6244.0	5964.9	5633.9
25°	6502.7	6533.3	6528.2	6410.0	6456.8	6454.2	6441.4	6392.1	6228.7	5964.9	5641.6
27.5°	6431.2	6441.4	6431.2	6323.2	6387.0	6438.9	6428.7	6420.2	6274.7	6039.0	5739.4
30°	6677.2	6661.8	6581.8	6364.0	6423.6	6495.1	6484.8	6489.9	6412.5	6233.8	5957.3
32.5°	7658.3	7588.5	7337.5	6725.7	6569.1	6607.4	6612.5	6697.6	6710.3	6533.3	6295.1
35°	9126.1	9049.5	8723.6	7694.0	7022.6	6889.9	6889.9	7017.5	7094.1	6963.9	6820.1
37.5°	10681.6	10596.5	10422.9	9036.7	7975.7	7379.2	7366.4	7455.7	7565.5	7597.0	7632.7
40°	12448.9	12359.6	12408.1	10542.9	9305.6	8226.7	8044.6	7980.8	8277.7	8475.1	8762.8
42.5°	14383.9	14342.2	14360.1	12220.9	10819.4	9495.4	9236.7	8905.7	9264.8	9615.4	10217.8
45°	16174.2	16210.0	16192.1	14017.2	12505.9	11042.4	10768.4	10127.6	10479.1	11080.7	12062.6
47.5°	17742.5	17593.6	17824.2	15979.4	14394.1	12774.8	12436.2	11578.4	11934.1	12677.0	14337.1
50°	19646.0	19625.6	19287.8	18598.5	16676.3	14514.1	14070.8	13076.9	13630.0	14663.0	17204.7
52.5°	21647.3	21275.5	20965.8	20634.8	19098.0	16297.6	15753.9	14570.3	15623.7	16922.2	20699.4
55°	22056.6	21890.7	22274.5	22831.0	21432.1	18150.1	17517.0	16443.1	17868.4	19505.6	24729.4
57.5°	22933.1	22930.5	23725.3	24716.6	23835.1	20114.8	19476.7	18705.7	20391.4	22464.2	29007.8
60°	23525.3	23691.3	25167.6	27091.5	26194.7	22385.1	21798.0	21316.3	23261.5	25771.7	32994.3
62.5°	23835.1	24060.6	26074.7	28054.8	29530.2	26164.0	25577.7	24883.4	27058.3	29400.1	35325.9
65°	22546.8	22989.2	25933.4	28887.8	32451.5	32289.8	32026.0	30806.6	31805.6	32266.8	34483.4
67.5°	18979.7	19433.3	22861.6	28110.9	34537.0	38198.5	38254.7	36171.7	34726.8	32512.7	28992.5
70°	13522.8	13878.5	16715.4	23568.7	32948.4	42059.2	42251.5	38643.6	34144.8	28833.3	20256.1
72.5°	6420.2	6638.0	9323.5	15339.5	26146.1	38536.4	38908.2	35487.5	29033.3	21347.0	11050.0
75°	2359.6	2426.0	3150.9	6525.7	15165.1	28419.0	28857.2	25439.0	19246.1	10628.0	4209.5
77.5°	1414.2	1457.6	1768.2	2754.4	5964.9	16244.0	16891.6	13835.1	8411.3	3955.9	2070.3
80°	988.8	1019.4	1267.9	1713.7	2818.2	6190.4	6766.5	5646.7	3350.9	2503.4	1506.1
82.5°	668.8	684.1	891.8	1158.1	1872.9	2210.7	2385.1	2511.1	2260.0	1862.7	955.6
85°	438.2	453.5	605.0	763.3	1191.3	1142.8	1168.3	1478.0	1649.9	1265.3	530.1
87.5°	251.0	261.2	364.2	407.6	584.6	484.2	489.3	778.6	1056.0	853.5	322.5
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°	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4	6110.4
2.5°	6087.5	6054.3	5980.2	5933.4	5890.1	5879.8	5862.0	5859.4	5856.9	5856.9	5849.2
5°	5951.3	5895.2	5780.3	5715.6	5662.0	5656.9	5654.3	5667.1	5672.2	5677.3	5669.7
7.5°	5864.5	5787.9	5644.1	5552.2	5488.4	5472.3	5498.6	5557.3	5595.6	5611.0	5603.3
