

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: P302933

Luminaire Tested: **GLNA-AF-09-LED-E1-T4W-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302933
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-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34692.7 lumens
Efficiency: N/A
Efficacy: 119.6 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

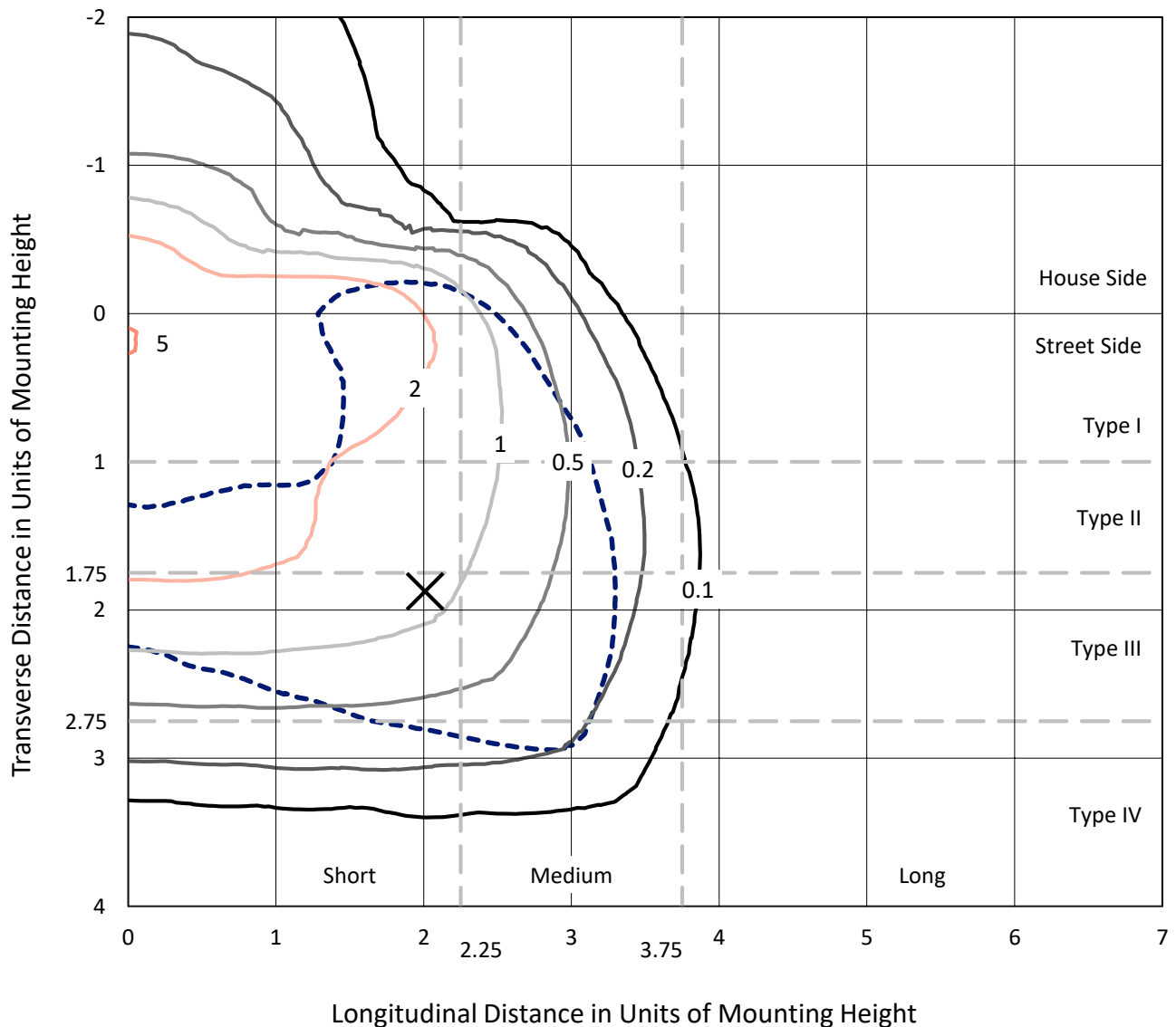
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P302933
 CATALOG NUMBER: GLNA-AF-09-LED-E1-T4W-600

