

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: P299206

Luminaire Tested: **GLNA-AF-09-LED-E1-T3-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299206
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)
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-T3-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42852 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B4 - U0 - G5

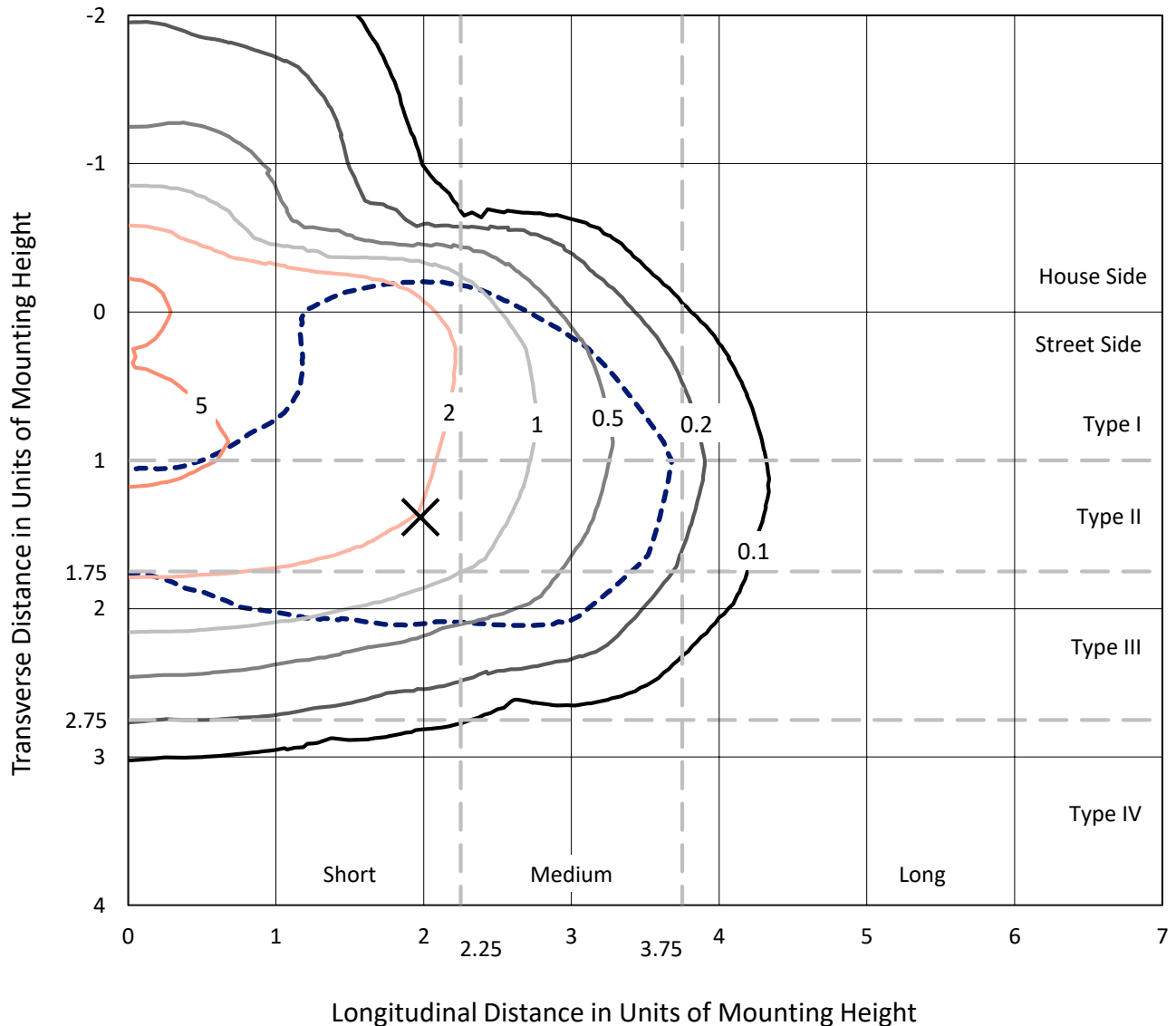
Input Watts (W): 374
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

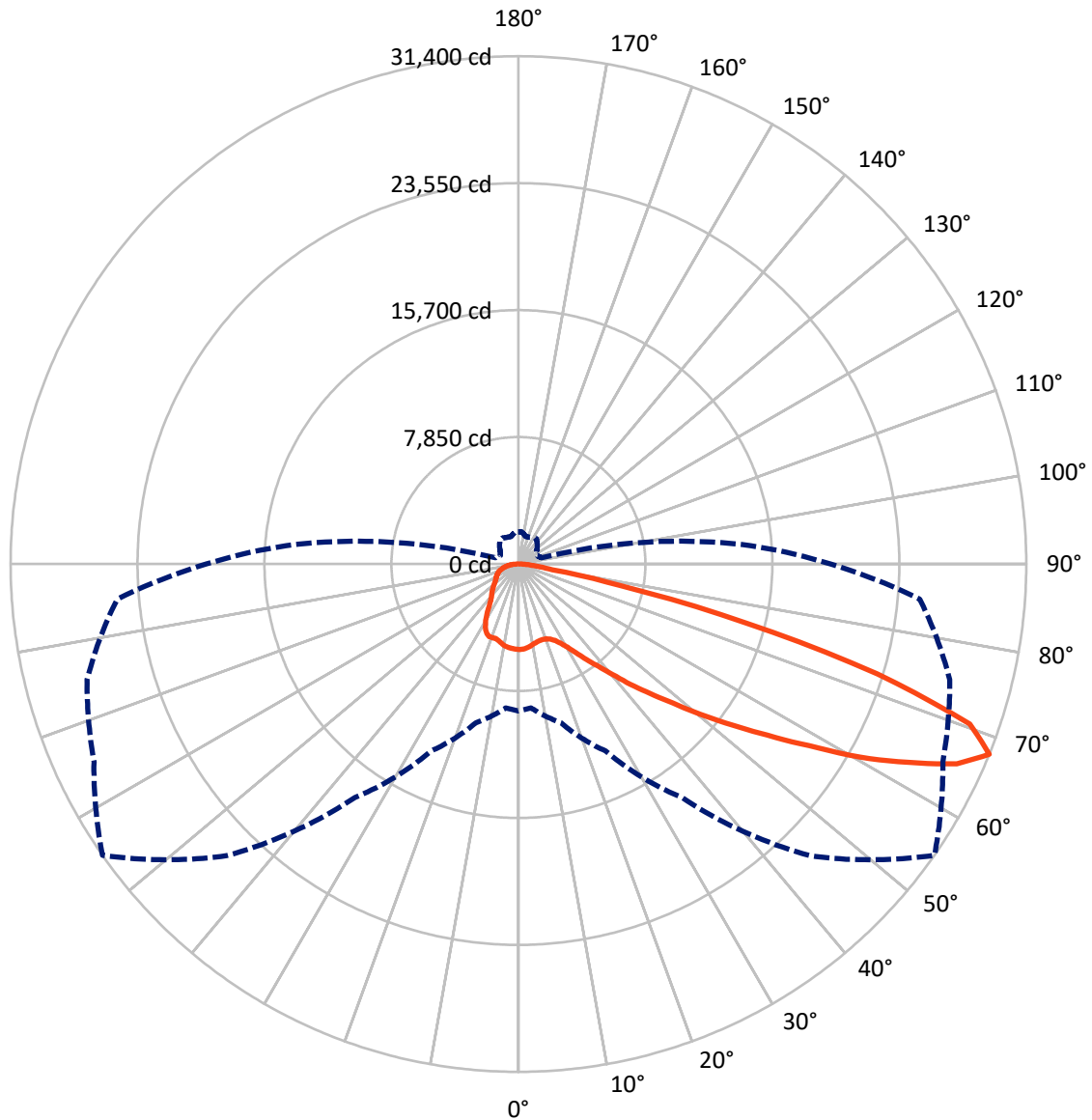
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9256.9	0.0	9256.9
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	33595.0	0.0	33595.0
	% Fixture	78.4	0.0	78.4
Total	Lumens	42852.0	0.0	42852.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	493.2	1.2
10°-20°	1396.9	3.3
20°-30°	2339.9	5.5
30°-40°	3847.8	9.0
40°-50°	6477.1	15.1
50°-60°	10194.5	23.8
60°-70°	12166.0	28.4
70°-80°	5224.3	12.2
80°-90°	712.3	1.7
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°	42852.0	100.0
0°-180°	42852.0	100.0



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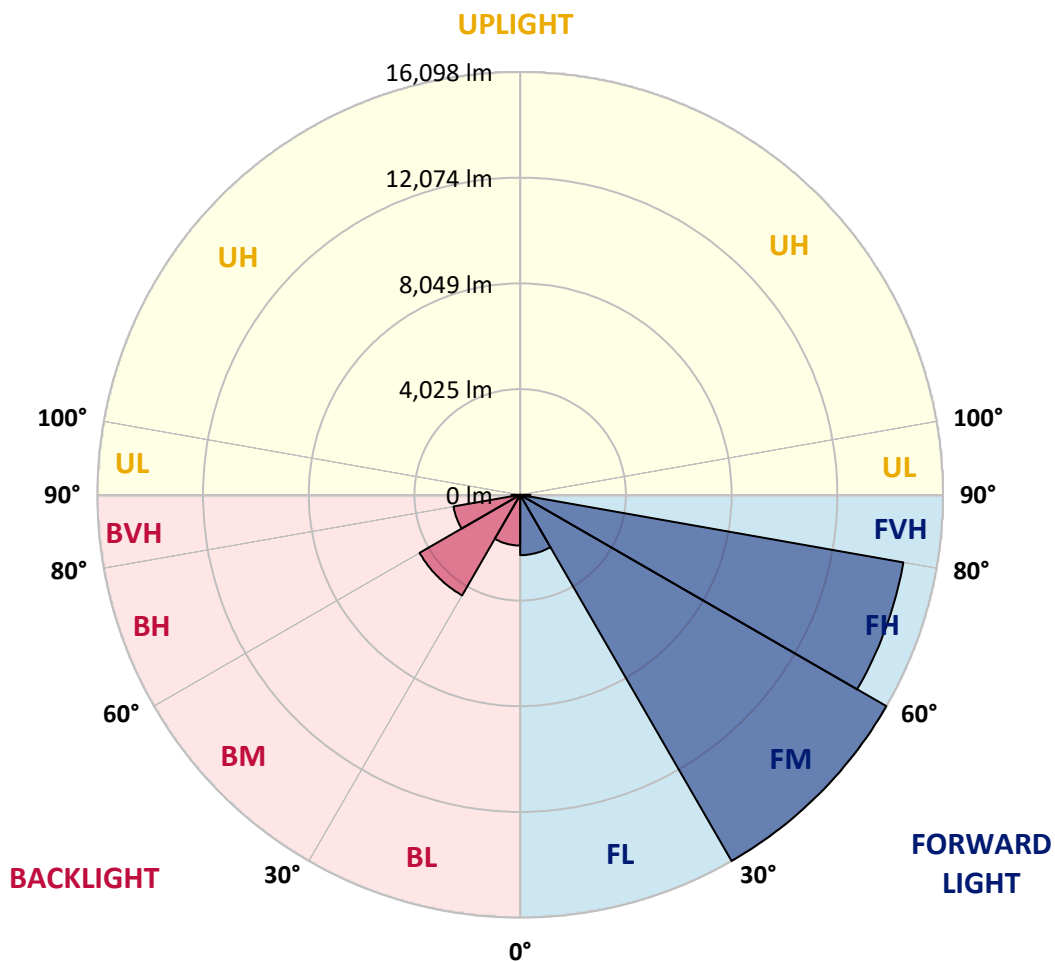
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2297.0	5.4			
FM	(30°-60°)	16098.4	37.6			
FH	(60°-80°)	14814.1	34.6			G5
FVH	(80°-90°)	385.6	0.9			G3/500
BL	(0°-30°)	1933.0	4.5	B3/2500		
BM	(30°-60°)	4421.0	10.3	B3/5000		
BH	(60°-80°)	2576.2	6.0	B4/5000		G4/5000
