

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: P301131

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301131
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
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 54217.8 lumens
Efficiency: N/A
Efficacy: 108.2 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

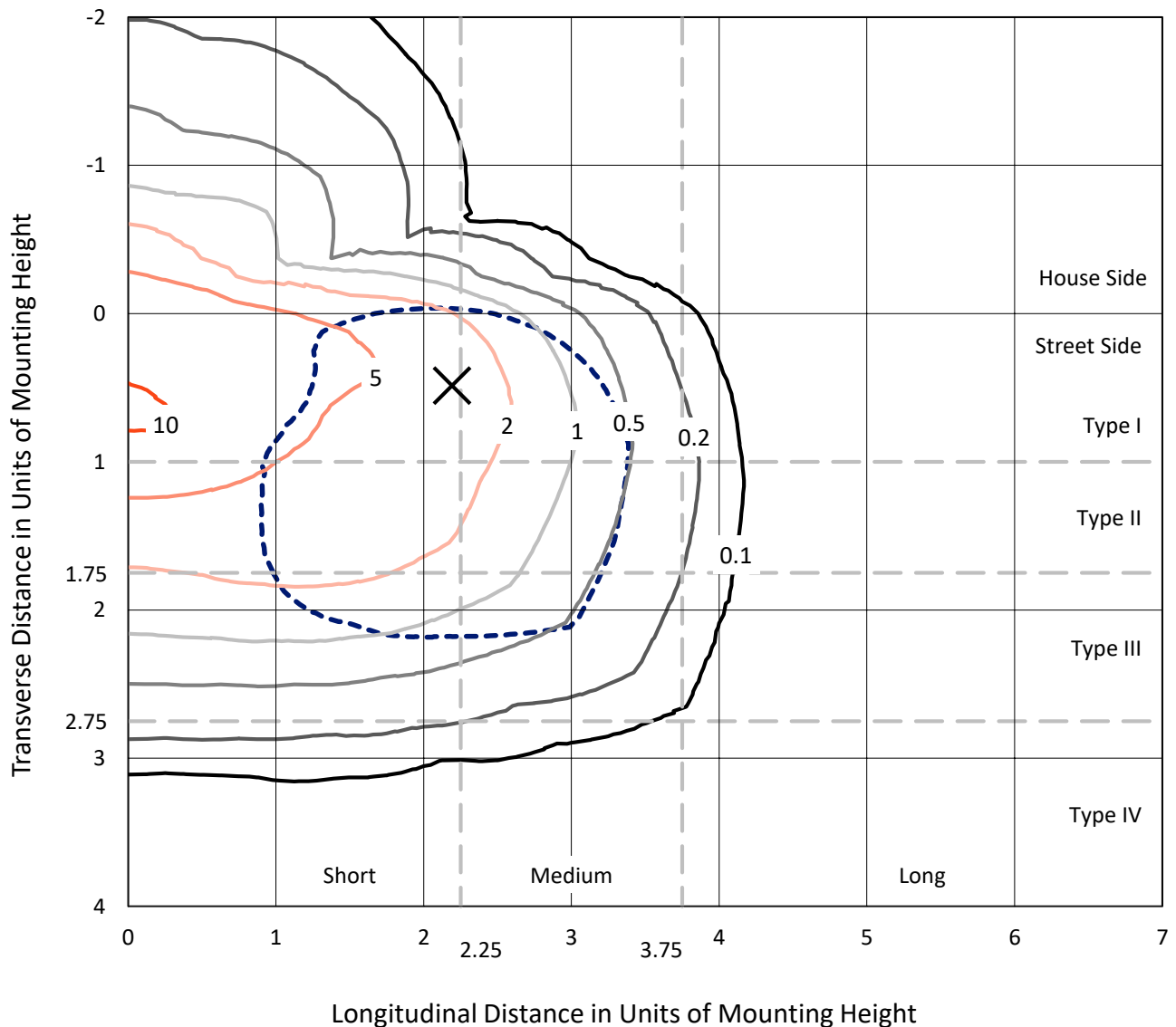


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

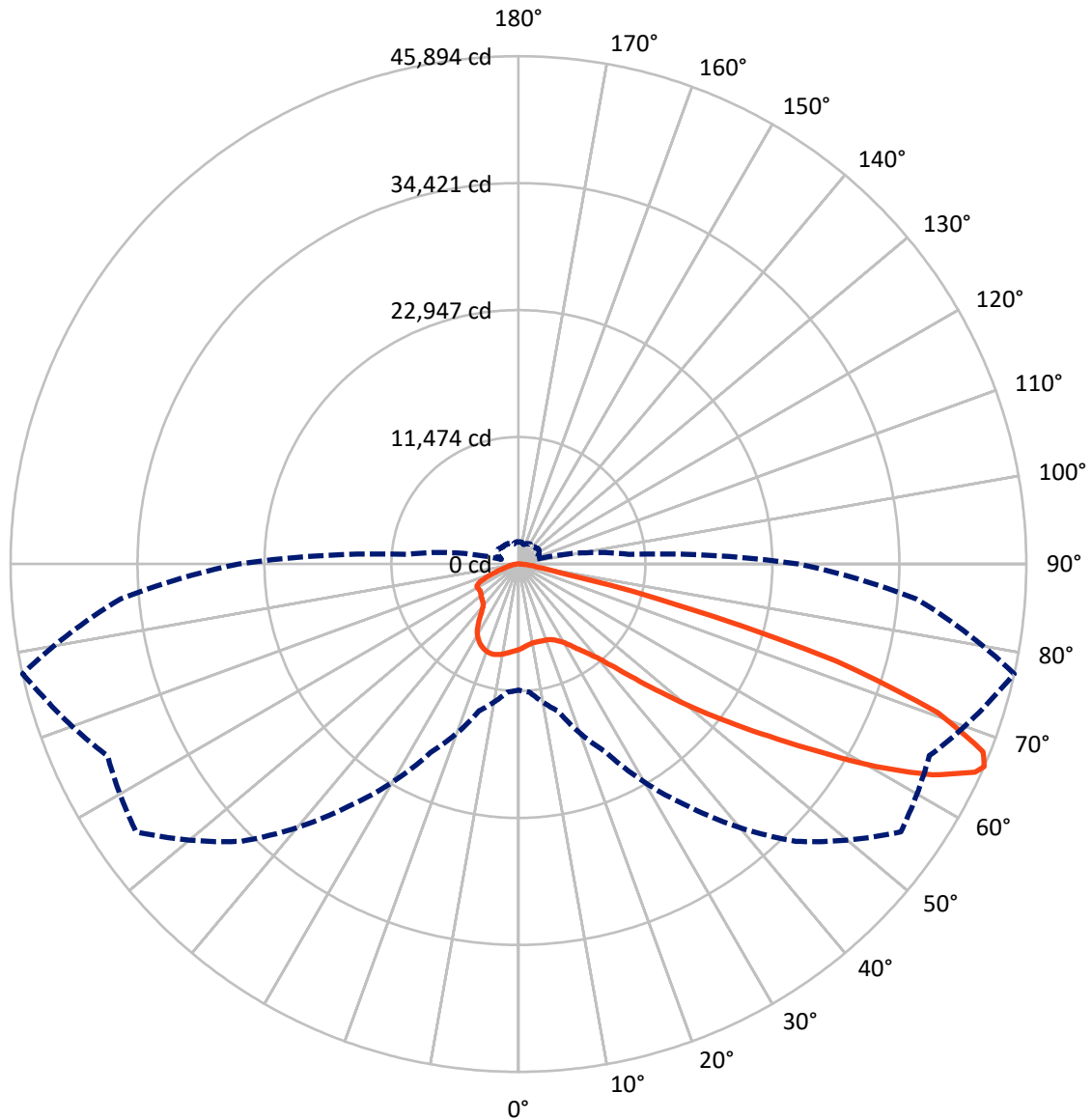


Based on 30 foot mounting height. Maximum calculated value = 10.6 fc
 Type III - Short - Full Cutoff

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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	9262.8	0.0	9262.8
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	44955.0	0.0	44955.0
	% Fixture	82.9	0.0	82.9
Total	Lumens	54217.8	0.0	54217.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	690.3	1.3
10°-20°	1947.4	3.6
20°-30°	3323.5	6.1
30°-40°	5320.4	9.8
40°-50°	8219.5	15.2
50°-60°	11658.0	21.5
60°-70°	15595.3	28.8
70°-80°	6772.8	12.5
80°-90°	690.6	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°	54217.8	100.0
0°-180°	54217.8	100.0



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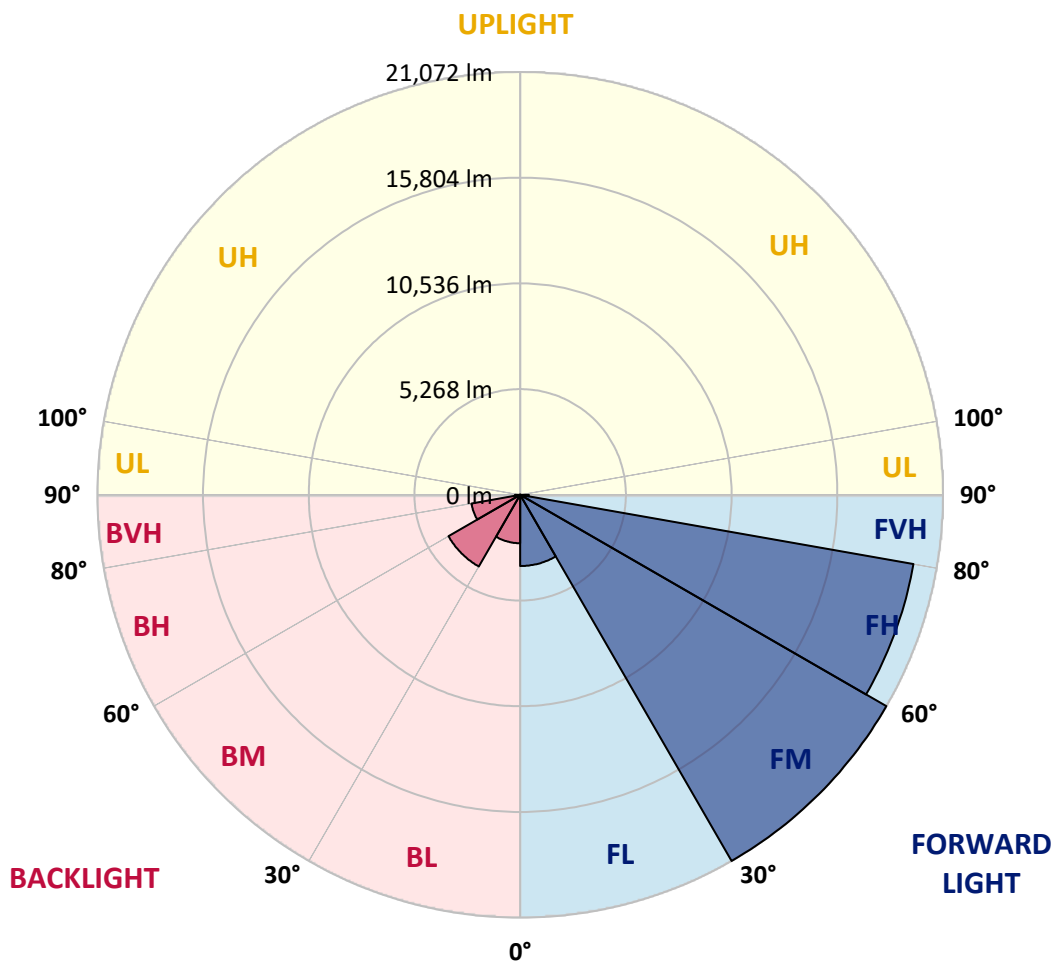
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3548.8	6.5			
FM	(30°-60°)	21071.8	38.9			
FH	(60°-80°)	19901.2	36.7			G5
FVH	(80°-90°)	433.1	0.8			G3/500
BL	(0°-30°)	2412.4	4.4	B3/2500		
BM	(30°-60°)	4126.0	7.6	B3/5000		
BH	(60°-80°)	2466.9	4.5	B3/2500		G3/2500
BVH	(80°-90°)	257.5	0.5			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2