Iso-Footcandle Lines of Horizontal Illumination

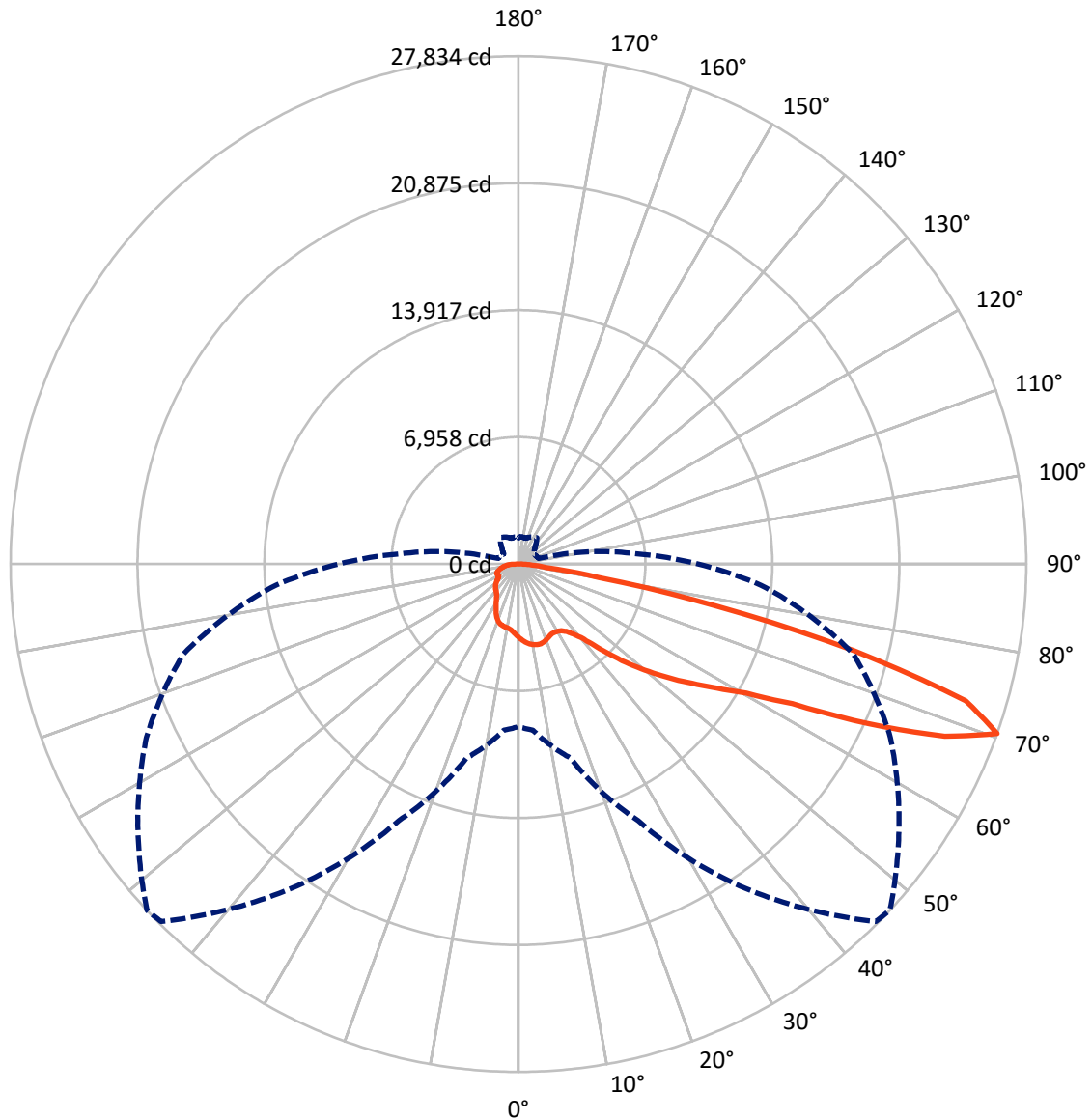
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P302933
CATALOG NUMBER: GLNA-AF-09-LED-E1-T4W-600

Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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CATALOG NUMBER: GLNA-AF-09-LED-E1-T4W-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7237.6	0.0	7237.6
	% Fixture	20.9	0.0	20.9
Street Side	Lumens	27455.1	0.0	27455.1
	% Fixture	79.1	0.0	79.1
Total	Lumens	34692.7	0.0	34692.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.7	1.1
10°-20°	1131.6	3.3
20°-30°	1671.0	4.8
30°-40°	2428.8	7.0
40°-50°	4370.9	12.6
50°-60°	7572.2	21.8
60°-70°	10807.7	31.2
70°-80°	5548.1	16.0
80°-90°	776.7	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°	34692.7	100.0
0°-180°	34692.7	100.0

Coefficient of Utilization



REPORT NUMBER: P302933

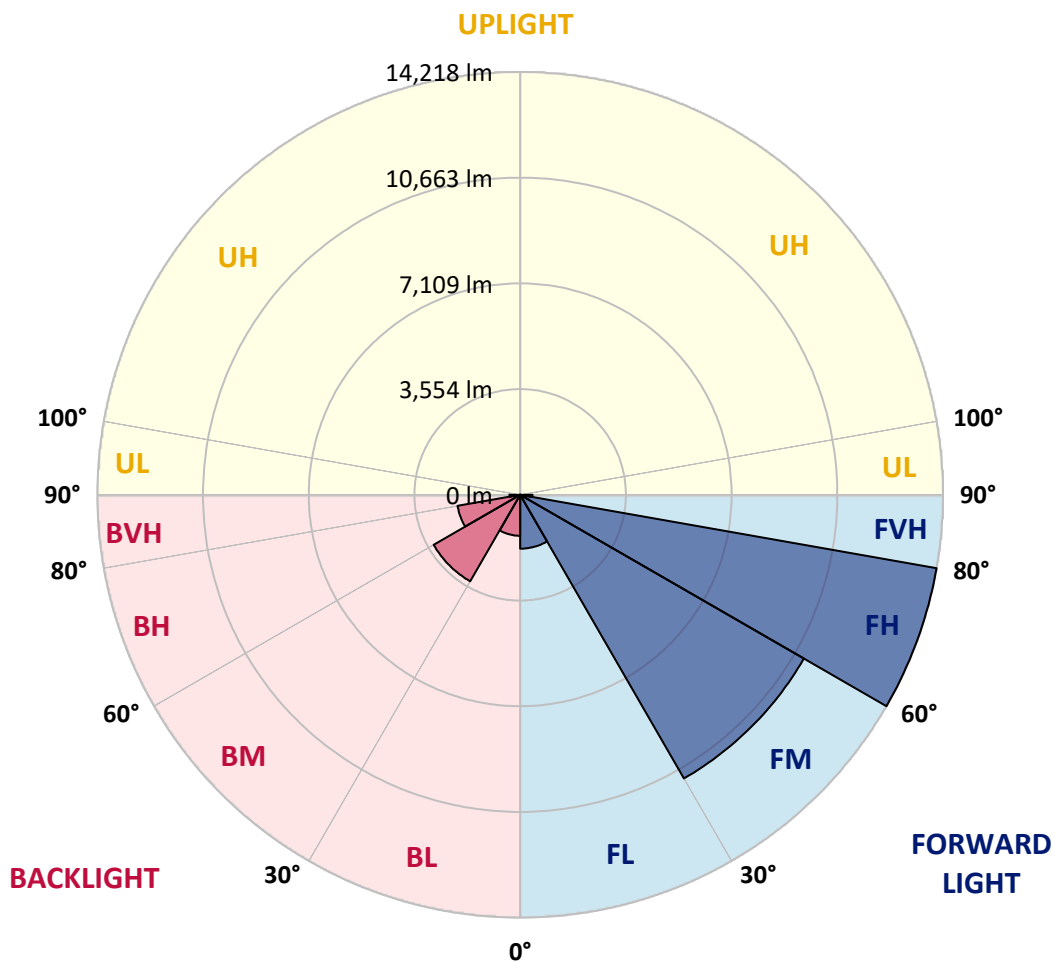
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1810.2	5.2			
FM	(30°-60°)	11012.4	31.7			
FH	(60°-80°)	14218.0	41.0			G5
FVH	(80°-90°)	414.5	1.2			G3/500
BL	(0°-30°)	1378.1	4.0	B3/2500		
BM	(30°-60°)	3359.5	9.7	B3/5000		
BH	(60°-80°)	2137.8	6.2	B3/2500		G3/2500
BVH	(80°-90°)	362.3	1.0			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 IV Short





