

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: P302810

Luminaire Tested: **GLNA-AF-09-LED-E1-T4W-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302810
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-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 45755.9 lumens
Efficiency: N/A
Efficacy: 91.3 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

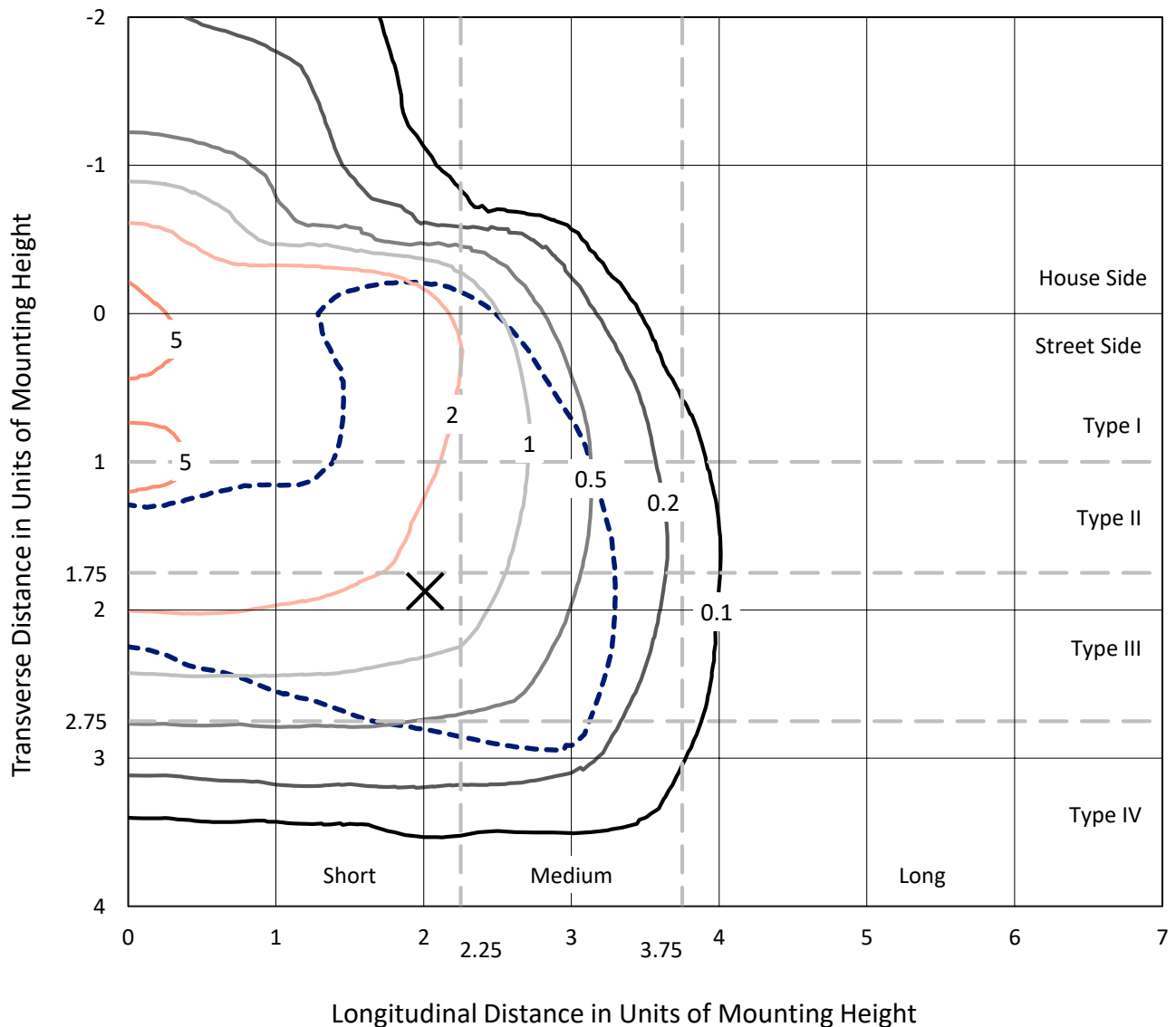
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

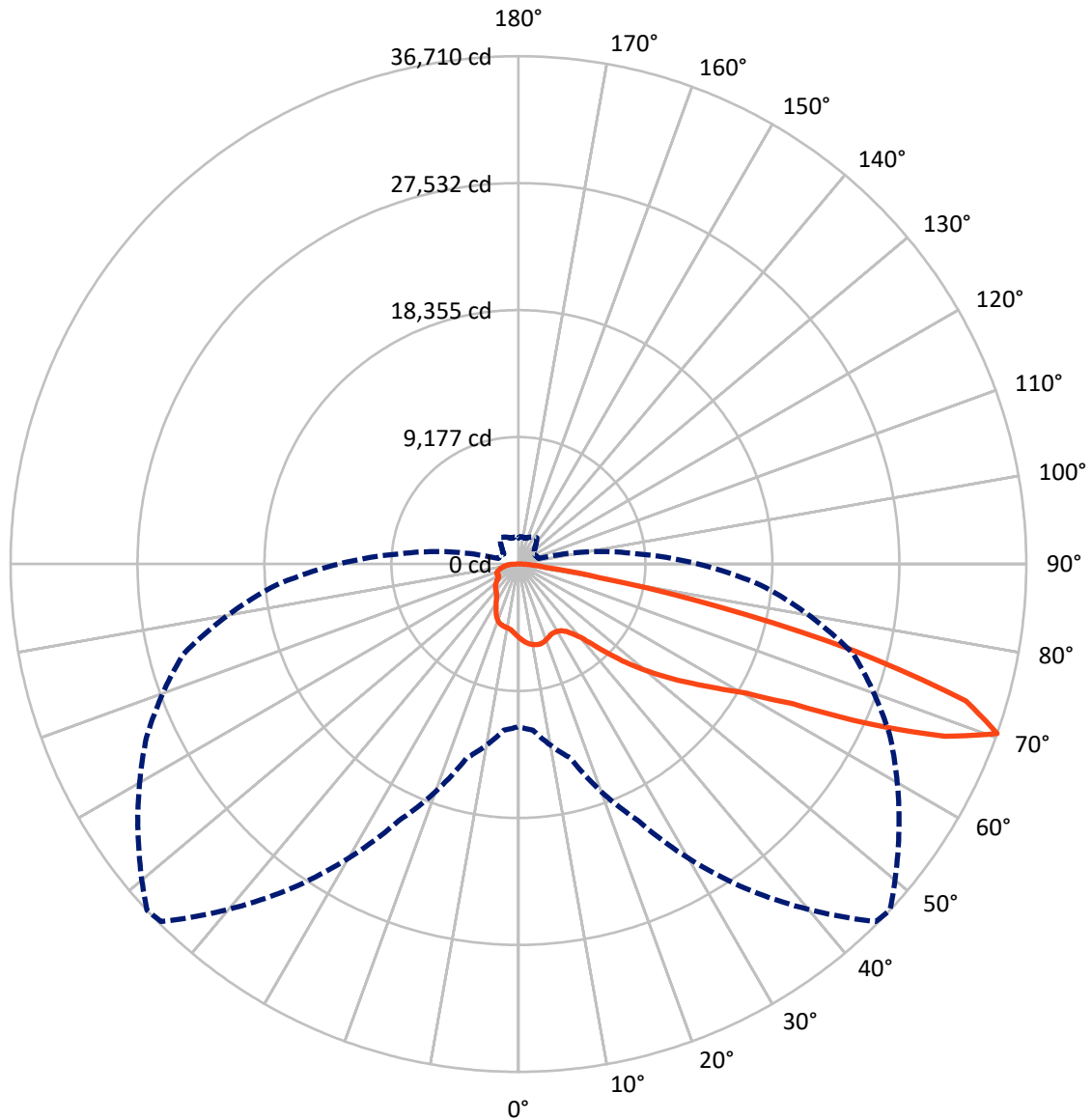
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.8 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	9545.6	0.0	9545.6
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	36210.3	0.0	36210.3
	% Fixture	79.1	0.0	79.1
Total	Lumens	45755.9	0.0	45755.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	508.7	1.1
10°-20°	1492.4	3.3
20°-30°	2203.9	4.8
30°-40°	3203.3	7.0
40°-50°	5764.8	12.6
50°-60°	9986.9	21.8
60°-70°	14254.2	31.2
70°-80°	7317.3	16.0
80°-90°	1024.4	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°	45755.9	100.0
0°-180°	45755.9	100.0



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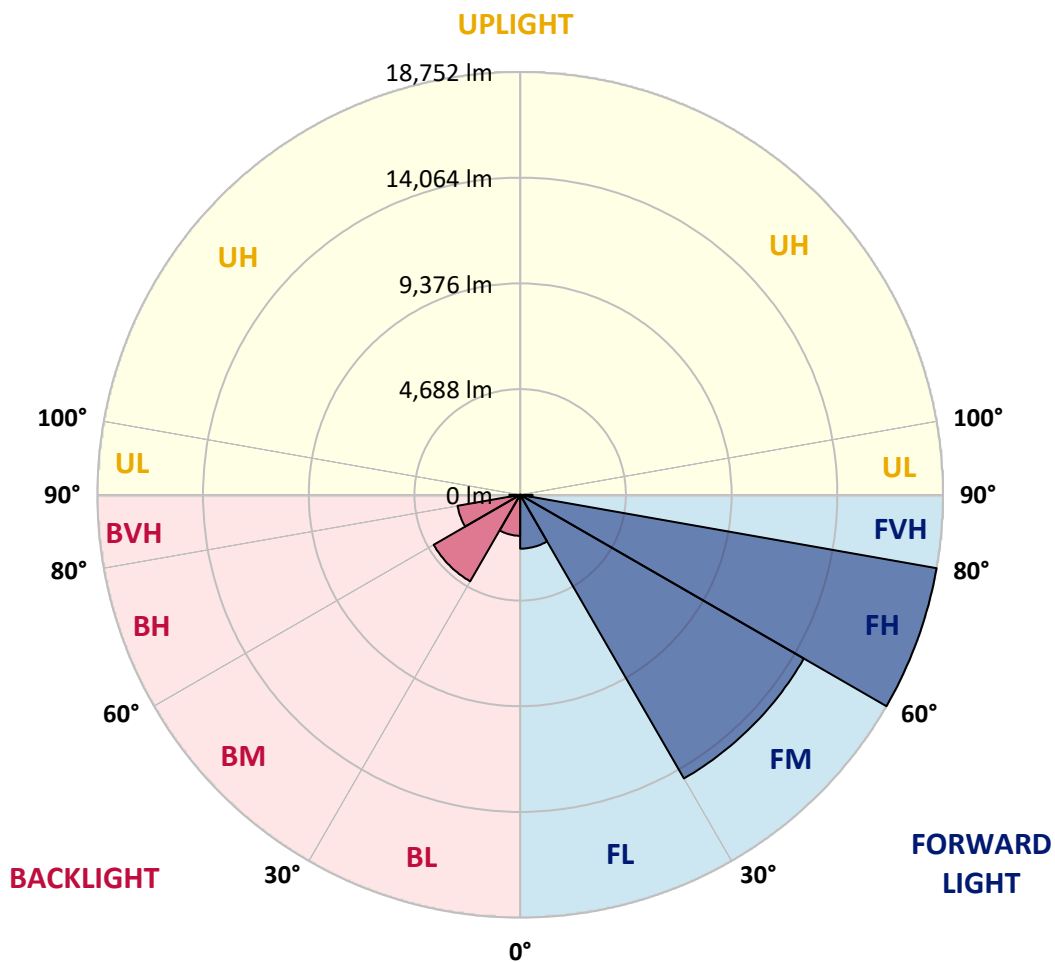
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2387.5	5.2			
FM	(30°-60°)	14524.2	31.7			
FH	(60°-80°)	18752.0	41.0			G5
FVH	(80°-90°)	546.7	1.2			G4/750
BL	(0°-30°)	1817.5	4.0	B3/2500		
BM	(30°-60°)	4430.8	9.7	B3/5000		
BH	(60°-80°)	2819.5	6.2	B4/5000		G4/5000
BVH	(80°-90°)	477.8	1.0			G3/500