2.5°	6835.0	6880.8	6919.5	6955.2	7026.6	7144.5	7280.2	7390.4	7549.4	7580.4	7664.9
5°	6207.5	6207.5	6237.7	6292.0	6389.0	6565.8	6750.4	6996.3	7342.3	7423.7	7649.4
7.5°	5902.7	5905.0	5922.8	5968.6	6053.1	6214.5	6416.9	6707.0	7175.5	7311.2	7695.2
10°	6015.1	5989.5	5950.8	5928.3	5940.7	6035.3	6227.7	6550.3	7073.1	7246.9	7798.3
12.5°	6645.0	6596.9	6463.5	6286.6	6117.5	6048.5	6161.0	6475.9	7029.7	7232.1	7934.1
15°	7675.0	7654.9	7405.9	7039.8	6630.2	6286.6	6209.8	6447.9	7034.3	7250.0	8095.4
17.5°	8966.5	8937.8	8610.4	8077.6	7409.0	6740.4	6381.2	6471.2	7052.2	7280.2	8251.3
20°	10270.3	10182.7	9829.8	9194.5	8335.9	7357.0	6665.9	6530.2	7075.4	7313.6	8415.8
22.5°	11243.8	11171.6	10854.4	10237.0	9248.0	8072.1	7047.5	6632.5	7149.9	7411.3	8617.4
25°	12099.3	12104.0	11789.0	11192.6	10170.3	8830.7	7539.3	6906.4	7339.2	7610.6	8894.3
27.5°	13157.3	13096.0	12801.3	12209.4	11082.4	9596.3	8133.4	7283.3	7621.5	7895.3	9258.1
30°	14422.4	14378.9	14038.4	13367.5	12093.9	10418.5	8812.1	7720.8	7985.3	8269.2	9734.4
32.5°	15910.8	15890.7	15537.0	14673.7	13262.0	11387.3	9609.5	8300.2	8528.2	8823.0	10418.5
35°	17658.4	17660.7	17243.4	16205.6	14540.3	12514.3	10513.1	9045.6	9189.1	9496.2	11233.7
37.5°	18734.2	18864.5	18708.6	17650.6	15987.6	13774.7	11686.7	10034.5	9942.2	10252.5	12107.1
40°	18964.5	19123.6	19617.6	19080.1	17607.2	15163.1	12726.8	10984.7	10869.9	11248.4	13231.7
42.5°	18641.9	18862.2	19907.7	20286.2	19326.0	16874.2	14125.3	12396.4	12250.6	12760.2	14630.2
45°	18449.5	18614.0	19823.2	20914.5	20816.8	18808.6	15906.2	14168.7	14115.2	14783.8	16244.4
