

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: P298966

Luminaire Tested: **GLNA-AF-09-LED-E1-T2-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298966
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24139)
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-T2-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42043.3 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G5

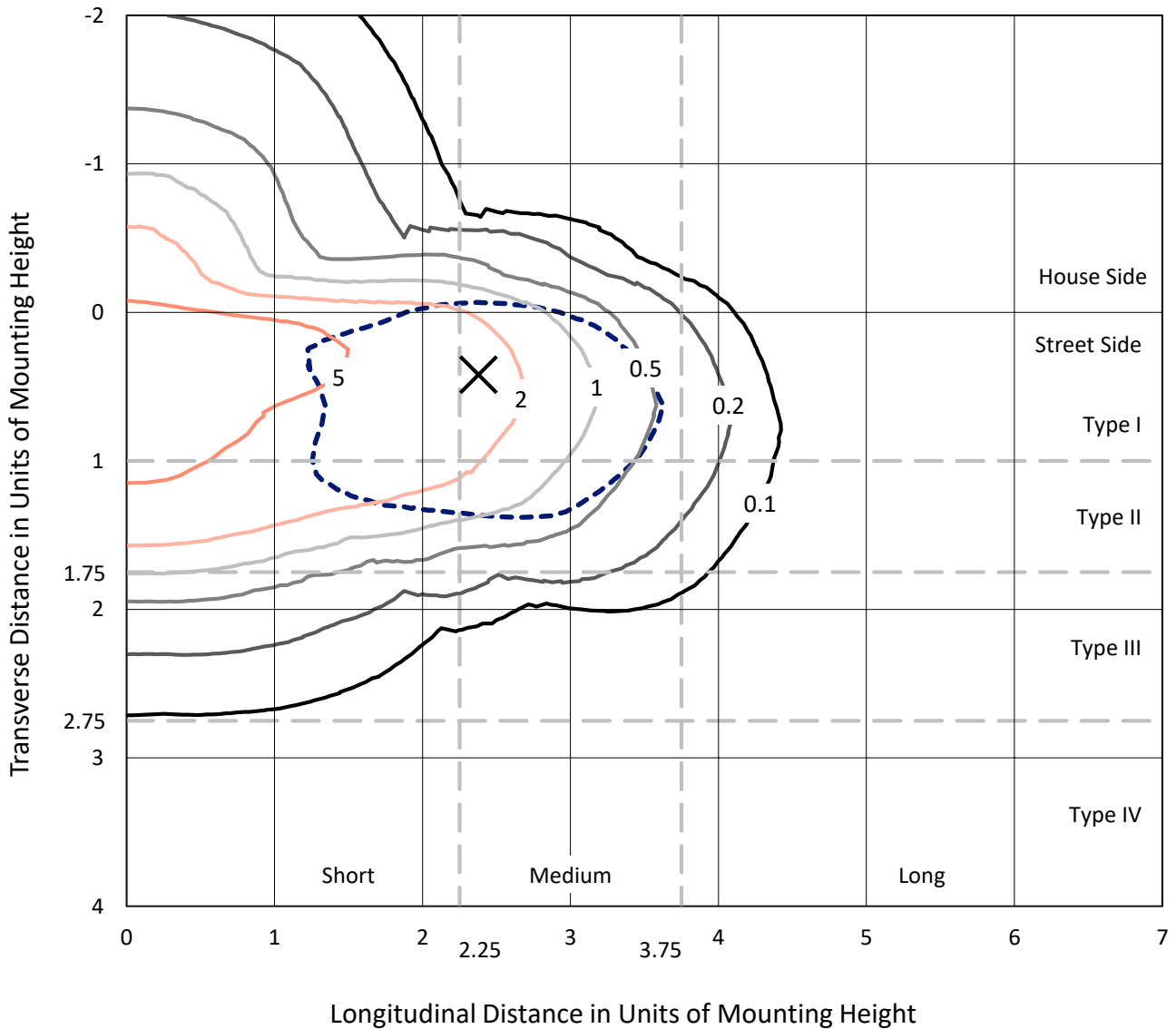
Input Watts (W): 374
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

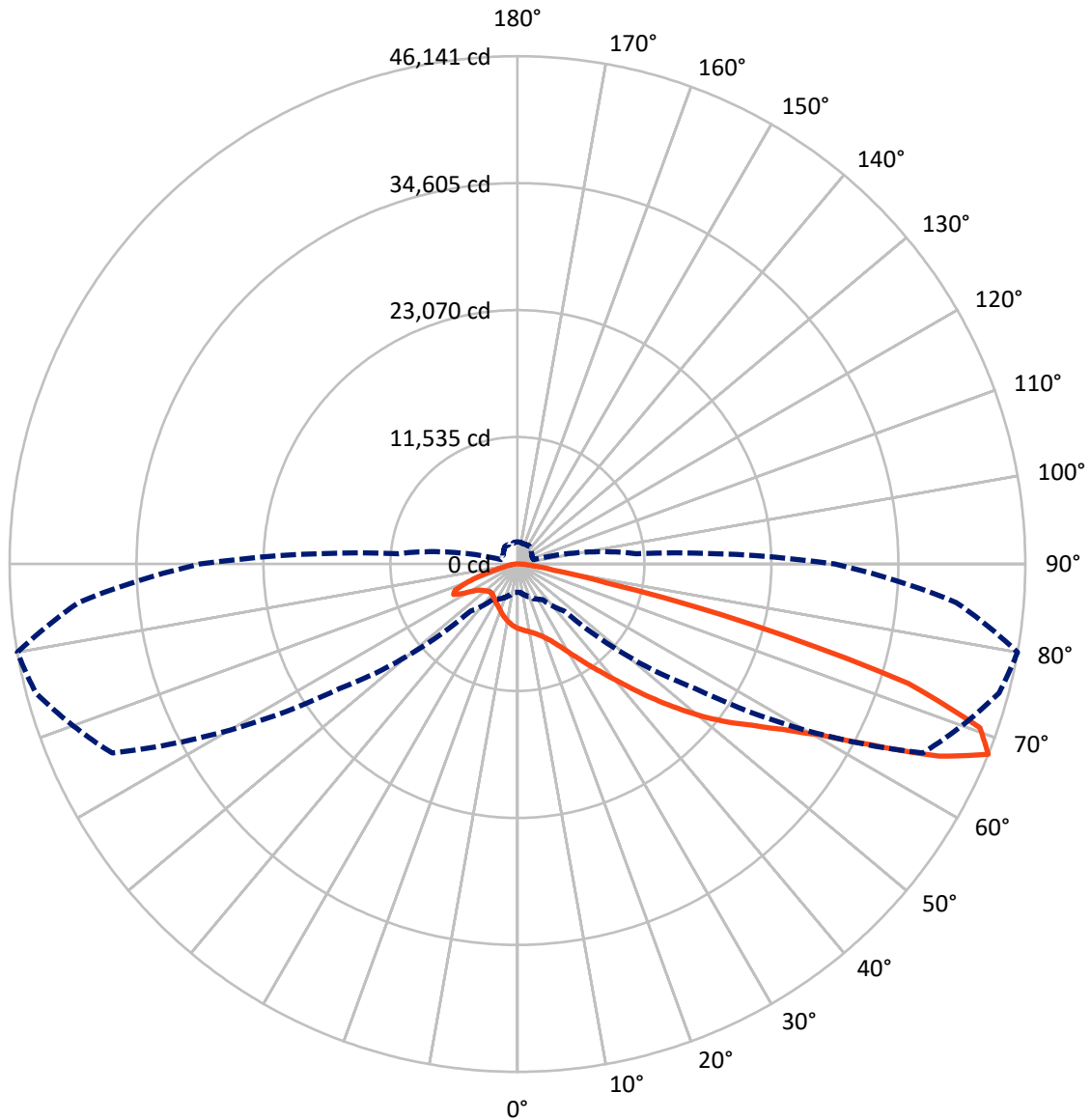
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.9 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7742.8	0.0	7742.8
	% Fixture	18.4	0.0	18.4
Street Side	Lumens	34300.5	0.0	34300.5
	% Fixture	81.6	0.0	81.6
Total	Lumens	42043.3	0.0	42043.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	538.8	1.3
10°-20°	1552.2	3.7
20°-30°	2569.2	6.1
30°-40°	4202.5	10.0
40°-50°	6785.3	16.1
50°-60°	9796.0	23.3
60°-70°	10810.5	25.7
70°-80°	4983.0	11.9
80°-90°	806.0	1.9
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°	42043.3	100.0
0°-180°	42043.3	100.0



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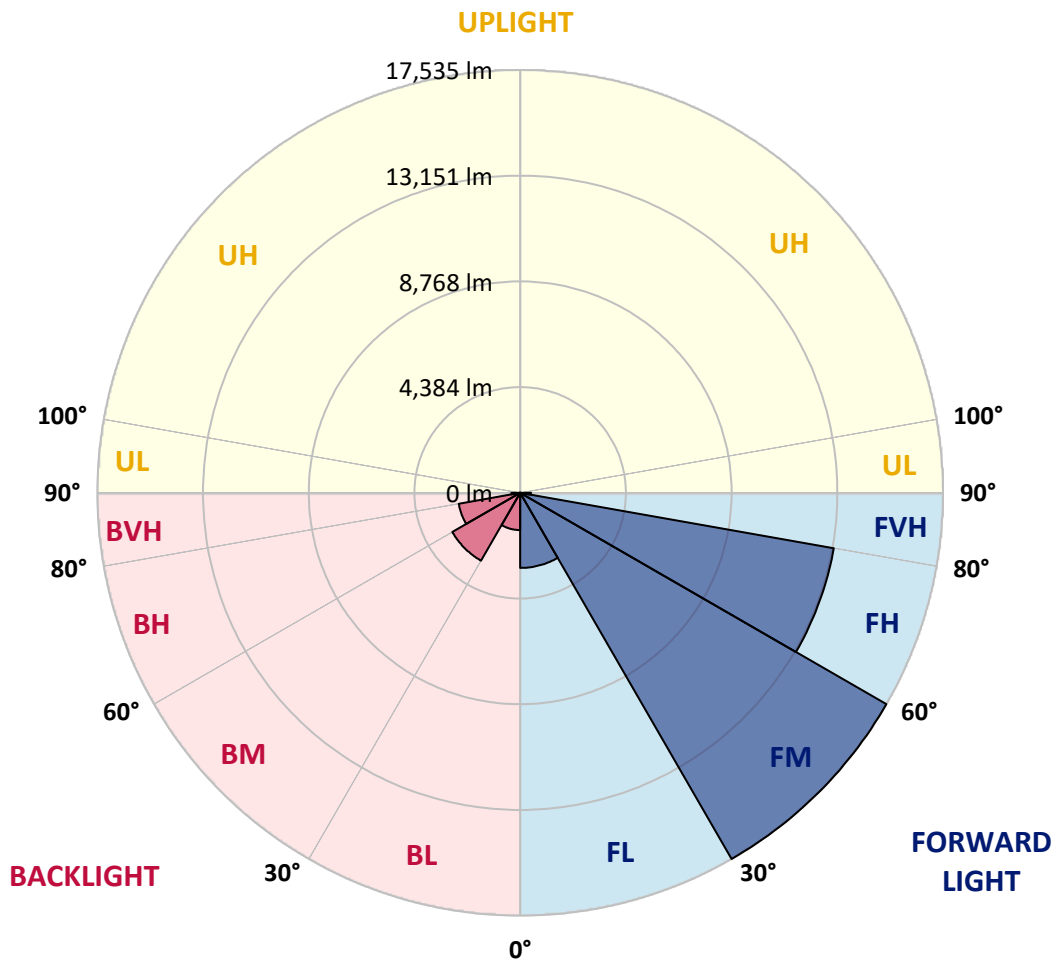
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3115.3	7.4			
FM	(30°-60°)	17535.2	41.7			
FH	(60°-80°)	13206.9	31.4			G5
FVH	(80°-90°)	443.1	1.1			G3/500
BL	(0°-30°)	1544.8	3.7	B3/2500		
BM	(30°-60°)	3248.6	7.7	B3/5000		
BH	(60°-80°)	2586.6	6.2	B4/5000		G4/5000
BVH	(80°-90°)	362.9	0.9			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	80°	85°