BVH	(80°-90°)	326.7	0.8			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1
2.5°	5238.6	5240.6	5244.8	5261.3	5275.8	5271.7	5273.8	5265.5	5263.4	5251.0	5263.4
5°	5172.3	5178.6	5180.6	5207.5	5224.1	5228.2	5222.0	5211.7	5199.3	5186.8	5193.0
7.5°	5021.3	5037.8	5039.9	5077.1	5104.0	5139.2	5141.3	5143.4	5137.2	5128.9	5141.3
10°	4926.0	4930.2	4928.1	4955.0	4975.7	5015.0	5037.8	5077.1	5093.7	5097.8	5106.1
12.5°	4919.8	4915.7	4909.5	4909.5	4903.3	4919.8	4961.2	5017.1	5056.4	5068.9	5079.2
15°	4986.1	4984.0	4963.3	4932.3	4892.9	4880.5	4915.7	4977.8	5029.5	5056.4	5066.8
17.5°	5135.1	5122.7	5089.6	5019.2	4934.3	4901.2	4905.3	4957.1	5017.1	5052.3	5062.6
20°	5408.3	5408.3	5337.9	5205.5	5054.4	4975.7	4938.5	4969.5	5027.5	5075.1	5089.6
22.5°	5880.2	5884.3	5766.4	5549.0	5294.5	5126.8	5033.7	5027.5	5095.8	5149.6	5166.1
25°	6548.7	6532.2	6366.6	6056.1	5669.1	5391.7	5230.3	5193.0	5251.0	5311.0	5331.7
27.5°	7327.0	7267.0	7070.3	6695.7	6194.8	5789.1	5540.8	5480.7	5536.6	5604.9	5625.6
30°	8096.9	8034.8	7800.9	7391.1	6834.4	6321.1	5965.1	5867.8	5946.4	6043.7	6056.1
32.5°	8866.9	8866.9	8606.1	8128.0	7521.5	6956.5	6530.1	6414.2	6544.6	6662.6	6689.5
35°	9787.9	9792.1	9539.6	8964.2	8312.2	7714.0	7244.2	7159.3	7356.0	7438.7	7502.9
37.5°	10920.1	10942.9	10617.9	9922.5	9208.4	8579.2	8020.3	7904.4	8101.1	8326.7	8533.6
40°	12143.3	12172.3	11814.2	10957.3	10243.3	9585.1	8980.7	8771.7	9098.7	9529.2	9796.2