REPORT NUMBER: P302933

CATALOG NUMBER: GLNA-AF-09-LED-E1-T4W-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3
2.5°	4261.9	4253.5	4250.1	4243.4	4235.0	4192.4	4184.0	4153.7	4111.7	4067.4	4022.0
5°	4542.2	4540.5	4521.4	4487.8	4434.0	4340.9	4319.1	4245.1	4145.3	4048.9	3953.0
7.5°	4788.3	4773.1	4737.8	4670.0	4575.8	4449.1	4418.8	4315.7	4178.9	4047.2	3917.2
10°	4968.7	4960.3	4883.0	4789.9	4666.6	4526.5	4491.2	4376.2	4226.0	4059.0	3897.0
12.5°	5071.9	5055.1	4965.4	4854.4	4707.5	4570.8	4534.9	4418.8	4250.1	4059.0	3868.4
15°	5065.2	5053.4	4963.7	4842.1	4694.1	4574.1	4542.2	4425.6	4245.1	4042.2	3831.4
17.5°	4930.1	4935.1	4859.4	4739.5	4617.8	4526.5	4497.9	4390.3	4210.9	4008.5	3787.7
20°	4694.1	4717.6	4666.6	4560.7	4492.8	4430.6	4412.1	4320.7	4158.7	3959.8	3740.0
22.5°	4457.5	4479.4	4459.2	4369.5	4359.4	4322.4	4312.3	4246.8	4113.3	3929.5	3711.4
25°	4283.8	4303.9	4300.6	4222.7	4253.5	4251.8	4243.4	4210.9	4103.3	3929.5	3716.5
27.5°	4236.7	4243.4	4236.7	4165.5	4207.5	4241.7	4235.0	4229.4	4133.5	3978.3	3780.9
30°	4398.7	4388.6	4335.9	4192.4	4231.6	4278.7	4272.0	4275.3	4224.3	4106.6	3924.4
32.5°	5045.0	4999.0	4833.7	4430.6	4327.5	4352.7	4356.1	4412.1	4420.5	4303.9	4147.0
35°	6011.9	5961.5	5746.8	5068.5	4626.3	4538.8	4538.8	4622.9	4673.3	4587.6	4492.8
37.5°	7036.6	6980.6	6866.2	5953.1	5254.1	4861.1	4852.7	4911.6	4983.9	5004.6	5028.2
40°	8200.9	8142.0	8174.0	6945.3	6130.2	5419.4	5299.5	5257.4	5453.1	5583.1	5772.6
42.5°	9475.6	9448.1	9459.9	8050.7	7127.4	6255.2	6084.8	5866.8	6103.3	6334.3	6731.1
45°	10655.0	10678.6	10666.8	9234.0	8238.5	7274.3	7093.8	6671.7	6903.2	7299.5	7946.4