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°	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0
2.5°	5621.0	5609.9	5605.5	5596.6	5585.5	5529.3	5518.2	5478.3	5422.8	5364.4	5304.6
5°	5990.6	5988.4	5963.3	5918.9	5847.9	5725.2	5696.4	5598.8	5467.2	5340.0	5213.6
7.5°	6315.2	6295.2	6248.7	6159.2	6035.0	5867.9	5828.0	5692.0	5511.6	5337.8	5166.3
10°	6553.2	6542.2	6440.1	6317.4	6154.8	5969.9	5923.4	5771.8	5573.7	5353.3	5139.7
12.5°	6689.3	6667.1	6548.8	6402.4	6208.7	6028.3	5981.0	5828.0	5605.5	5353.3	5102.0
15°	6680.4	6664.9	6546.6	6386.2	6191.0	6032.8	5990.6	5836.9	5598.8	5331.2	5053.2
17.5°	6502.2	6508.9	6409.1	6250.9	6090.4	5969.9	5932.2	5790.3	5553.7	5286.8	4995.5
20°	6191.0	6222.0	6154.8	6015.0	5925.6	5843.5	5819.1	5698.6	5484.9	5222.5	4932.7
22.5°	5879.0	5907.8	5881.2	5762.9	5749.6	5700.8	5687.5	5601.0	5425.1	5182.6	4895.0
25°	5649.8	5676.4	5672.0	5569.2	5609.9	5607.7	5596.6	5553.7	5411.8	5182.6	4901.6
27.5°	5587.7	5596.6	5587.7	5493.8	5549.3	5594.4	5585.5	5578.1	5451.7	5246.9	4986.6
30°	5801.4	5788.1	5718.6	5529.3	5581.1	5643.2	5634.3	5638.7	5571.4	5416.2	5175.9
32.5°	6653.8	6593.2	6375.1	5843.5	5707.5	5740.7	5745.2	5819.1	5830.2	5676.4	5469.4
35°	7929.1	7862.6	7579.4	6684.8	6101.5	5986.2	5986.2	6097.1	6163.6	6050.5	5925.6
37.5°	9280.6	9206.6	9055.8	7851.5	6929.6	6411.3	6400.2	6477.8	6573.2	6600.6	6631.6
40°	10816.1	10738.5	10780.6	9160.1	8085.1	7147.7	6989.4	6934.0	7192.0	7363.5	7613.4
42.5°	12497.3	12461.1	12476.6	10618.0	9400.3	8250.0	8025.2	7737.6	8049.6	8354.2	8877.6
