

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: P301128

Luminaire Tested: **GLNA-AF-09-LED-E1-T3R-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301128
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
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-T3R-7027
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 47106.5 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - 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

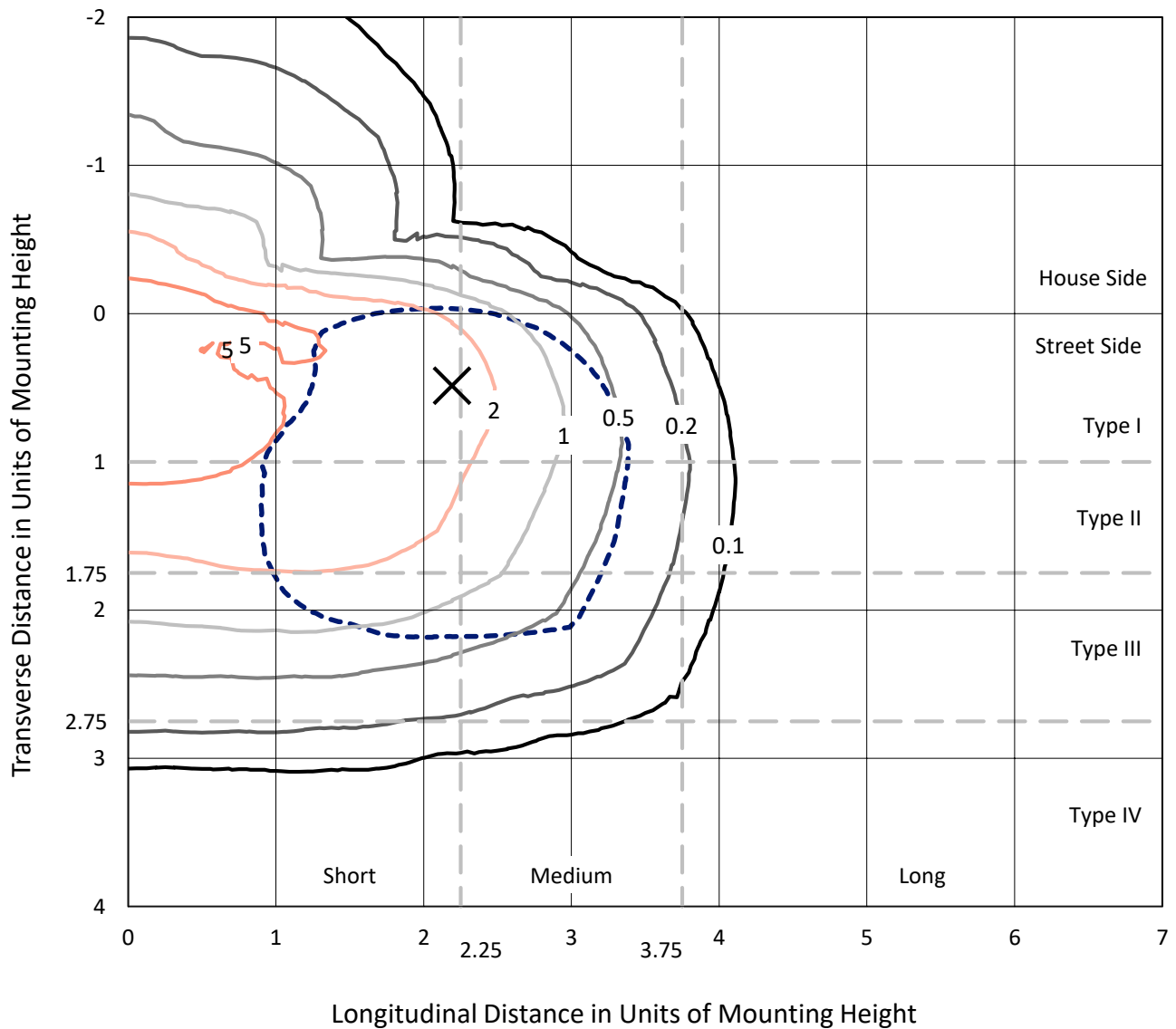


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

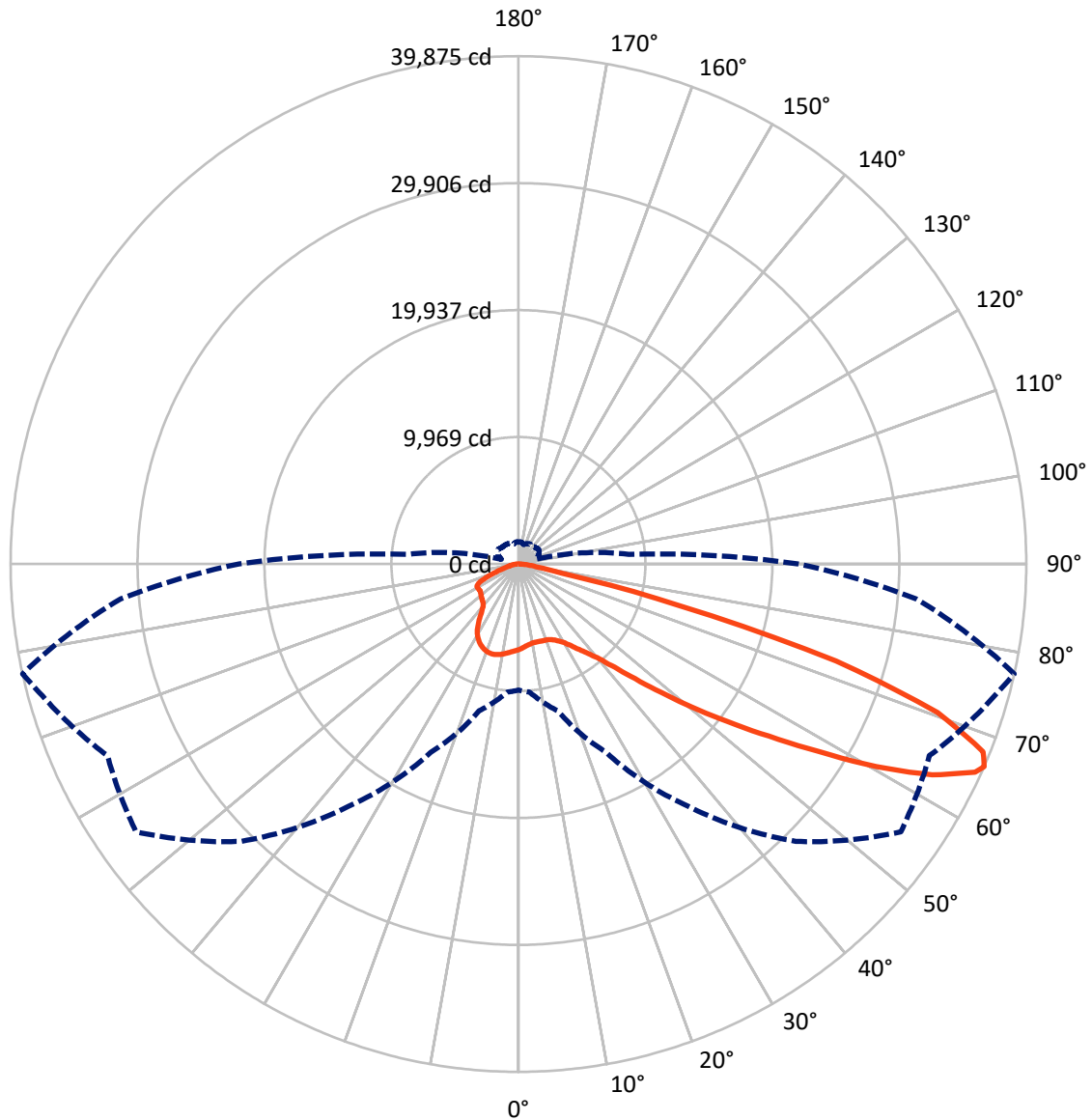


Based on 30 foot mounting height. Maximum calculated value = 9.2 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8047.9	0.0	8047.9
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	39058.6	0.0	39058.6
	% Fixture	82.9	0.0	82.9
Total	Lumens	47106.5	0.0	47106.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	599.7	1.3
10°-20°	1692.0	3.6
20°-30°	2887.6	6.1
30°-40°	4622.5	9.8
40°-50°	7141.4	15.2
50°-60°	10129.0	21.5
60°-70°	13549.8	28.8
70°-80°	5884.5	12.5
80°-90°	600.0	1.3
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°	47106.5	100.0
0°-180°	47106.5	100.0



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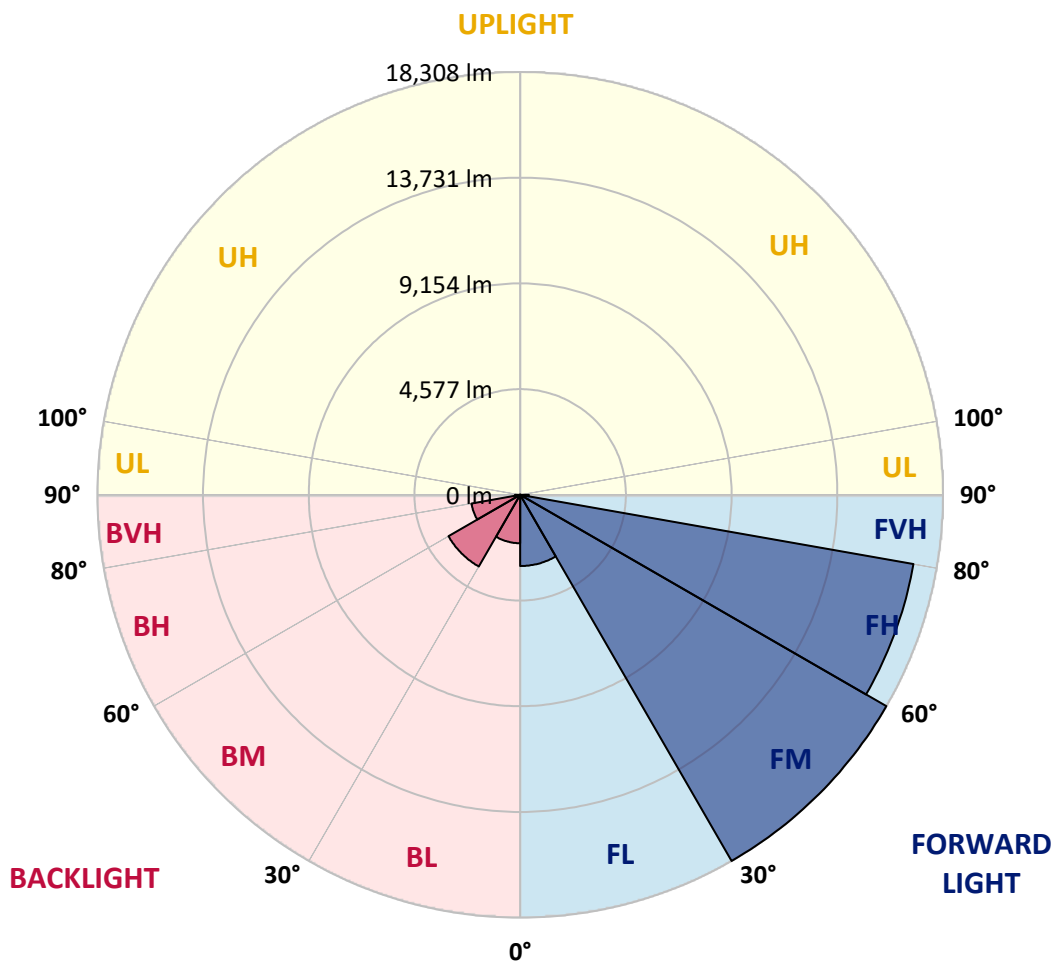
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3083.3	6.5			
FM	(30°-60°)	18308.0	38.9			
FH	(60°-80°)	17290.9	36.7			G5
FVH	(80°-90°)	376.3	0.8			G3/500
BL	(0°-30°)	2096.0	4.4	B3/2500		
BM	(30°-60°)	3584.9	7.6	B3/5000		
BH	(60°-80°)	2143.3	4.5	B3/2500		G3/2500
