

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: P301101

Luminaire Tested: **GLNA-AF-04-LED-E1-T3R**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301101  
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-04-LED-E1-T3R  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(4) 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: 24464 lumens  
Efficiency: N/A  
Efficacy: 108.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 225  
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

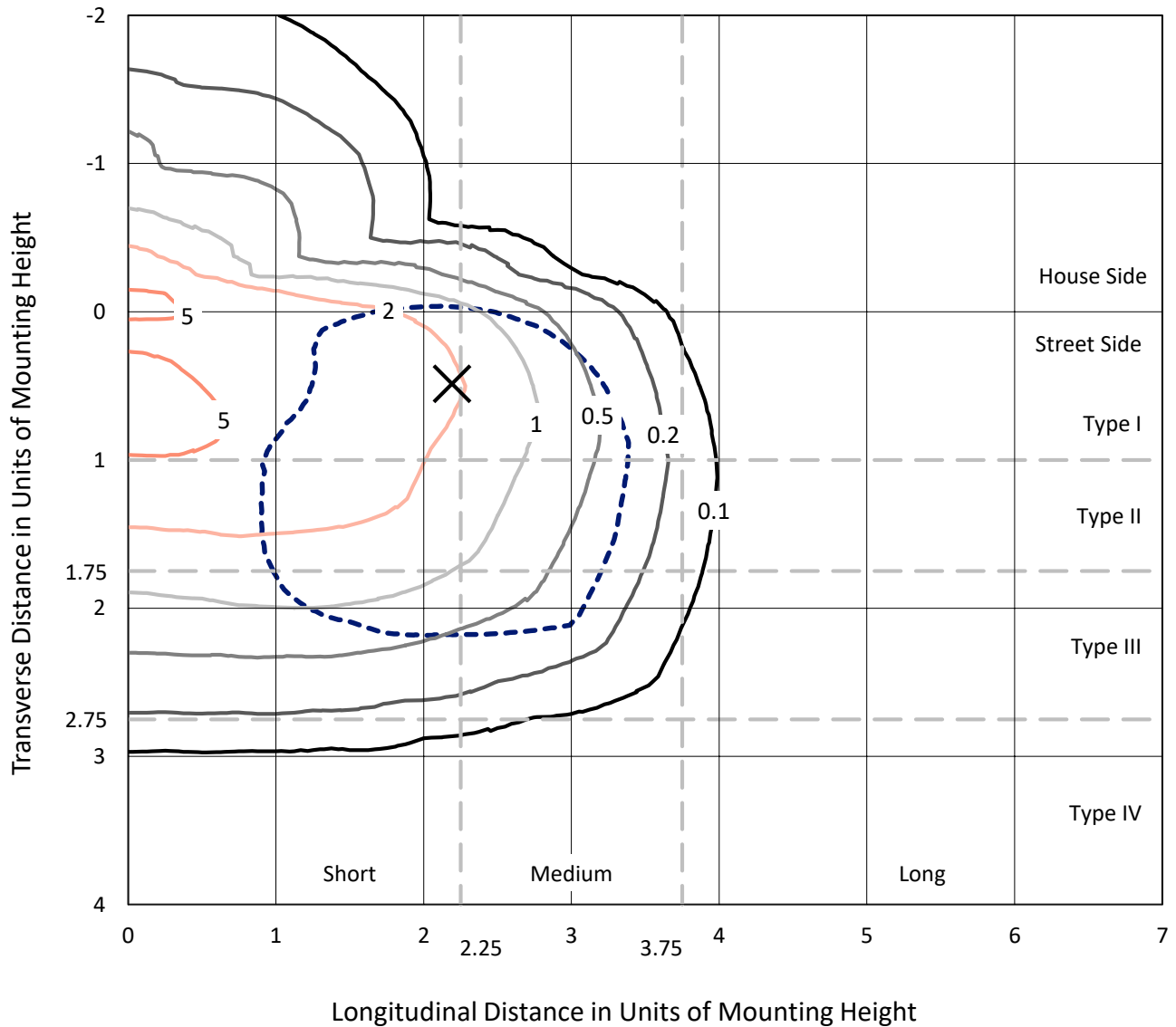


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

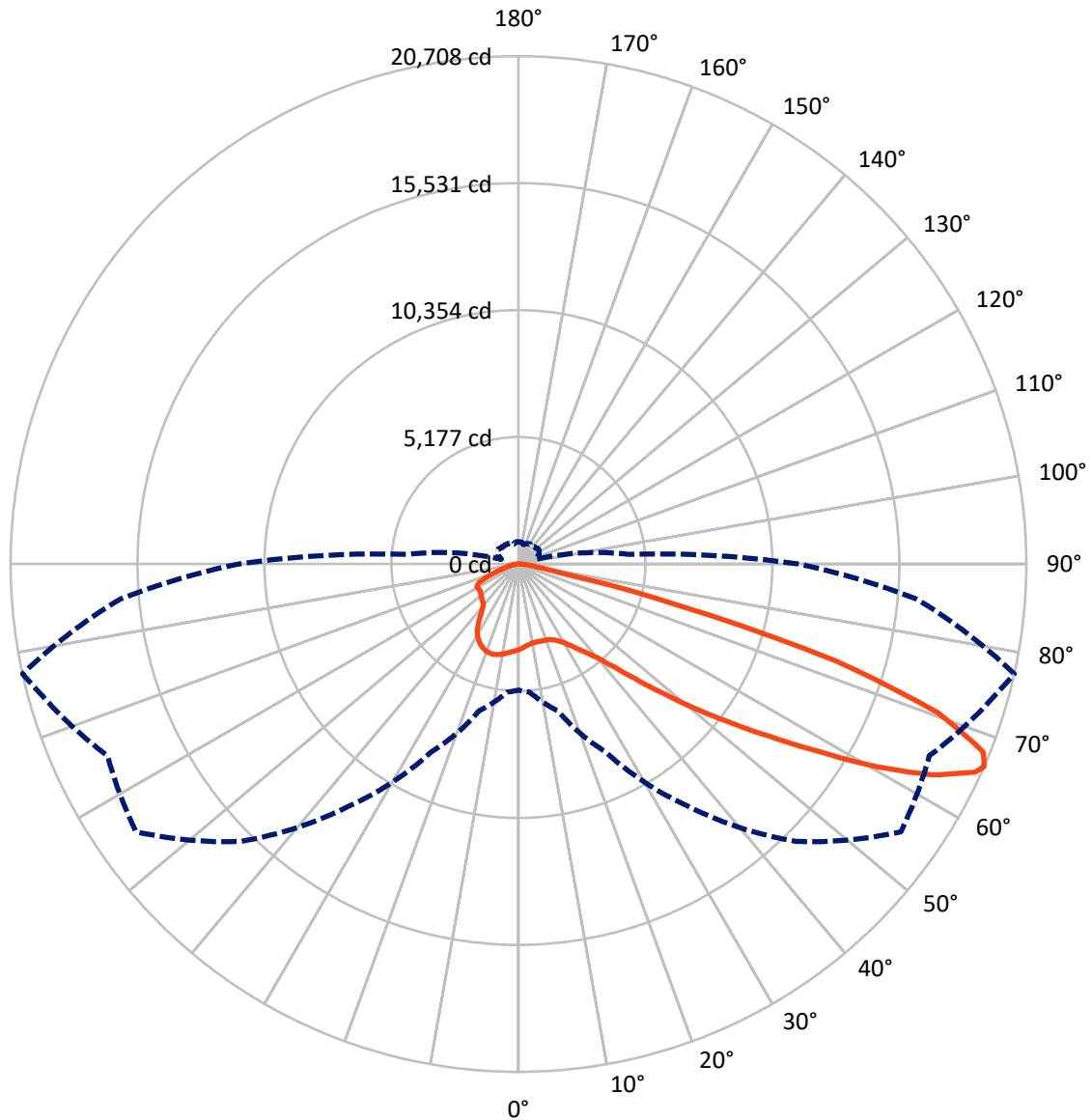


Based on 25 foot mounting height. Maximum calculated value = 6.9 fc  
 Type III - Short - Full Cutoff

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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
<b>House Side</b>	Lumens	4179.5	0.0	4179.5
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	20284.4	0.0	20284.4
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	24464.0	0.0	24464.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	311.5	1.3
10°-20°	878.7	3.6
20°-30°	1499.6	6.1
30°-40°	2400.6	9.8
40°-50°	3708.8	15.2
50°-60°	5260.3	21.5
60°-70°	7036.9	28.8
70°-80°	3056.0	12.5
80°-90°	311.6	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°	24464.0	100.0
0°-180°	24464.0	100.0



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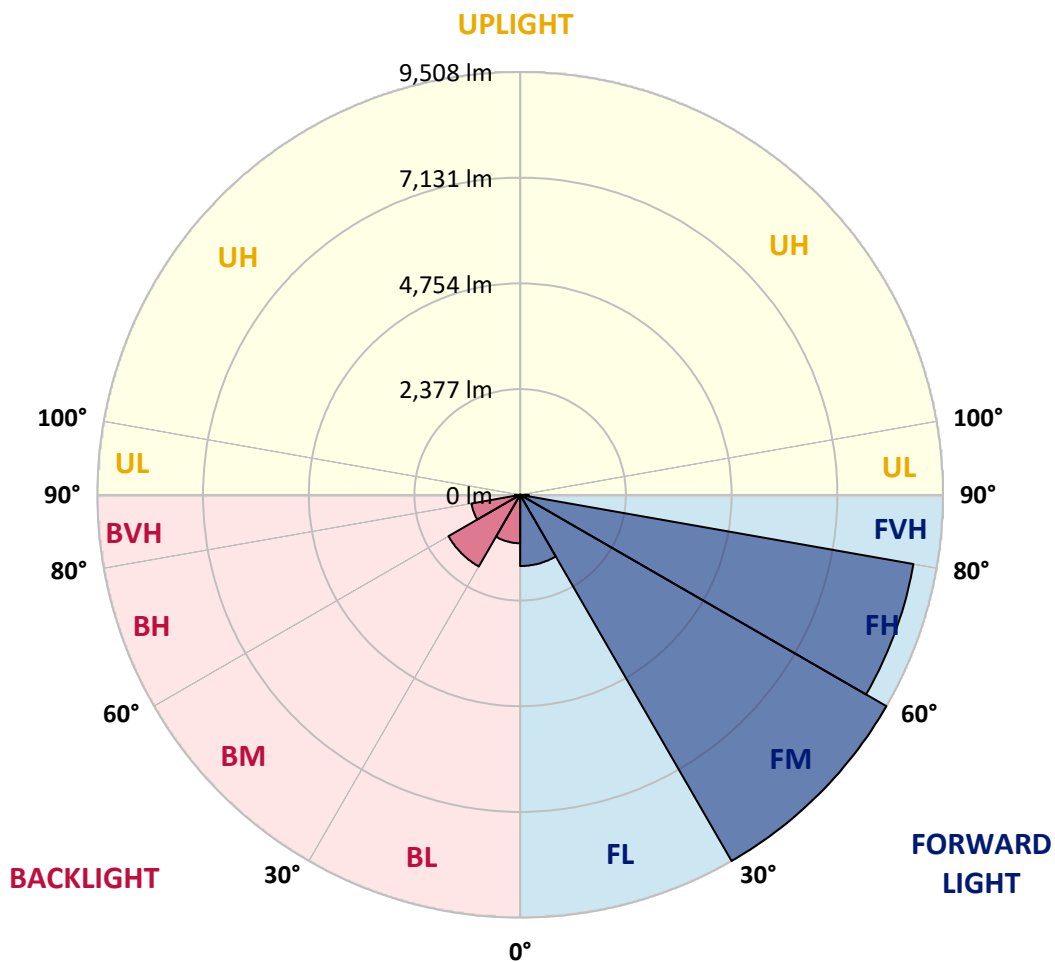
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1601.3	6.5			
FM	(30°-60°)	9508.0	38.9			