45°	14052.8	14083.9	14068.3	12178.7	10865.6	9594.0	9356.0	8799.3	9104.6	9627.3	10480.5
47.5°	15415.4	15286.0	15486.3	13883.5	12506.2	11099.3	10805.0	10059.8	10368.8	11014.2	12456.6
50°	17069.2	17051.5	16757.9	16159.1	14489.0	12610.4	12225.2	11361.7	11842.3	12739.8	14948.1
52.5°	18808.1	18485.0	18215.9	17928.3	16593.1	14160.0	13687.6	12659.2	13574.5	14702.7	17984.5
55°	19163.7	19019.5	19352.9	19836.4	18621.0	15769.5	15219.4	14286.4	15524.8	16947.2	21485.8
57.5°	19925.2	19922.9	20613.5	21474.7	20708.8	17476.6	16922.1	16252.3	17716.8	19517.8	25203.1
60°	20439.7	20583.9	21866.6	23538.2	22758.9	19449.0	18938.9	18520.5	20210.5	22391.5	28666.8
62.5°	20708.8	20904.7	22654.7	24375.1	25657.0	22732.3	22222.9	21619.7	23509.3	25543.9	30692.5
65°	19589.5	19973.9	22532.0	25098.8	28195.1	28054.6	27825.4	26766.0	27633.9	28034.6	29960.6
67.5°	16490.3	16884.4	19863.1	24423.9	30007.1	33188.4	33237.2	31427.3	30172.0	28248.3	25189.8
70°	11749.1	12058.2	14523.0	20477.4	28626.8	36542.6	36709.7	33575.0	29666.3	25051.5	17599.3
72.5°	5578.1	5767.4	8100.6	13327.5	22716.8	33481.9	33805.0	30832.9	25225.3	18547.1	9600.7
75°	2050.1	2107.8	2737.7	5669.8	13176.0	24691.5	25072.2	22102.4	16721.7	9234.0	3657.4
77.5°	1228.7	1266.4	1536.3	2393.1	5182.6	14113.4	14676.0	12020.4	7308.1	3437.1	1798.7
80°	859.1	885.7	1101.6	1489.0	2448.6	5378.5	5879.0	4906.1	2911.4	2175.1	1308.6
82.5°	581.1	594.4	774.8	1006.2	1627.2	1920.7	2072.3	2181.7	1963.6	1618.4	830.2
85°	380.7	394.1	525.6	663.2	1035.0	992.9	1015.1	1284.2	1433.5	1099.4	460.6