0°	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0
2.5°	6389.5	6352.3	6358.5	6348.1	6317.1	6263.3	6205.3	6099.8	5990.1	5932.1	5886.6
5°	6923.6	6913.2	6898.7	6865.6	6786.9	6675.2	6536.5	6350.2	6149.4	6043.9	5942.5
7.5°	7323.0	7316.8	7298.2	7277.5	7200.9	7066.4	6857.3	6592.4	6300.5	6155.7	5998.3
10°	7356.1	7366.5	7381.0	7436.9	7447.2	7374.8	7161.6	6840.8	6457.8	6271.6	6070.8
12.5°	7074.7	7097.4	7153.3	7296.1	7447.2	7536.2	7426.5	7101.6	6642.1	6416.4	6161.9
15°	6702.1	6714.5	6782.8	6979.4	7250.6	7525.9	7629.4	7389.3	6880.1	6602.7	6298.5
17.5°	6542.7	6548.9	6596.5	6726.9	6979.4	7372.7	7743.2	7701.8	7171.9	6834.6	6466.1
20°	6462.0	6476.5	6544.8	6673.1	6832.5	7176.1	7759.8	8039.2	7519.7	7124.3	6677.2
22.5°	6691.7	6685.5	6710.4	6774.5	6909.1	7116.0	7747.3	8386.9	7962.6	7496.9	6952.5
25°	7227.8	7250.6	7207.1	7134.7	7178.1	7323.0	7813.6	8763.6	8517.3	7975.0	7312.7
27.5°	7991.6	7968.8	7904.7	7734.9	7645.9	7708.0	8033.0	9169.3	9206.6	8604.3	7788.7
30°	8753.3	8734.7	8672.6	8465.6	8283.4	8231.7	8459.4	9635.0	10028.3	9359.7	8372.4
32.5°	9544.0	9523.3	9465.3	9258.3	9038.9	8918.9	9065.8	10173.2	10997.0	10262.2	9059.6
35°	10518.8	10479.5	10357.4	10069.7	9854.4	9761.3	9829.6	10850.0	12114.7	11330.2	9893.8
37.5°	11435.8	11495.8	11371.6	10974.2	10694.8	10661.7	10738.2	11675.9	13319.3	12524.5	10852.1
40°	12356.8	12367.2	12255.4	11930.5	11642.8	11588.9	11781.4	12677.7	14741.3	13952.7	12017.4
42.5°	13309.0	13329.7	13141.3	12841.2	12630.1	12640.4	12859.8	13851.3	16372.3	15635.4	13358.6