47.5°	18116.8	18265.7	19428.4	21060.3	21693.3	20581.0	18045.4	16336.7	16441.4	17317.8	18065.6
50°	18295.9	18357.2	18987.8	20688.8	21946.9	21880.2	20435.2	18846.6	19205.8	20299.4	20128.0
52.5°	18270.3	18429.3	18936.6	20079.1	21980.3	22682.2	22789.3	21646.7	22403.0	23658.0	22415.4
55°	14771.4	15063.0	18334.7	19925.6	22097.4	23467.9	24885.1	24598.1	26006.6	27469.5	24997.5
57.5°	14105.1	14289.7	16103.2	20248.2	22722.5	24969.6	27215.9	27846.5	30202.9	31901.5	28143.5
60°	13974.0	14202.1	16079.9	20643.0	23990.7	27416.0	30672.1	31779.0	35309.0	37169.0	31791.4
62.5°	13566.8	13812.7	15928.7	20591.1	25791.8	30800.1	35096.4	35959.7	40150.5	41959.3	34842.8
65°	12276.1	12506.5	14696.9	19764.2	27006.4	34412.3	40332.0	39792.2	43972.9	45332.6	36363.8
66°	11391.9	11617.6	13725.8	18790.8	26724.1	35436.9	42187.4	40978.2	44828.5	45894.2	36066.8
67.5°	9775.5	9952.3	11840.2	16610.5	25225.6	35723.9	43747.2	41869.4	44917.7	45294.6	34368.9
70°	6176.5	6227.7	7695.2	11466.4	19095.6	30981.6	41372.2	39656.5	41213.9	40194.0	28812.1
72.5°	2679.9	2662.0	3694.4	5832.9	10811.0	20788.9	33466.8	32721.4	32329.7	30003.5	20169.1
75°	1490.8	1511.7	1918.9	2707.8	4393.3	10211.4	21892.6	20950.2	17688.6	15094.1	9145.6
77.5°	1196.0	1224.7	1590.8	1921.3	1972.5	3561.0	10244.7	8335.9	5018.4	4027.2	2541.0
80°	945.5	996.7	1388.4	1496.2	1329.5	1467.5	3309.7	2646.5	1985.7	1821.2	1317.0
82.5°	747.7	784.2	1191.4	1132.4	930.0	988.9	1585.4	1545.1	1291.5	1175.9	760.9
85°	538.3	604.2	978.9	853.2	609.7	666.3	1052.6	1009.1	740.0	604.2	335.9
87.5°	220.3	287.0	691.9	566.2	340.5	310.3	525.1	494.1	350.6	256.0	166.8
