

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: P298936

Luminaire Tested: **GLNA-AF-04-LED-E1-T2-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P298936  
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-04-LED-E1-T2-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 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: 18970.7 lumens  
Efficiency: N/A  
Efficacy: 110.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

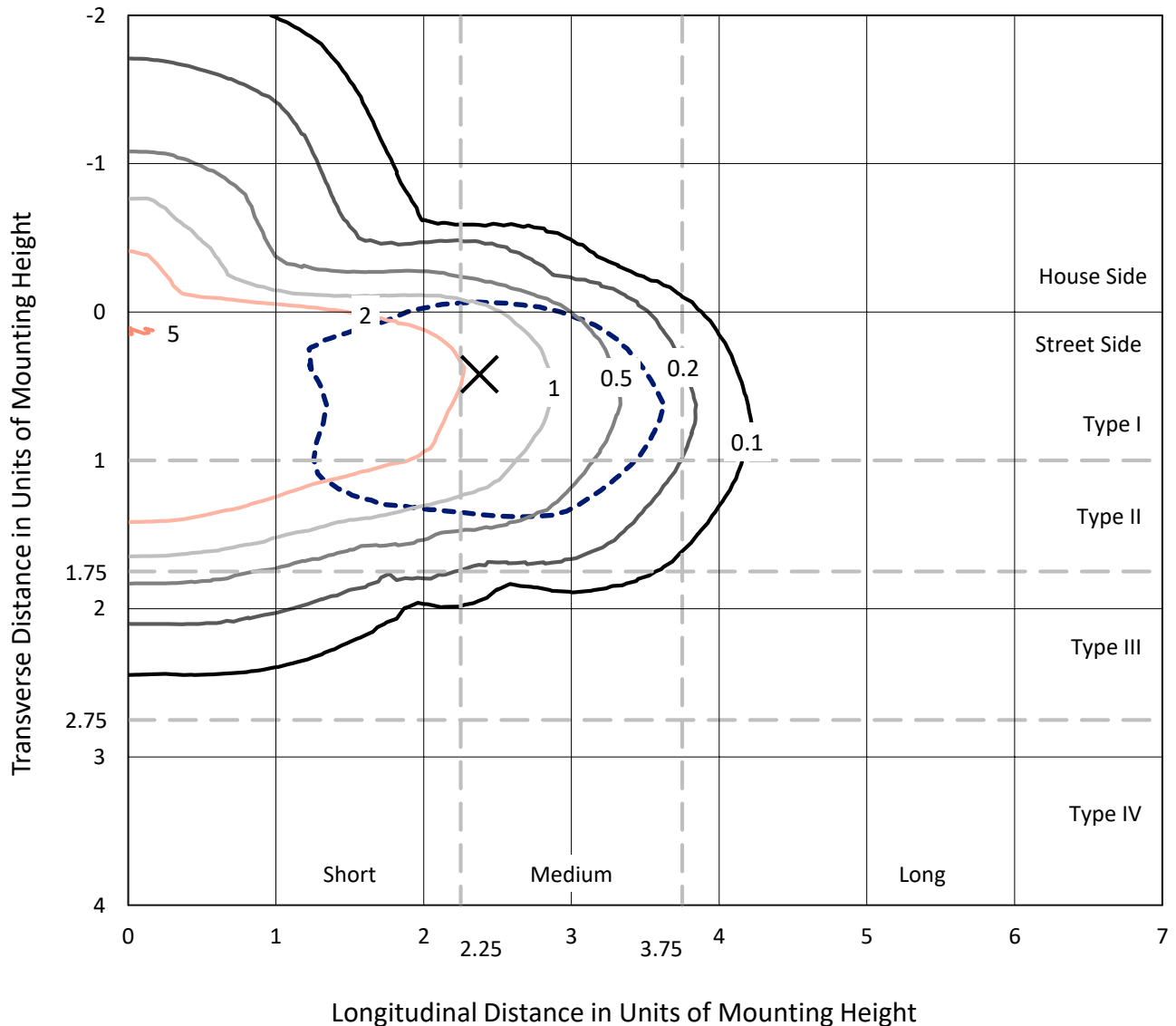
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

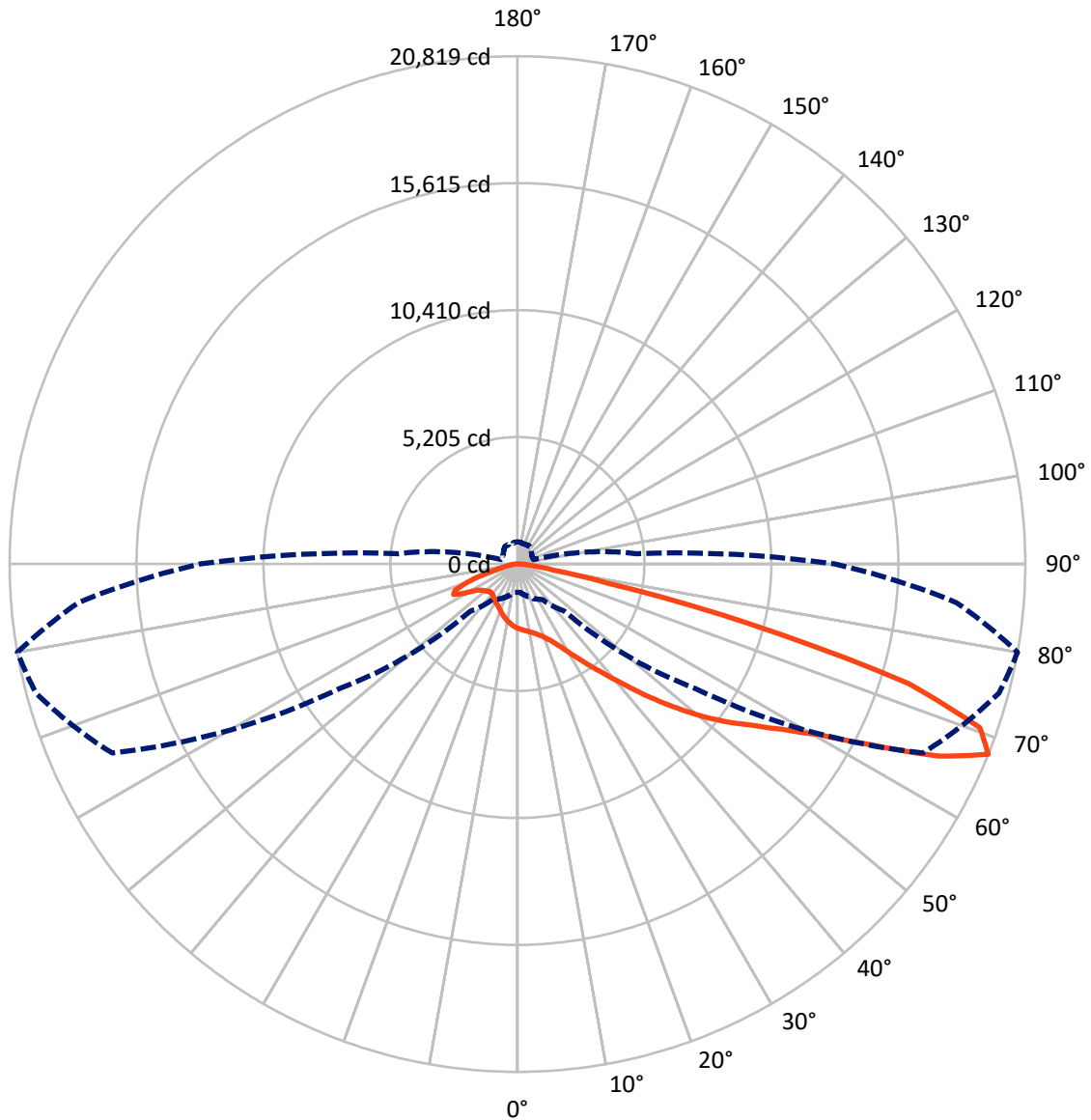
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 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
<b>House Side</b>	Lumens	3493.7	0.0	3493.7
	% Fixture	18.4	0.0	18.4
<b>Street Side</b>	Lumens	15477.0	0.0	15477.0
	% Fixture	81.6	0.0	81.6
<b>Total</b>	Lumens	18970.7	0.0	18970.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	243.1	1.3
10°-20°	700.4	3.7
20°-30°	1159.2	6.1
30°-40°	1896.2	10.0
40°-50°	3061.6	16.1
50°-60°	4420.1	23.3
60°-70°	4877.9	25.7
70°-80°	2248.4	11.9
80°-90°	363.7	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°	18970.7	100.0
0°-180°	18970.7	100.0



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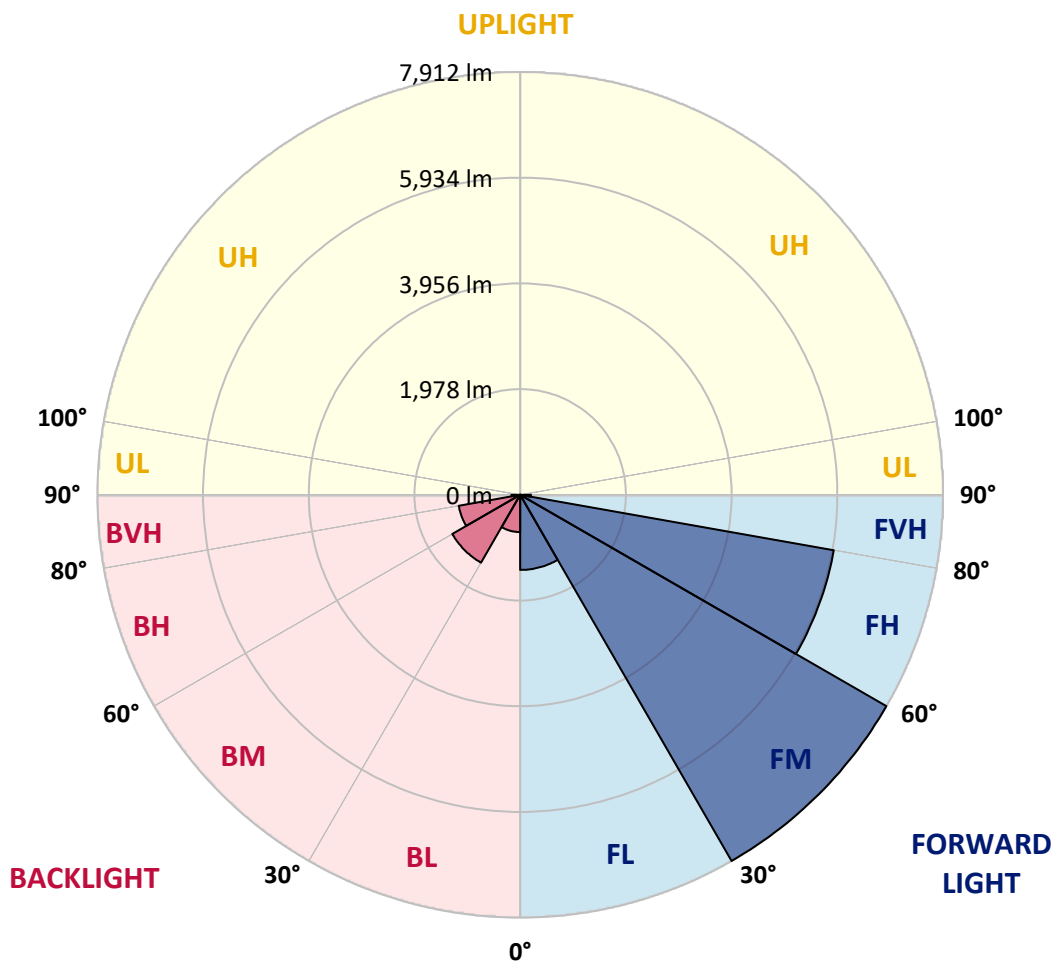
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1405.7	7.4			
FM	(30°-60°)	7912.2	41.7			
FH	(60°-80°)	5959.2	31.4			G3/7500
FVH	(80°-90°)	199.9	1.1			G2/225
BL	(0°-30°)	697.0	3.7	B2/1000		