45°	14437.0	14468.1	14261.1	13867.8	13675.3	14062.4	13971.3	15167.7	18160.6	17548.0	14898.6
47.5°	15616.8	15664.4	15507.1	15138.7	14898.6	15430.5	15082.8	16626.9	20085.6	19599.1	16589.6
50°	16260.5	16328.8	16482.0	16455.1	16403.3	16314.3	16322.6	18191.7	22070.5	21735.2	18328.3
52.5°	15914.9	15912.8	16471.6	17150.5	17875.0	17928.8	17833.6	19841.3	23925.1	23823.7	19965.5
55°	14333.5	14441.2	15287.7	16602.0	18580.8	19816.5	20098.0	21731.1	25746.5	25864.5	21627.6
57.5°	11700.7	11789.7	12932.2	14764.0	17628.7	20938.3	23318.6	24477.7	27783.2	28333.8	23840.2
60°	7935.7	8043.3	9254.2	11454.4	15066.2	20313.2	26384.0	29379.1	30221.5	31473.7	26944.9
62.5°	4663.3	4760.6	5747.9	7225.7	10607.8	17409.3	27729.4	36352.3	34094.1	36211.5	31680.7
65°	3210.3	3276.5	3756.7	4497.7	6095.6	11725.5	26061.1	41166.7	40053.1	42081.6	37171.9
67.5°	2583.1	2574.9	2955.7	3460.7	3924.4	6046.0	19706.8	40622.3	45293.9	46140.5	40022.1
70°	2127.8	2119.5	2378.2	2796.3	3135.8	3404.9	10734.1	34280.4	44225.9	44569.5	37397.5
72.5°	1780.0	1788.3	1953.9	2264.4	2572.8	2564.5	4717.1	24115.5	34791.6	37167.8	29811.7
75°	1502.7	1506.8	1616.5	1835.9	2088.5	2065.7	2558.3	13064.7	20224.2	21878.0	16525.5
77.5°	1279.2	1283.3	1353.7	1475.8	1655.9	1647.6	1867.0	5644.4	8436.6	8333.1	5652.7
80°	1140.5	1140.5	1173.6	1196.4	1295.7	1258.5	1384.7	2711.5	3566.3	3293.1	2256.1
82.5°	894.2	898.3	1101.1	1092.9	1020.4	972.8	972.8	1597.9	1889.7	1746.9	1320.5
85°	503.0	500.9	709.9	856.9	898.3	685.1	678.9	894.2	1028.7	906.6	639.6
87.5°	215.3	219.4	329.1	380.8	509.2	426.4	420.2	461.6	523.7	453.3	296.0