42.5°	13310.7	13459.7	13114.0	12232.3	11464.4	10783.5	10170.8	9866.6	10276.4	10926.3	11158.1
45°	14997.5	15105.2	14502.9	13703.9	12981.6	12219.9	11408.6	11087.7	11661.1	12480.7	12528.3
47.5°	16121.4	16040.7	15734.4	15237.6	14780.2	14068.2	12847.0	12495.2	13256.9	14221.4	13954.4
50°	16719.6	16744.4	16703.0	16732.0	16748.6	16301.5	14610.5	14128.2	15036.9	16202.1	15587.4
52.5°	17278.4	17112.8	17249.4	17928.3	18747.9	18582.4	16529.2	16026.2	16945.2	18400.2	17313.6
55°	17266.0	17013.5	17458.5	18656.9	20434.8	20625.2	18683.8	18104.2	18963.2	20757.7	19143.3
57.5°	16655.4	16667.8	17352.9	18921.8	21610.4	22546.0	21184.1	20314.8	21103.3	23146.2	20813.6
60°	15815.1	15928.9	16916.2	18878.3	22552.2	24121.1	24251.5	22697.1	23200.0	25317.4	22196.2
62.5°	14459.4	14579.4	15941.3	18427.1	22409.4	25638.2	27024.9	25400.2	25391.9	26633.8	22601.8
65°	12321.3	12286.1	13716.3	16740.3	21211.0	26760.0	29779.8	27736.9	27043.6	26654.5	21786.4
67.5°	9086.3	8929.0	10156.3	12749.8	17630.3	25503.7	31400.4	28954.0	27606.5	24901.4	19294.4
70°	4714.9	4557.6	5551.1	7444.9	11594.8	19904.9	29605.9	28324.8	26362.6	20873.6	15115.5
72.5°	2016.0	1989.0	2392.7	3266.1	5609.1	11481.0	23214.5	24516.4	22620.5	15552.2	10392.3
75°	1355.7	1347.4	1498.5	1780.0	2523.0	4659.0	14527.7	17402.6	16549.9	9643.0	5845.0
77.5°	1063.9	1053.5	1142.5	1279.1	1635.1	1838.0	6447.3	9342.9	8647.5	4197.5	2558.2
80°	832.0	823.8	879.7	954.2	1175.6	1159.1	2121.5	3717.3	2877.0	1608.2	1243.9
82.5°	656.1	656.1	701.7	703.7	834.1	790.7	1107.3	1637.2	1436.4	937.6	761.7