BM	(30°-60°)	1465.8	7.7	B2/2500		
BH	(60°-80°)	1167.1	6.2	B3/2500		G3/2500
BVH	(80°-90°)	163.7	0.9			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	80°	85°
0°	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6
2.5°	2883.1	2866.3	2869.1	2864.4	2850.4	2826.1	2799.9	2752.3	2702.8	2676.7	2656.1
5°	3124.0	3119.4	3112.8	3097.9	3062.4	3012.0	2949.4	2865.3	2774.7	2727.1	2681.3
7.5°	3304.3	3301.5	3293.1	3283.7	3249.2	3188.5	3094.1	2974.6	2842.9	2777.5	2706.6
10°	3319.2	3323.9	3330.4	3355.6	3360.3	3327.6	3231.4	3086.7	2913.9	2829.8	2739.2
12.5°	3192.2	3202.5	3227.7	3292.1	3360.3	3400.5	3351.0	3204.3	2997.0	2895.2	2780.3
15°	3024.1	3029.7	3060.5	3149.2	3271.6	3395.8	3442.5	3334.2	3104.4	2979.3	2842.0
17.5°	2952.2	2955.0	2976.5	3035.3	3149.2	3326.7	3493.9	3475.2	3236.1	3083.9	2917.6
20°	2915.8	2922.3	2953.1	3011.0	3082.9	3238.0	3501.3	3627.4	3393.0	3214.6	3012.9
22.5°	3019.4	3016.6	3027.8	3056.8	3117.5	3210.9	3495.7	3784.3	3592.9	3382.7	3137.1
25°	3261.3	3271.6	3252.0	3219.3	3238.9	3304.3	3525.6	3954.3	3843.2	3598.5	3299.6
27.5°	3605.9	3595.7	3566.7	3490.1	3450.0	3478.0	3624.6	4137.3	4154.2	3882.4	3514.4
30°	3949.6	3941.2	3913.2	3819.8	3737.6	3714.3	3817.0	4347.5	4524.9	4223.3	3777.8
32.5°	4306.4	4297.1	4270.9	4177.5	4078.5	4024.3	4090.7	4590.3	4962.0	4630.5	4087.9
35°	4746.3	4728.5	4673.4	4543.6	4446.5	4404.5	4435.3	4895.7	5466.3	5112.4	4464.2
37.5°	5160.0	5187.1	5131.1	4951.7	4825.7	4810.7	4845.3	5268.3	6009.9	5651.3	4896.6