FH	(60°-80°)	8979.8	36.7			G4/12000
FVH	(80°-90°)	195.4	0.8			G2/225
BL	(0°-30°)	1088.5	4.4	B3/2500		
BM	(30°-60°)	1861.7	7.6	B2/2500		
BH	(60°-80°)	1113.1	4.5	B3/2500		G3/2500
BVH	(80°-90°)	116.2	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2
2.5°	3084.1	3104.7	3122.2	3138.3	3170.5	3223.7	3285.0	3334.7	3406.4	3420.4	3458.5
5°	2800.9	2800.9	2814.6	2839.1	2882.8	2962.6	3045.9	3156.9	3313.0	3349.7	3451.5
7.5°	2663.4	2664.4	2672.5	2693.1	2731.3	2804.1	2895.4	3026.3	3237.7	3299.0	3472.2
10°	2714.1	2702.6	2685.1	2674.9	2680.5	2723.2	2810.0	2955.6	3191.5	3269.9	3518.7
12.5°	2998.3	2976.6	2916.4	2836.6	2760.3	2729.2	2779.9	2922.0	3171.9	3263.3	3580.0
15°	3463.1	3454.0	3341.7	3176.5	2991.7	2836.6	2802.0	2909.4	3174.0	3271.3	3652.8
17.5°	4045.8	4032.9	3885.2	3644.7	3343.1	3041.4	2879.3	2919.9	3182.1	3285.0	3723.1
20°	4634.1	4594.6	4435.4	4148.7	3761.3	3319.6	3007.8	2946.5	3192.6	3300.0	3797.3
22.5°	5073.4	5040.8	4897.7	4619.1	4172.9	3642.3	3180.0	2992.7	3226.2	3344.1	3888.3
25°	5459.4	5461.5	5319.4	5050.3	4589.0	3984.6	3401.9	3116.3	3311.6	3434.0	4013.3
27.5°	5936.8	5909.1	5776.1	5509.1	5000.6	4330.0	3669.9	3286.4	3438.9	3562.5	4177.4
30°	6507.6	6488.0	6334.4	6031.6	5457.0	4701.0	3976.2	3483.7	3603.1	3731.2	4392.3
32.5°	7179.2	7170.1	7010.5	6621.0	5984.0	5138.1	4336.0	3745.2	3848.1	3981.1	4701.0
35°	7967.7	7968.8	7780.5	7312.2	6560.8	5646.7	4743.7	4081.5	4146.3	4284.9	5068.8
37.5°	8453.2	8512.0	8441.6	7964.2	7213.9	6215.4	5273.2	4527.8	4486.1	4626.1	5462.9
40°	8557.1	8628.9	8851.8	8609.3	7944.7	6841.8	5742.5	4956.5	4904.7	5075.5	5970.4