BVH	(80°-90°)	223.7	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8
2.5°	5938.5	5978.3	6012.0	6043.0	6105.0	6207.4	6325.3	6421.0	6559.2	6586.1	6659.6
5°	5393.3	5393.3	5419.6	5466.8	5551.0	5704.7	5865.1	6078.7	6379.2	6450.0	6646.1
7.5°	5128.5	5130.5	5146.0	5185.7	5259.2	5399.4	5575.3	5827.3	6234.4	6352.3	6685.9
10°	5226.2	5203.9	5170.2	5150.7	5161.5	5243.7	5410.8	5691.2	6145.4	6296.4	6775.5
12.5°	5773.4	5731.6	5615.7	5462.1	5315.1	5255.2	5352.9	5626.5	6107.7	6283.5	6893.4
15°	6668.4	6650.8	6434.5	6116.4	5760.6	5462.1	5395.3	5602.2	6111.7	6299.0	7033.6
17.5°	7790.4	7765.5	7481.1	7018.1	6437.2	5856.3	5544.3	5622.4	6127.2	6325.3	7169.1
20°	8923.3	8847.1	8540.5	7988.5	7242.5	6392.0	5791.6	5673.7	6147.4	6354.3	7311.9
22.5°	9769.0	9706.3	9430.7	8894.3	8035.0	7013.4	6123.2	5762.6	6212.1	6439.2	7487.2
25°	10512.3	10516.4	10242.8	9724.5	8836.3	7672.5	6550.4	6000.5	6376.5	6612.4	7727.7
27.5°	11431.6	11378.3	11122.2	10608.0	9628.8	8337.6	7066.6	6328.0	6621.9	6859.7	8043.8
30°	12530.7	12493.0	12197.1	11614.2	10507.6	9052.0	7656.3	6708.1	6937.9	7184.6	8457.6
32.5°	13823.9	13806.4	13499.1	12749.1	11522.5	9893.7	8349.1	7211.5	7409.7	7665.7	9052.0
35°	15342.3	15344.3	14981.7	14080.0	12633.1	10872.9	9134.2	7859.2	7983.8	8250.7	9760.3
37.5°	16277.0	16390.2	16254.7	15335.5	13890.7	11968.0	10153.8	8718.4	8638.2	8907.8	10519.1
40°	16477.1	16615.3	17044.6	16577.5	15297.8	13174.3	11057.5	9543.9	9444.2	9773.1	11496.3
42.5°	16196.8	16388.2	17296.6	17625.5	16791.2	14660.9	12272.6	10770.5	10643.8	11086.5	12711.3
45°	16029.7	16172.5	17223.2	18171.3	18086.4	16341.7	13819.9	12310.3	12263.8	12844.7	14113.7