40°	5575.6	5580.3	5529.9	5383.2	5253.4	5229.1	5316.0	5720.4	6651.5	6295.7	5422.4
42.5°	6005.2	6014.6	5929.6	5794.2	5698.9	5703.6	5802.6	6249.9	7387.5	7055.0	6027.6
45°	6514.2	6528.2	6434.8	6257.4	6170.5	6345.2	6304.1	6843.9	8194.4	7917.9	6722.5
47.5°	7046.6	7068.0	6997.1	6830.8	6722.5	6962.5	6805.6	7502.3	9062.9	8843.5	7485.5
50°	7337.0	7367.8	7437.0	7424.8	7401.5	7361.3	7365.0	8208.4	9958.6	9807.3	8270.0
52.5°	7181.1	7180.1	7432.3	7738.6	8065.5	8089.8	8046.8	8952.7	10795.4	10749.6	9008.8
55°	6467.5	6516.1	6898.1	7491.1	8384.0	8941.5	9068.5	9805.4	11617.3	11670.5	9758.7
57.5°	5279.6	5319.7	5835.3	6661.8	7954.4	9447.7	10521.8	11044.8	12536.3	12784.7	10757.1
60°	3580.7	3629.3	4175.6	5168.4	6798.1	9165.7	11904.9	13256.3	13636.4	14201.5	12158.0
62.5°	2104.2	2148.1	2593.5	3260.4	4786.4	7855.4	12512.0	16402.8	15383.8	16339.3	14294.9
65°	1448.5	1478.4	1695.1	2029.4	2750.5	5290.8	11759.2	18575.1	18072.7	18987.9	16772.6
67.5°	1165.6	1161.8	1333.7	1561.5	1770.7	2728.0	8892.0	18329.5	20437.4	20819.4	18058.6
70°	960.1	956.4	1073.1	1261.8	1414.9	1536.3	4843.4	15467.9	19955.5	20110.5	16874.4
72.5°	803.2	806.9	881.6	1021.7	1160.9	1157.2	2128.4	10881.3	15698.6	16770.7	13451.5
75°	678.0	679.9	729.4	828.4	942.3	932.1	1154.3	5895.0	9125.5	9871.7	7456.6
77.5°	577.2	579.0	610.8	665.9	747.2	743.4	842.4	2546.9	3806.7	3760.0	2550.6
80°	514.6	514.6	529.5	539.8	584.6	567.8	624.8	1223.5	1609.2	1485.9	1018.0
82.5°	403.5	405.3	496.9	493.1	460.4	439.0	439.0	721.0	852.7	788.2	595.9