42.5°	8411.5	8510.9	8982.7	9153.5	8720.2	7613.9	6373.6	5593.5	5527.7	5757.6	6601.4
45°	8324.7	8398.9	8944.6	9437.0	9392.9	8486.8	7177.1	6393.2	6369.0	6670.7	7329.7
47.5°	8174.6	8241.8	8766.4	9502.8	9788.4	9286.5	8142.4	7371.4	7418.6	7814.1	8151.5
50°	8255.4	8283.1	8567.6	9335.1	9902.8	9872.7	9220.7	8503.9	8666.0	9159.4	9082.1
52.5°	8243.9	8315.6	8544.5	9060.1	9917.9	10234.6	10282.9	9767.4	10108.6	10674.9	10114.2
55°	6665.1	6796.7	8272.9	8990.8	9970.7	10589.1	11228.6	11099.1	11734.6	12394.7	11279.3
57.5°	6364.5	6447.8	7266.0	9136.3	10252.8	11266.7	12280.3	12564.8	13628.1	14394.5	12698.8
60°	6305.3	6408.2	7255.5	9314.5	10825.0	12370.6	13839.8	14339.2	15932.0	16771.3	14344.8
62.5°	6121.6	6232.5	7187.3	9291.0	11637.7	13897.5	15836.1	16225.6	18116.6	18932.8	15721.7
65°	5539.2	5643.2	6631.5	8918.0	12185.8	15527.4	18198.5	17954.9	19841.3	20454.9	16408.0
66°	5140.2	5242.1	6193.3	8478.7	12058.4	15989.7	19035.7	18490.0	20227.4	20708.2	16273.9
67.5°	4410.9	4490.7	5342.5	7494.9	11382.2	16119.2	19739.5	18892.2	20267.6	20437.7	15507.8
70°	2786.9	2810.0	3472.2	5173.8	8616.3	13979.4	18667.8	17893.7	18596.4	18136.2	13000.5
72.5°	1209.2	1201.1	1667.0	2631.9	4878.1	9380.3	15100.8	14764.5	14587.7	13538.1	9100.6
75°	672.7	682.1	865.9	1221.8	1982.3	4607.5	9878.3	9453.1	7981.4	6810.7	4126.7
77.5°	539.7	552.6	717.8	866.9	890.0	1606.8	4622.6	3761.3	2264.4	1817.1	1146.5
80°	426.6	449.7	626.5	675.1	599.9	662.2	1493.4	1194.1	896.0	821.8	594.3
82.5°	337.4	353.8	537.6	511.0	419.6	446.2	715.4	697.2	582.7	530.6	343.3