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°	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0	5841.0
2.5°	5843.1	5789.3	5671.3	5524.4	5391.9	5305.0	5226.3	5112.5	5118.7	5040.0	4982.1
5°	5839.0	5727.2	5454.0	5129.0	4816.5	4590.9	4421.1	4268.0	4230.7	4158.3	4114.8
7.5°	5843.1	5661.0	5201.5	4681.9	4294.9	4009.2	3864.4	3783.6	3765.0	3740.2	3742.2
10°	5857.6	5600.9	4924.1	4263.8	3858.1	3669.8	3634.6	3659.4	3688.4	3696.7	3698.8
12.5°	5890.7	5547.1	4619.8	3891.3	3584.9	3527.0	3587.0	3671.9	3727.7	3754.7	3752.6
15°	5965.2	5505.7	4328.0	3599.4	3433.8	3464.9	3576.7	3696.7	3777.4	3814.7	3816.8
17.5°	6046.0	5445.7	4027.9	3375.9	3322.1	3400.7	3539.4	3680.1	3779.5	3820.9	3829.2
20°	6151.5	5371.2	3713.3	3208.2	3216.5	3305.5	3435.9	3576.7	3686.4	3721.5	3738.1
22.5°	6290.2	5290.5	3438.0	3071.6	3096.5	3164.8	3266.2	3388.3	3483.5	3500.1	3514.6
25°	6476.5	5203.5	3218.6	2947.4	2957.8	2997.1	3065.4	3137.9	3204.1	3185.5	3199.9
27.5°	6726.9	5129.0	3055.1	2833.6	2815.0	2823.2	2858.4	2881.2	2916.4	2864.6	2870.8
30°	7020.8	5048.3	2928.8	2734.2	2682.5	2668.0	2676.3	2688.7	2715.6	2645.2	2634.9
32.5°	7362.4	4951.0	2810.8	2647.3	2574.9	2545.9	2550.0	2583.1	2686.6	2643.2	2620.4
35°	7759.8	4841.3	2686.6	2552.1	2502.4	2461.0	2456.9	2560.4	2868.8	2841.9	2821.2
37.5°	8225.5	4731.6	2562.4	2444.5	2448.6	2403.1	2388.6	2506.6	2904.0	2798.4	2783.9
40°	8817.4	4673.7	2456.9	2330.6	2382.4	2376.2	2347.2	2407.2	2672.1	2479.6	2454.8
42.5°	9550.2	4681.9	2378.2	2208.5	2303.7	2369.9	2324.4	2326.5	2421.7	2276.8	2254.0