10°	5810.9	5715.6	5549.7	5449.3	5395.7	5388.0	5421.2	5491.0	5570.1	5600.7	5598.2
12.5°	5749.7	5641.6	5464.6	5359.9	5329.3	5344.6	5388.0	5451.8	5534.4	5582.9	5585.4
15°	5687.5	5562.4	5380.4	5288.5	5275.7	5296.1	5337.0	5385.5	5449.3	5498.6	5503.7
17.5°	5613.5	5482.5	5301.2	5205.9	5195.7	5205.9	5208.5	5234.0	5275.7	5321.6	5334.4
20°	5534.4	5400.8	5211.0	5116.6	5070.6	5029.8	4983.0	4988.1	5000.8	5047.6	5057.9
22.5°	5477.4	5344.6	5142.1	5011.1	4888.5	4765.1	4673.2	4660.5	4665.6	4703.9	4716.6
25°	5482.5	5342.1	5124.2	4898.7	4629.8	4432.4	4309.0	4288.6	4286.1	4314.2	4332.9
27.5°	5582.9	5441.6	5190.6	4783.0	4348.2	4055.5	3925.3	3910.0	3889.5	3897.2	3917.6
30°	5805.8	5674.8	5352.3	4665.6	4042.7	3687.0	3550.9	3535.6	3507.5	3494.7	3510.0
32.5°	6169.2	6061.9	5588.0	4552.4	3738.1	3371.3	3233.5	3200.3	3182.4	3167.1	3179.9
35°	6774.2	6728.2	5902.8	4429.9	3469.2	3128.0	3002.9	2951.8	2926.3	2954.4	2974.8
37.5°	7722.1	7747.6	6315.5	4237.6	3261.6	2967.2	2861.6	2802.9	2764.6	2787.6	2810.6
40°	9064.8	9082.7	6771.6	3966.1	3082.0	2871.8	2759.5	2705.9	2651.5	2610.6	2608.1
42.5°	10827.1	10645.8	7220.0	3671.7	2874.4	2813.1	2688.0	2620.8	2539.1	2426.0	2403.0
45°	12917.8	12280.4	7560.4	3333.0	2641.2	2741.7	2608.1	2516.2	2387.7	2265.1	2252.4
47.5°	15326.7	14035.0	7727.2	2982.5	2423.4	2636.1	2511.1	2364.7	2203.0	2141.8	2134.1
50°	18267.5	16118.1	7806.3	2641.2	2234.5	2498.3	2369.8	2197.9	2062.6	2049.9	2042.2
52.5°	21616.7	18624.0	7832.7	2362.1	2077.9	2318.8	2254.9	2088.2	1980.1	1991.1	1991.1
55°	25121.6	21211.7	7483.8	2159.6	1934.1	2134.1	2177.5	2044.8	1954.6	1996.3	2011.6
57.5°	28339.0	23504.9	6387.0	2003.9	1798.8	1993.7	2149.4	2085.6	2024.3	2190.3	2200.5
60°	30809.2	24859.6	4770.2	1862.7	1698.4	1944.3	2224.3	2242.2	2257.5	2654.0	2708.5
62.5°	31326.5	24409.4	3279.4	1752.9	1652.5	1986.0	2359.6	2362.1	2344.3	2620.8	2654.0
65°	28951.6	21557.2	2385.1	1690.8	1614.2	2060.1	2475.3	2420.9	2303.4	2513.6	2451.5
67.5°	22991.8	16241.5	1986.0	1644.8	1558.0	2055.0	2597.9	2475.3	2280.5	2462.6	2362.1
70°	14924.2	9820.4	1768.2	1606.5	1490.8	1957.1	2669.3	2470.2	2213.2	2290.7	2172.4
72.5°	7281.3	4391.6	1621.8	1550.4	1421.9	1821.8	2666.8	2423.4	2144.3	2139.2	2075.4
75°	2848.9	2011.6	1488.3	1465.3	1304.5	1667.8	2595.3	2357.0	2062.6	1980.1	1957.1
77.5°	1667.8	1434.6	1319.8	1340.2	1163.2	1513.8	2490.6	2242.2	1949.5	1852.4	1826.9
80°	1214.3	1073.9	1124.9	1158.1	993.9	1360.6	2349.4	2100.9	1824.4	1872.9	1837.1
82.5°	778.6	691.8	912.2	945.4	827.9	1204.0	2195.4	1952.0	1647.4	1495.9	1460.2
85°	397.4	438.2	679.0	719.9	638.2	988.8	2009.0	1755.4	1447.4	1244.9	1265.3
87.5°	222.9	299.5	433.1	484.2	451.0	760.7	1629.5	1447.4	1181.1	960.7	845.8
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)