87.5°	218.1	227.0	316.4	354.1	507.9	420.7	425.1	676.5	917.5	741.5	280.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0	5309.0
2.5°	5289.0	5260.2	5195.9	5155.2	5117.5	5108.6	5093.1	5090.9	5088.7	5088.7	5082.0
5°	5170.7	5121.9	5022.1	4965.9	4919.4	4914.9	4912.7	4923.8	4928.2	4932.7	4926.0
7.5°	5095.3	5028.8	4903.8	4824.0	4768.6	4754.5	4777.4	4828.4	4861.7	4875.0	4868.4
10°	5048.8	4965.9	4821.8	4734.5	4688.0	4681.3	4710.1	4770.8	4839.5	4866.1	4863.9
12.5°	4995.5	4901.6	4747.9	4656.9	4630.3	4643.6	4681.3	4736.8	4808.5	4850.6	4852.8
15°	4941.6	4832.9	4674.7	4594.8	4583.7	4601.5	4637.0	4679.1	4734.5	4777.4	4781.9
17.5°	4877.2	4763.4	4605.9	4523.1	4514.2	4523.1	4525.3	4547.5	4583.7	4623.6	4634.7
20°	4808.5	4692.4	4527.5	4445.5	4405.6	4370.1	4329.4	4333.8	4344.9	4385.6	4394.5
22.5°	4758.9	4643.6	4467.7	4353.8	4247.3	4140.1	4060.3	4049.2	4053.6	4086.9	4098.0
25°	4763.4	4641.4	4452.1	4256.2	4022.6	3851.1	3743.9	3726.1	3723.9	3748.3	3764.6
27.5°	4850.6	4727.9	4509.8	4155.7	3777.9	3523.6	3410.4	3397.1	3379.4	3386.0	3403.8
30°	5044.3	4930.5	4650.3	4053.6	3512.5	3203.4	3085.1	3071.8	3047.4	3036.3	3049.7
32.5°	5360.0	5266.8	4855.1	3955.3	3247.8	2929.1	2809.4	2780.5	2765.0	2751.7	2762.8
35°	5885.6	5845.7	5128.6	3848.8	3014.2	2717.7	2609.0	2564.7	2542.5	2566.9	2584.6
37.5°	6709.2	6731.4	5487.2	3681.8	2833.8	2578.0	2486.3	2435.3	2402.0	2422.0	2441.9
40°	7875.9	7891.4	5883.4	3445.9	2677.8	2495.2	2397.6	2351.0	2303.7	2268.2	2266.0
42.5°	9407.0	9249.5	6273.0	3190.1	2497.4	2444.2	2335.5	2277.1	2206.1	2107.8	2087.8