47.5°	15740.5	15869.9	16880.1	18298.0	18848.0	17881.6	15678.5	14193.9	14284.9	15046.4	15696.1
50°	15896.2	15949.5	16497.3	17975.2	19068.3	19010.4	17754.9	16374.7	16686.7	17636.9	17488.0
52.5°	15874.0	16012.1	16452.9	17445.5	19097.3	19707.2	19800.2	18807.5	19464.6	20555.0	19475.4
55°	12834.0	13087.4	15929.9	17312.1	19199.1	20389.9	21621.1	21371.7	22595.6	23866.6	21718.8
57.5°	12255.1	12415.5	13991.1	17592.5	19742.2	21694.6	23646.2	24194.1	26241.4	27717.3	24452.2
60°	12141.2	12339.3	13970.9	17935.5	20844.1	23820.1	26649.1	27610.8	30677.8	32293.8	27621.6
62.5°	11787.4	12001.0	13839.4	17890.3	22408.9	26760.3	30493.1	31243.2	34884.3	36455.9	30272.8
65°	10666.0	10866.1	12769.3	17171.9	23464.2	29898.7	35042.0	34573.0	38205.4	39386.7	31594.3
66°	9897.7	10093.8	11925.5	16326.2	23218.9	30789.0	36654.0	35603.4	38948.7	39874.7	31336.2
67.5°	8493.3	8647.0	10287.3	14431.8	21916.9	31038.3	38009.3	36377.7	39026.2	39353.7	29861.0
70°	5366.4	5410.8	6685.9	9962.4	16591.0	26918.0	35945.8	34455.1	35808.3	34922.1	25033.1
72.5°	2328.4	2312.9	3209.8	5067.8	9393.0	18062.2	29077.3	28429.6	28089.3	26068.2	17523.7
75°	1295.3	1313.5	1667.3	2352.6	3817.0	8872.0	19021.1	18202.3	15368.5	13114.3	7946.1
77.5°	1039.2	1064.1	1382.2	1669.3	1713.8	3093.9	8901.0	7242.5	4360.2	3498.9	2207.7
80°	821.5	866.0	1206.3	1300.0	1155.1	1275.0	2875.6	2299.4	1725.2	1582.3	1144.3
82.5°	649.7	681.3	1035.1	983.9	808.0	859.2	1377.5	1342.4	1122.1	1021.6	661.1
85°	467.7	525.0	850.5	741.3	529.7	578.9	914.5	876.8	642.9	525.0	291.8