85°	226.9	226.0	320.3	386.7	405.3	309.1	306.3	403.5	464.2	409.1	288.6
87.5°	97.1	99.0	148.5	171.8	229.7	192.4	189.6	208.3	236.3	204.5	133.6
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6
2.5°	2636.5	2612.2	2559.0	2492.7	2432.9	2393.7	2358.2	2306.8	2309.6	2274.1	2248.0
5°	2634.6	2584.2	2460.9	2314.3	2173.3	2071.5	1994.9	1925.8	1909.0	1876.3	1856.7
7.5°	2636.5	2554.3	2347.0	2112.6	1937.9	1809.0	1743.7	1707.2	1698.8	1687.6	1688.6
10°	2643.0	2527.2	2221.8	1923.9	1740.9	1655.9	1640.0	1651.2	1664.3	1668.0	1668.9
12.5°	2658.0	2503.0	2084.6	1755.8	1617.6	1591.4	1618.5	1656.8	1682.0	1694.2	1693.2
15°	2691.6	2484.3	1952.9	1624.1	1549.4	1563.4	1613.8	1668.0	1704.4	1721.2	1722.2
17.5°	2728.0	2457.2	1817.4	1523.3	1499.0	1534.5	1597.0	1660.5	1705.4	1724.1	1727.8
20°	2775.7	2423.6	1675.5	1447.6	1451.3	1491.5	1550.3	1613.8	1663.3	1679.2	1686.7
22.5°	2838.2	2387.1	1551.3	1386.0	1397.2	1428.0	1473.8	1528.9	1571.8	1579.3	1585.8
25°	2922.3	2347.9	1452.3	1329.9	1334.6	1352.3	1383.2	1415.9	1445.7	1437.3	1443.9
27.5°	3035.3	2314.3	1378.5	1278.6	1270.2	1273.9	1289.8	1300.0	1315.9	1292.6	1295.4
30°	3167.9	2277.9	1321.5	1233.7	1210.4	1203.8	1207.6	1213.2	1225.3	1193.6	1188.9
32.5°	3322.0	2234.0	1268.3	1194.5	1161.8	1148.7	1150.6	1165.6	1212.3	1192.6	1182.4
35°	3501.3	2184.5	1212.3	1151.5	1129.1	1110.5	1108.6	1155.3	1294.4	1282.3	1273.0
37.5°	3711.5	2135.0	1156.2	1103.0	1104.8	1084.3	1077.8	1131.0	1310.3	1262.7	1256.1
40°	3978.6	2108.8	1108.6	1051.6	1075.0	1072.2	1059.1	1086.2	1205.7	1118.9	1107.7