45°	11223.5	10669.7	6568.8	2895.9	2294.8	2382.1	2266.0	2186.1	2074.5	1968.0	1957.0
47.5°	13316.5	12194.2	6713.7	2591.3	2105.6	2290.4	2181.7	2054.5	1914.1	1860.8	1854.2
50°	15871.5	14004.0	6782.4	2294.8	1941.4	2170.6	2059.0	1909.6	1792.1	1781.0	1774.3
52.5°	18781.4	16181.3	6805.4	2052.3	1805.4	2014.6	1959.2	1814.3	1720.4	1730.0	1730.0
55°	21826.7	18429.5	6502.2	1876.4	1680.5	1854.2	1891.9	1776.6	1698.2	1734.4	1747.7
57.5°	24622.0	20422.0	5549.3	1741.1	1562.9	1732.2	1867.5	1812.0	1758.8	1903.0	1911.9
60°	26768.2	21599.0	4144.6	1618.4	1475.7	1689.3	1932.6	1948.1	1961.4	2305.9	2353.2
62.5°	27217.7	21207.9	2849.3	1523.0	1435.7	1725.6	2050.1	2052.3	2036.8	2277.1	2305.9
65°	25154.3	18729.7	2072.3	1469.0	1402.5	1789.9	2150.7	2103.3	2001.3	2183.9	2130.0
67.5°	19976.2	14111.2	1725.6	1429.1	1353.7	1785.4	2257.1	2150.7	1981.4	2139.6	2052.3
70°	12966.8	8532.4	1536.3	1395.8	1295.3	1700.4	2319.2	2146.2	1922.9	1990.2	1887.5
72.5°	6326.3	3815.6	1409.1	1347.0	1235.4	1582.9	2317.0	2105.6	1863.1	1858.6	1803.2
75°	2475.2	1747.7	1293.1	1273.1	1133.4	1449.0	2254.9	2047.9	1792.1	1720.4	1700.4
77.5°	1449.0	1246.5	1146.7	1164.4	1010.6	1315.2	2164.0	1948.1	1693.8	1609.5	1587.3
80°	1055.0	933.0	977.4	1006.2	863.5	1182.2	2041.2	1825.4	1585.1	1627.2	1596.2
82.5°	676.5	601.1	792.5	821.4	719.3	1046.1	1907.4	1696.0	1431.3	1299.7	1268.7
85°	345.3	380.7	590.0	625.5	554.5	859.1	1745.5	1525.2	1257.6	1081.6	1099.4
87.5°	193.7	260.2	376.3	420.7	391.8	660.9	1415.8	1257.6	1026.2	834.7	734.9
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)