47.5°	11688.1	11590.0	11741.9	10526.6	9482.3	8415.6	8192.5	7627.5	7861.8	8351.1	9444.8
50°	12942.1	12928.6	12706.1	12252.0	10985.7	9561.4	9269.3	8614.6	8979.0	9659.5	11333.8
52.5°	14260.5	14015.5	13811.5	13593.4	12581.1	10736.3	10378.1	9598.4	10292.3	11147.7	13636.0
55°	14530.1	14420.8	14673.6	15040.2	14118.7	11956.6	11539.6	10832.1	11771.1	12849.6	16290.8
57.5°	15107.5	15105.8	15629.4	16282.4	15701.7	13250.9	12830.5	12322.7	13433.1	14798.6	19109.3
60°	15497.6	15606.9	16579.5	17846.9	17256.1	14746.5	14359.7	14042.4	15323.9	16977.5	21735.5
62.5°	15701.7	15850.2	17177.1	18481.5	19453.5	17235.9	16849.7	16392.3	17825.1	19367.7	23271.4
65°	14853.0	15144.5	17084.0	19030.2	21377.8	21271.3	21097.6	20294.3	20952.4	21256.2	22716.4
67.5°	12503.2	12801.9	15060.4	18518.5	22751.8	25163.8	25200.8	23828.6	22876.8	21418.2	19099.2
70°	8908.3	9142.6	11011.5	15526.2	21705.2	27707.1	27833.7	25457.0	22493.3	18994.4	13344.0
72.5°	4229.4	4372.9	6142.0	10105.1	17224.1	25386.4	25631.3	23377.9	19126.1	14062.6	7279.4
75°	1554.4	1598.1	2075.7	4298.9	9990.2	18721.4	19010.1	16758.3	12678.6	7001.3	2773.1
77.5°	931.6	960.2	1164.8	1814.5	3929.5	10701.0	11127.6	9114.0	5541.1	2606.0	1363.8
80°	651.4	671.5	835.2	1129.0	1856.6	4078.0	4457.5	3719.8	2207.5	1649.1	992.2
82.5°	440.6	450.7	587.5	762.9	1233.8	1456.3	1571.2	1654.2	1488.8	1227.1	629.5
85°	288.7	298.8	398.6	502.8	784.8	752.8	769.6	973.7	1086.9	833.5	349.2
87.5°	165.4	172.1	239.9	268.5	385.1	319.0	322.3	512.9	695.6	562.2	212.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P302933