87.5°	191.4	249.3	601.1	492.0	295.8	269.6	456.2	429.3	304.6	222.4	144.9
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°	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8	6712.8
2.5°	6706.1	6759.3	6828.7	6871.2	6893.4	6908.9	6933.2	6931.2	6937.9	6939.9	6948.7
5°	6750.6	6839.5	6939.9	6966.9	6966.9	6942.0	6917.7	6877.3	6861.8	6857.7	6861.8
7.5°	6866.5	6964.2	7051.1	7020.1	6953.4	6855.0	6728.3	6617.1	6557.2	6536.9	6532.9
10°	7013.4	7131.3	7167.0	7049.1	6853.0	6617.1	6365.8	6183.1	6078.7	6049.7	6040.9
12.5°	7191.3	7302.5	7254.0	7004.6	6641.4	6261.3	5913.6	5622.4	5404.1	5335.4	5330.6
15°	7387.4	7474.4	7302.5	6866.5	6325.3	5764.6	5146.0	4643.2	4371.7	4284.7	4278.0
17.5°	7570.0	7614.5	7273.5	6625.9	5860.3	4952.6	4131.1	3743.6	3650.6	3672.8	3676.9
20°	7725.7	7725.7	7175.8	6280.9	5128.5	3881.7	3362.8	3356.8	3423.5	3490.2	3503.7
22.5°	7896.9	7794.5	7004.6	5793.6	4090.6	3176.1	3100.7	3162.7	3238.1	3311.6	3323.1
25°	8108.5	7850.4	6766.1	5055.0	3215.9	2884.3	2913.3	2964.5	3002.3	3049.4	3056.2
27.5°	8344.4	7921.2	6452.7	4037.4	2791.3	2702.4	2724.6	2742.1	2737.4	2755.6	2759.7
30°	8626.7	8004.0	6022.7	3155.9	2615.4	2546.0	2506.3	2490.8	2490.8	2519.8	2530.5
32.5°	9005.5	8126.0	5406.1	2704.4	2530.5	2434.8	2306.1	2248.2	2270.4	2368.1	2390.4
35°	9422.0	8257.4	4571.8	2550.8	2513.0	2383.6	2183.5	2076.3	2079.0	2170.0	2199.0
37.5°	9875.5	8424.6	3656.6	2521.8	2552.8	2386.3	2118.8	1971.9	1911.9	1911.9	1923.3
40°	10456.4	8595.7	2960.5	2542.0	2637.7	2412.6	2085.8	1889.6	1720.5	1725.2	1734.0
42.5°	11213.2	8742.7	2586.5	2583.8	2740.1	2448.3	2083.1	1780.5	1633.6	1734.0	1825.0