85°	242.9	272.6	441.7	385.0	275.1	300.6	474.9	455.3	333.9	272.6	151.5
87.5°	99.4	129.5	312.2	255.5	153.6	140.0	236.9	222.9	158.2	115.5	75.2
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°	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2	3486.2
2.5°	3482.7	3510.3	3546.4	3568.4	3580.0	3588.0	3600.6	3599.6	3603.1	3604.1	3608.7
5°	3505.8	3552.0	3604.1	3618.1	3618.1	3605.2	3592.6	3571.6	3563.5	3561.4	3563.5
7.5°	3566.0	3616.7	3661.9	3645.8	3611.1	3560.0	3494.2	3436.5	3405.4	3394.9	3392.8
10°	3642.3	3703.5	3722.1	3660.8	3559.0	3436.5	3306.0	3211.1	3156.9	3141.8	3137.3
12.5°	3734.7	3792.4	3767.2	3637.7	3449.1	3251.7	3071.1	2919.9	2806.5	2770.8	2768.4
15°	3836.5	3881.7	3792.4	3566.0	3285.0	2993.8	2672.5	2411.4	2270.4	2225.2	2221.7
17.5°	3931.4	3954.5	3777.4	3441.0	3043.5	2572.0	2145.4	1944.2	1895.9	1907.4	1909.5
20°	4012.2	4012.2	3726.6	3261.9	2663.4	2015.9	1746.4	1743.3	1777.9	1812.6	1819.6
22.5°	4101.1	4047.9	3637.7	3008.8	2124.4	1649.5	1610.3	1642.5	1681.7	1719.8	1725.8
25°	4211.0	4077.0	3513.8	2625.2	1670.1	1497.9	1513.0	1539.6	1559.2	1583.7	1587.2
27.5°	4333.5	4113.7	3351.1	2096.8	1449.6	1403.4	1415.0	1424.1	1421.6	1431.1	1433.2
30°	4480.2	4156.8	3127.8	1639.0	1358.3	1322.2	1301.6	1293.5	1293.5	1308.6	1314.2
32.5°	4676.8	4220.1	2807.6	1404.5	1314.2	1264.5	1197.6	1167.5	1179.1	1229.8	1241.4
35°	4893.1	4288.4	2374.3	1324.7	1305.1	1237.9	1134.0	1078.3	1079.7	1127.0	1142.0
37.5°	5128.7	4375.2	1899.0	1309.6	1325.7	1239.3	1100.4	1024.1	992.9	992.9	998.9
40°	5430.4	4464.1	1537.5	1320.1	1369.8	1252.9	1083.2	981.4	893.5	896.0	900.5