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°	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2	7726.2
2.5°	7718.5	7779.7	7859.6	7908.5	7934.1	7951.9	7979.8	7977.5	7985.3	7987.6	7997.7
5°	7769.6	7872.0	7987.6	8018.6	8018.6	7989.9	7962.0	7915.5	7897.6	7893.0	7897.6
7.5°	7903.1	8015.5	8115.6	8079.9	8003.1	7889.9	7744.0	7616.1	7547.0	7523.8	7519.1
10°	8072.1	8207.9	8249.0	8113.3	7887.5	7616.1	7326.8	7116.6	6996.3	6963.0	6952.9
12.5°	8276.9	8404.9	8349.1	8062.1	7644.0	7206.5	6806.3	6471.2	6219.9	6140.8	6135.4
15°	8502.6	8602.7	8404.9	7903.1	7280.2	6634.9	5922.8	5344.2	5031.6	4931.6	4923.8
17.5°	8712.8	8764.0	8371.5	7626.2	6745.0	5700.2	4754.7	4308.7	4201.7	4227.3	4231.9
20°	8892.0	8892.0	8259.1	7229.0	5902.7	4467.7	3870.5	3863.5	3940.3	4017.1	4032.6
22.5°	9089.0	8971.1	8062.1	6668.2	4708.2	3655.6	3568.7	3640.1	3727.0	3811.5	3824.7
25°	9332.6	9035.5	7787.5	5818.1	3701.4	3319.8	3353.1	3412.1	3455.5	3509.8	3517.6
27.5°	9604.0	9116.9	7426.8	4646.9	3212.7	3110.3	3135.9	3156.1	3150.7	3171.6	3176.3
30°	9929.0	9212.3	6931.9	3632.4	3010.3	2930.4	2884.6	2866.8	2866.8	2900.1	2912.6
32.5°	10365.0	9352.7	6222.2	3112.7	2912.6	2802.4	2654.3	2587.6	2613.2	2725.6	2751.2
35°	10844.3	9504.0	5262.0	2935.8	2892.4	2743.5	2513.1	2389.8	2392.9	2497.6	2530.9
37.5°	11366.3	9696.4	4208.7	2902.5	2938.1	2746.6	2438.6	2269.5	2200.5	2200.5	2213.7
40°	12034.9	9893.4	3407.4	2925.7	3035.9	2776.8	2400.6	2174.9	1980.2	1985.7	1995.7
42.5°	12906.0	10062.5	2976.9	2973.8	3153.8	2817.9	2397.5	2049.3	1880.2	1995.7	2100.4