45°	12054.9	8816.1	2421.4	2622.2	2822.3	2470.6	2048.0	1763.0	1645.0	1942.9	2116.8
47.5°	13022.7	8773.7	2330.4	2635.0	2842.6	2470.6	2007.6	1805.4	1722.5	2250.2	2453.0
50°	14084.7	8651.7	2241.4	2608.7	2835.8	2465.8	2045.3	1847.2	1751.5	2303.4	2443.6
52.5°	15333.5	8549.2	2147.8	2550.8	2788.6	2441.6	2089.8	1829.7	1660.5	2094.5	2192.2
55°	16757.5	8578.2	2043.3	2468.5	2715.2	2395.1	2074.3	1758.2	1564.8	1845.2	1905.1
57.5°	18578.4	8923.3	1918.6	2364.1	2615.4	2316.9	2019.0	1725.2	1535.8	1674.0	1709.7
60°	20610.2	9523.7	1763.0	2259.0	2490.8	2192.2	1976.6	1740.7	1549.3	1660.5	1678.0
62.5°	22101.6	9873.5	1629.5	2105.3	2321.6	2054.1	1923.3	1760.3	1585.0	1707.0	1703.0
65°	22506.6	9299.3	1462.4	1880.9	2092.5	1909.9	1856.0	1782.5	1600.5	1744.8	1725.2
66°	21939.2	8680.7	1388.9	1776.4	1976.6	1838.4	1822.9	1780.5	1593.8	1749.5	1715.8
67.5°	20561.7	7411.7	1262.2	1622.8	1791.9	1732.0	1769.7	1760.3	1575.6	1744.8	1698.3
70°	16768.9	5057.0	1079.6	1351.2	1491.4	1524.4	1667.3	1689.5	1517.6	1667.3	1564.8
72.5°	11716.6	3080.4	954.9	1048.6	1206.3	1300.0	1527.1	1591.1	1440.1	1455.6	1357.9
75°	5662.2	1636.3	866.0	812.7	936.7	1086.3	1357.9	1457.7	1317.5	1217.8	1182.0
77.5°	1765.0	999.4	734.6	654.4	734.6	876.8	1134.9	1277.7	1173.3	1019.6	1006.1
80°	948.2	734.6	565.4	525.0	580.9	688.1	892.3	1066.1	1008.2	914.5	816.8
82.5°	625.4	476.5	418.5	407.0	442.8	525.0	663.1	883.5	883.5	783.8	570.1
85°	322.8	291.8	287.1	287.1	309.3	349.8	451.5	681.3	725.8	413.8	343.0
87.5°	160.4	167.1	155.7	162.4	173.9	171.2	215.7	343.0	409.7	251.4	208.9
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)