45°	10454.7	4779.2	2322.3	2111.2	2214.7	2363.7	2316.1	2283.0	2291.3	2214.7	2202.3
47.5°	11510.3	4980.0	2283.0	2030.5	2129.8	2341.0	2314.1	2270.6	2252.0	2210.6	2200.2
50°	12683.9	5271.8	2254.0	1953.9	2053.3	2303.7	2316.1	2258.2	2237.5	2220.9	2214.7
52.5°	13836.8	5605.1	2210.6	1887.7	1993.2	2258.2	2322.3	2245.8	2223.0	2210.6	2204.4
55°	15122.1	6021.1	2144.3	1831.8	1943.6	2200.2	2322.3	2227.1	2202.3	2204.4	2202.3
57.5°	16858.7	6693.8	2065.7	1784.2	1883.5	2129.8	2283.0	2206.4	2175.4	2177.5	2179.5
60°	19572.2	7879.8	1970.5	1736.6	1809.0	2047.1	2229.2	2160.9	2129.8	2138.1	2140.2
62.5°	23562.9	9620.5	1846.3	1666.2	1730.4	1958.1	2154.7	2102.9	2071.9	2092.6	2092.6
65°	27710.8	11156.3	1693.1	1577.2	1647.6	1860.8	2061.5	2030.5	1999.4	2047.1	2045.0
67.5°	28826.4	10812.8	1539.9	1479.9	1564.8	1753.1	1949.8	1933.2	1916.7	1999.4	1995.3
70°	25607.8	8680.8	1399.2	1380.6	1473.7	1637.2	1829.7	1829.7	1819.4	1881.5	1867.0
72.5°	19510.1	6155.7	1264.7	1275.0	1370.2	1511.0	1699.3	1713.8	1697.3	1728.3	1715.9
75°	10444.3	3522.8	1130.1	1159.1	1241.9	1382.6	1554.4	1568.9	1558.6	1556.5	1562.7
77.5°	3471.1	1722.1	989.4	1034.9	1107.4	1250.2	1403.3	1426.1	1401.3	1397.1	1395.1
80°	1546.2	1082.5	834.1	894.2	958.3	1099.1	1244.0	1262.6	1235.7	1272.9	1225.3
82.5°	993.5	712.0	668.6	734.8	796.9	948.0	1084.6	1088.7	1063.9	1235.7	1053.5
85°	482.3	440.9	503.0	563.0	616.8	745.1	898.3	900.4	838.3	763.8	736.9
87.5°	240.1	256.7	335.3	389.1	416.0	511.2	654.1	641.6	614.7	558.9	515.4
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)