42.5°	4309.2	2112.6	1073.1	996.5	1039.5	1069.4	1048.8	1049.7	1092.7	1027.3	1017.1
45°	4717.3	2156.5	1047.9	952.6	999.3	1066.6	1045.1	1030.1	1033.9	999.3	993.7
47.5°	5193.6	2247.1	1030.1	916.2	961.0	1056.3	1044.1	1024.5	1016.1	997.4	992.8
50°	5723.2	2378.7	1017.1	881.6	926.5	1039.5	1045.1	1018.9	1009.6	1002.1	999.3
52.5°	6243.4	2529.1	997.4	851.8	899.4	1018.9	1047.9	1013.3	1003.1	997.4	994.6
55°	6823.4	2716.8	967.6	826.5	877.0	992.8	1047.9	1004.9	993.7	994.6	993.7
57.5°	7606.9	3020.4	932.1	805.1	849.9	961.0	1030.1	995.6	981.6	982.5	983.4
60°	8831.3	3555.5	889.1	783.6	816.3	923.7	1005.9	975.0	961.0	964.8	965.7
62.5°	10632.0	4340.9	833.1	751.8	780.8	883.5	972.2	948.9	934.9	944.2	944.2
65°	12503.6	5033.9	764.0	711.7	743.4	839.6	930.2	916.2	902.2	923.7	922.7
67.5°	13007.0	4878.9	694.9	667.8	706.1	791.0	879.8	872.3	864.8	902.2	900.3
70°	11554.7	3916.9	631.3	622.9	665.0	738.7	825.6	825.6	820.9	849.0	842.4
72.5°	8803.3	2777.5	570.6	575.3	618.3	681.8	766.8	773.3	765.8	779.8	774.2
75°	4712.7	1589.6	509.9	523.0	560.4	623.9	701.4	707.9	703.3	702.3	705.1
77.5°	1566.2	777.0	446.4	467.0	499.7	564.1	633.2	643.5	632.3	630.4	629.5
80°	697.7	488.5	376.4	403.5	432.4	495.9	561.3	569.7	557.6	574.4	552.9
82.5°	448.3	321.3	301.7	331.5	359.6	427.7	489.4	491.3	480.0	557.6	475.4
85°	217.6	198.9	226.9	254.0	278.3	336.2	405.3	406.3	378.2	344.6	332.5
87.5°	108.3	115.8	151.3	175.6	187.7	230.7	295.1	289.5	277.4	252.2	232.6
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)