85°	600.2	600.2	647.8	525.7	544.3	498.8	687.2	970.7	910.7	385.0	331.2
87.5°	302.2	293.9	544.3	465.7	296.0	264.9	335.3	469.8	505.0	213.2	165.6
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1	5284.1
2.5°	5259.3	5257.2	5261.3	5263.4	5280.0	5302.7	5313.1	5327.6	5335.9	5331.7
5°	5197.2	5201.3	5217.9	5230.3	5259.3	5296.5	5317.2	5333.8	5348.3	5342.1
7.5°	5145.4	5155.8	5180.6	5191.0	5207.5	5217.9	5215.8	5222.0	5234.4	5220.0
10°	5116.5	5128.9	5147.5	5133.0	5093.7	5037.8	4986.1	4959.2	4967.4	4957.1
12.5°	5087.5	5104.0	5089.6	5021.3	4911.6	4839.1	4799.8	4803.9	4822.6	4826.7
15°	5070.9	5077.1	5015.0	4886.7	4775.0	4764.6	4785.3	4781.2	4783.2	4783.2
17.5°	5070.9	5054.4	4938.5	4810.1	4762.5	4743.9	4679.7	4599.0	4563.8	4551.4
20°	5097.8	5054.4	4913.6	4828.8	4725.3	4565.9	4396.2	4247.2	4180.9	4162.3
22.5°	5178.6	5104.0	4984.0	4837.0	4543.1	4276.1	4007.1	3829.1	3709.0	3688.3
25°	5342.1	5259.3	5122.7	4727.3	4253.4	3872.5	3566.2	3367.5	3247.5	3230.9
27.5°	5627.7	5573.9	5197.2	4485.2	3868.4	3460.6	3177.1	3023.9	2934.9	2928.7
30°	6058.2	6031.3	5159.9	4127.1	3394.4	3061.2	2924.6	2835.6	2769.3	2767.3
32.5°	6745.4	6528.0	5037.8	3690.4	2961.8	2777.6	2721.7	2667.9	2616.2	2616.2
35°	7629.2	6929.6	4806.0	3222.6	2699.0	2620.3	2550.0	2465.1	2396.8	2392.7
37.5°	8668.2	7178.0	4390.0	2845.9	2574.8	2514.8	2411.3	2285.0	2165.0	2144.3
40°	9717.6	7252.5	3804.2	2614.1	2496.1	2409.2	2283.0	2133.9	2018.0	2011.8