42.5°	5823.4	4540.4	1343.2	1341.8	1423.0	1271.5	1081.8	924.7	848.4	900.5	947.8
45°	6260.5	4578.5	1257.5	1361.8	1465.7	1283.0	1063.6	915.6	854.3	1009.0	1099.3
47.5°	6763.1	4556.4	1210.2	1368.4	1476.2	1283.0	1042.6	937.6	894.6	1168.6	1273.9
50°	7314.7	4493.1	1164.0	1354.8	1472.7	1280.6	1062.2	959.3	909.6	1196.2	1269.0
52.5°	7963.2	4439.9	1115.4	1324.7	1448.2	1268.0	1085.3	950.2	862.4	1087.8	1138.5
55°	8702.7	4455.0	1061.2	1282.0	1410.1	1243.8	1077.3	913.1	812.7	958.3	989.4
57.5°	9648.4	4634.1	996.4	1227.7	1358.3	1203.2	1048.6	896.0	797.6	869.4	887.9
60°	10703.6	4946.0	915.6	1173.1	1293.5	1138.5	1026.5	904.0	804.6	862.4	871.5
62.5°	11478.1	5127.6	846.3	1093.4	1205.7	1066.8	998.9	914.2	823.2	886.5	884.4
65°	11688.4	4829.4	759.5	976.8	1086.7	991.9	963.9	925.7	831.2	906.1	896.0
66°	11393.7	4508.2	721.3	922.6	1026.5	954.8	946.7	924.7	827.7	908.6	891.1
67.5°	10678.4	3849.1	655.5	842.8	930.6	899.5	919.1	914.2	818.3	906.1	882.0
70°	8708.7	2626.3	560.7	701.7	774.5	791.7	865.9	877.4	788.2	865.9	812.7
72.5°	6084.8	1599.8	495.9	544.6	626.5	675.1	793.1	826.3	747.9	756.0	705.2
75°	2940.6	849.8	449.7	422.1	486.5	564.2	705.2	757.0	684.2	632.4	613.9
77.5°	916.6	519.0	381.5	339.8	381.5	455.3	589.4	663.6	609.3	529.5	522.5
80°	492.4	381.5	293.6	272.6	301.7	357.3	463.4	553.7	523.6	474.9	424.2
82.5°	324.8	247.4	217.3	211.4	229.9	272.6	344.4	458.8	458.8	407.0	296.1
85°	167.6	151.5	149.1	149.1	160.6	181.6	234.5	353.8	376.9	214.9	178.1
87.5°	83.3	86.8	80.8	84.3	90.3	88.9	112.0	178.1	212.8	130.5	108.5
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)