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3	4025.3
2.5°	4010.2	3988.3	3939.6	3908.7	3880.2	3873.4	3861.7	3860.0	3858.3	3858.3	3853.2
5°	3920.5	3883.5	3807.8	3765.2	3729.9	3726.6	3724.9	3733.3	3736.7	3740.0	3735.0
7.5°	3863.3	3812.9	3718.2	3657.6	3615.6	3604.9	3622.3	3661.0	3686.2	3696.3	3691.2
10°	3828.0	3765.2	3655.9	3589.8	3554.5	3549.4	3571.3	3617.3	3669.4	3689.6	3687.9
12.5°	3787.7	3716.5	3599.9	3530.9	3510.7	3520.8	3549.4	3591.5	3645.8	3677.8	3679.5
15°	3746.7	3664.3	3544.4	3483.8	3475.4	3488.9	3515.8	3547.7	3589.8	3622.3	3625.7
17.5°	3698.0	3611.6	3492.3	3429.5	3422.7	3429.5	3431.2	3448.0	3475.4	3505.7	3514.1
20°	3645.8	3557.8	3432.8	3370.6	3340.3	3313.4	3282.6	3286.0	3294.4	3325.2	3331.9
22.5°	3608.3	3520.8	3387.4	3301.1	3220.4	3139.1	3078.6	3070.2	3073.5	3098.7	3107.2
25°	3611.6	3519.2	3375.7	3227.1	3050.0	2919.9	2838.6	2825.2	2823.5	2842.0	2854.3
27.5°	3677.8	3584.7	3419.4	3150.9	2864.4	2671.6	2585.8	2575.7	2562.3	2567.3	2580.8
30°	3824.7	3738.3	3525.9	3073.5	2663.2	2428.9	2339.2	2329.1	2310.6	2302.2	2312.3
32.5°	4064.0	3993.4	3681.2	2999.0	2462.5	2220.9	2130.1	2108.2	2096.5	2086.4	2094.8
35°	4462.6	4432.3	3888.6	2918.2	2285.4	2060.6	1978.2	1944.6	1927.7	1946.2	1959.7
37.5°	5087.0	5103.8	4160.4	2791.6	2148.6	1954.7	1885.1	1846.5	1821.2	1836.4	1851.5
40°	5971.6	5983.4	4460.9	2612.7	2030.3	1891.9	1817.9	1782.6	1746.7	1719.8	1718.1
42.5°	7132.5	7013.1	4756.3	2418.8	1893.6	1853.2	1770.8	1726.5	1672.7	1598.1	1583.0
45°	8509.8	8089.9	4980.5	2195.7	1740.0	1806.1	1718.1	1657.6	1572.9	1492.2	1483.8
47.5°	10096.7	9245.8	5090.4	1964.7	1596.5	1736.6	1654.2	1557.8	1451.3	1410.9	1405.9
50°	12034.0	10618.0	5142.5	1740.0	1472.0	1645.8	1561.1	1447.9	1358.8	1350.4	1345.3
52.5°	14240.3	12268.8	5159.9	1556.1	1368.9	1527.5	1485.5	1375.6	1304.4	1311.7	1311.7
55°	16549.2	13973.5	4930.1	1422.7	1274.1	1405.9	1434.5	1347.0	1287.6	1315.1	1325.1
57.5°	18668.7	15484.2	4207.5	1320.1	1185.0	1313.4	1416.0	1373.9	1333.6	1442.9	1449.6
60°	20296.0	16376.6	3142.5	1227.1	1118.9	1280.9	1465.3	1477.1	1487.1	1748.4	1784.2
62.5°	20636.8	16080.0	2160.4	1154.7	1088.6	1308.3	1554.4	1556.1	1544.3	1726.5	1748.4
65°	19072.3	14201.1	1571.2	1113.8	1063.4	1357.1	1630.7	1594.8	1517.4	1655.9	1615.0
67.5°	15146.2	10699.3	1308.3	1083.6	1026.4	1353.7	1711.4	1630.7	1502.3	1622.2	1556.1
70°	9831.6	6469.4	1164.8	1058.3	982.1	1289.3	1758.5	1627.3	1458.0	1509.0	1431.1
72.5°	4796.7	2893.0	1068.4	1021.3	936.7	1200.1	1756.8	1596.5	1412.6	1409.2	1367.2
75°	1876.7	1325.1	980.4	965.3	859.3	1098.7	1709.7	1552.7	1358.8	1304.4	1289.3
77.5°	1098.7	945.1	869.4	882.9	766.3	997.2	1640.7	1477.1	1284.2	1220.3	1203.5
80°	799.9	707.4	741.1	762.9	654.7	896.3	1547.7	1384.0	1201.8	1233.8	1210.2
82.5°	512.9	455.7	600.9	622.8	545.4	793.2	1446.2	1285.9	1085.2	985.5	961.9
85°	261.8	288.7	447.3	474.2	420.4	651.4	1323.5	1156.4	953.5	820.1	833.5
87.5°	146.9	197.3	285.3	319.0	297.1	501.1	1073.5	953.5	778.0	632.9	557.2
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)