42.5°	10680.0	7109.6	3183.3	2454.7	2417.5	2301.6	2169.1	2036.7	1945.6	1943.5
45°	11487.2	6739.2	2661.7	2303.7	2334.7	2204.3	2086.3	1978.7	1908.3	1893.8
47.5°	12246.8	6215.5	2295.4	2144.3	2251.9	2150.5	2051.1	1949.7	1881.4	1871.1
50°	13128.5	5650.5	2038.7	1989.0	2179.5	2131.9	2080.1	1974.6	1860.7	1848.3
52.5°	14196.5	5162.0	1838.0	1852.4	2123.6	2156.7	2154.6	2044.9	1846.2	1829.7
55°	15388.7	4619.7	1686.9	1740.7	2100.8	2202.2	2173.3	2111.2	1858.7	1833.8
57.5°	16562.3	3986.4	1581.3	1655.8	2067.7	2198.1	2084.3	1995.3	1887.6	1852.4
60°	17441.9	3135.7	1500.6	1581.3	1995.3	2129.8	1987.0	1869.0	1881.4	1854.5
62.5°	17499.9	2423.7	1403.3	1517.1	1885.6	2061.5	1922.8	1813.1	1908.3	1883.5
65°	16471.2	1831.7	1310.2	1440.6	1767.6	2018.0	1860.7	1782.1	1964.2	1937.3
67.5°	13867.4	1473.7	1231.5	1361.9	1649.6	1927.0	1804.8	1753.1	2013.9	1966.3
70°	10011.5	1256.3	1154.9	1266.7	1544.0	1823.5	1755.2	1701.3	1879.3	1804.8
72.5°	6163.8	1088.7	1068.0	1140.4	1463.3	1715.8	1680.7	1604.1	1693.1	1633.0
75°	3077.7	943.8	970.7	1016.3	1349.5	1593.7	1556.5	1479.9	1492.3	1479.9
77.5°	1473.7	807.2	856.9	892.1	1202.5	1455.0	1415.7	1337.1	1322.6	1324.7
80°	933.5	674.7	722.3	747.2	1074.2	1293.6	1254.3	1175.6	1341.2	1243.9
82.5°	583.7	548.5	560.9	606.4	935.5	1126.0	1074.2	1003.8	1208.7	956.2
85°	322.9	382.9	399.5	438.8	720.3	941.7	890.0	801.0	718.2	705.8
87.5°	192.5	227.7	233.9	262.9	484.3	681.0	602.3	571.3	474.0	471.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)