45°	13874.8	10147.0	2786.9	3018.0	3248.4	2843.5	2357.2	2029.1	1893.4	2236.2	2436.3
47.5°	14988.6	10098.1	2682.2	3032.8	3271.7	2843.5	2310.6	2078.0	1982.6	2589.9	2823.4
50°	16211.0	9957.7	2579.8	3002.5	3263.9	2838.1	2354.1	2126.0	2015.9	2651.2	2812.5
52.5°	17648.3	9839.8	2472.0	2935.8	3209.6	2810.2	2405.3	2105.9	1911.2	2410.7	2523.2
55°	19287.2	9873.2	2351.8	2841.2	3125.1	2756.6	2387.4	2023.7	1801.0	2123.7	2192.8
57.5°	21383.0	10270.3	2208.3	2721.0	3010.3	2666.7	2323.8	1985.7	1767.7	1926.7	1967.8
60°	23721.6	10961.4	2029.1	2600.0	2866.8	2523.2	2275.0	2003.5	1783.2	1911.2	1931.4
62.5°	25438.1	11364.0	1875.5	2423.1	2672.1	2364.2	2213.7	2026.0	1824.3	1964.7	1960.1
65°	25904.2	10703.1	1683.2	2164.8	2408.4	2198.2	2136.1	2051.6	1842.2	2008.1	1985.7
66°	25251.2	9991.1	1598.6	2044.6	2275.0	2116.0	2098.1	2049.3	1834.4	2013.6	1974.8
67.5°	23665.7	8530.6	1452.8	1867.8	2062.4	1993.4	2036.8	2026.0	1813.5	2008.1	1954.6
70°	19300.4	5820.4	1242.6	1555.2	1716.5	1754.5	1918.9	1944.5	1746.8	1918.9	1801.0
72.5°	13485.4	3545.5	1099.1	1206.9	1388.4	1496.2	1757.6	1831.3	1657.6	1675.4	1562.9
75°	6517.0	1883.3	996.7	935.4	1078.1	1250.3	1562.9	1677.7	1516.4	1401.6	1360.5
77.5°	2031.4	1150.3	845.5	753.2	845.5	1009.1	1306.2	1470.6	1350.4	1173.6	1158.0
80°	1091.3	845.5	650.8	604.2	668.6	791.9	1027.0	1227.1	1160.4	1052.6	940.1
82.5°	719.8	548.4	481.7	468.5	509.6	604.2	763.2	1016.9	1016.9	902.1	656.2
85°	371.5	335.9	330.4	330.4	356.0	402.6	519.7	784.2	835.4	476.2	394.8
87.5°	184.6	192.4	179.2	186.9	200.1	197.0	248.2	394.8	471.6	289.3	240.5
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)