

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: LUMARK

Report Number: P196302

Luminaire Tested: **NAV-AF-06-D-UNV-T3-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196302  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-06-D-UNV-T3-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24284.8 lumens  
Efficiency: N/A  
Efficacy: 125.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

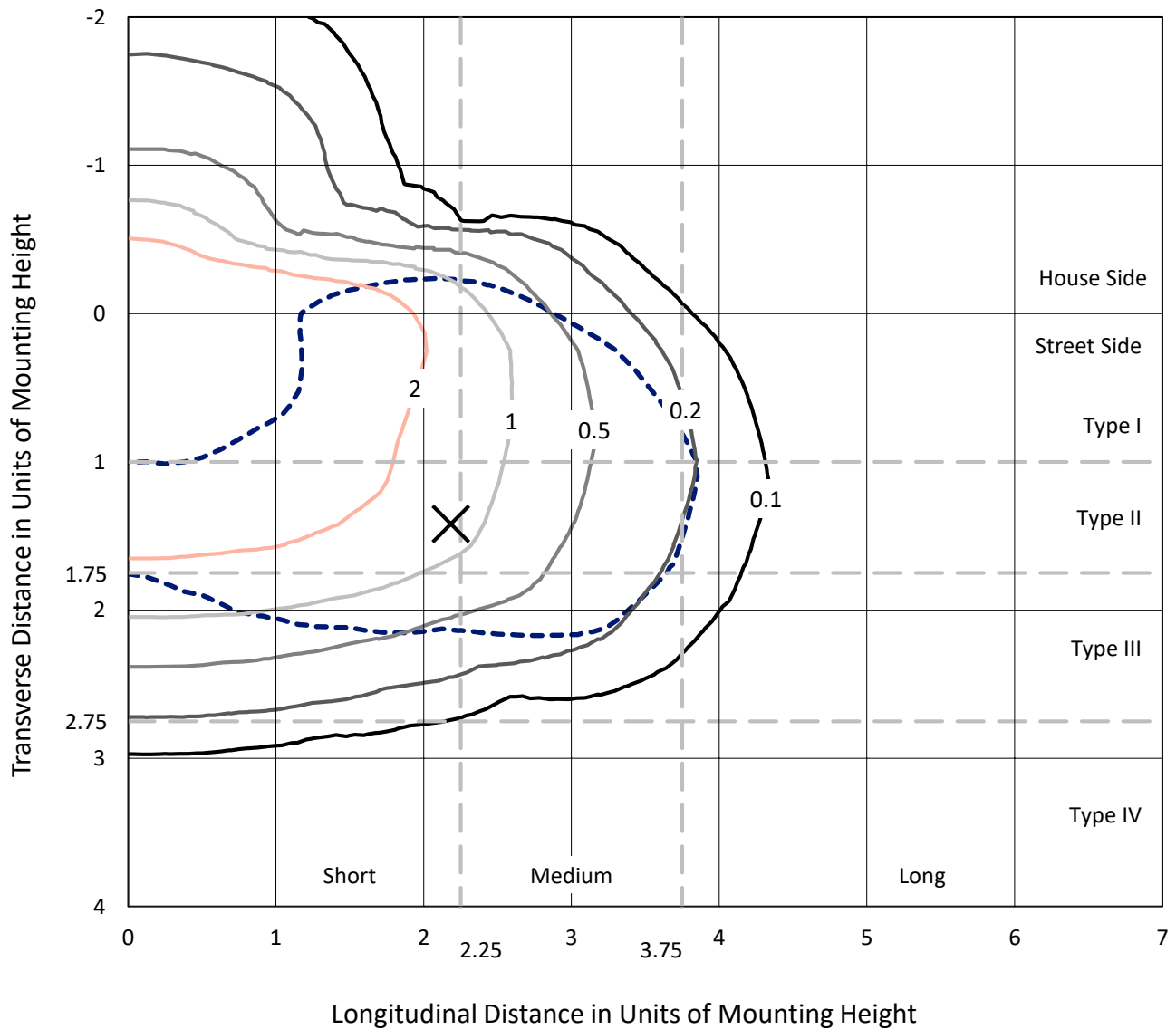
Input Watts (W): 193  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

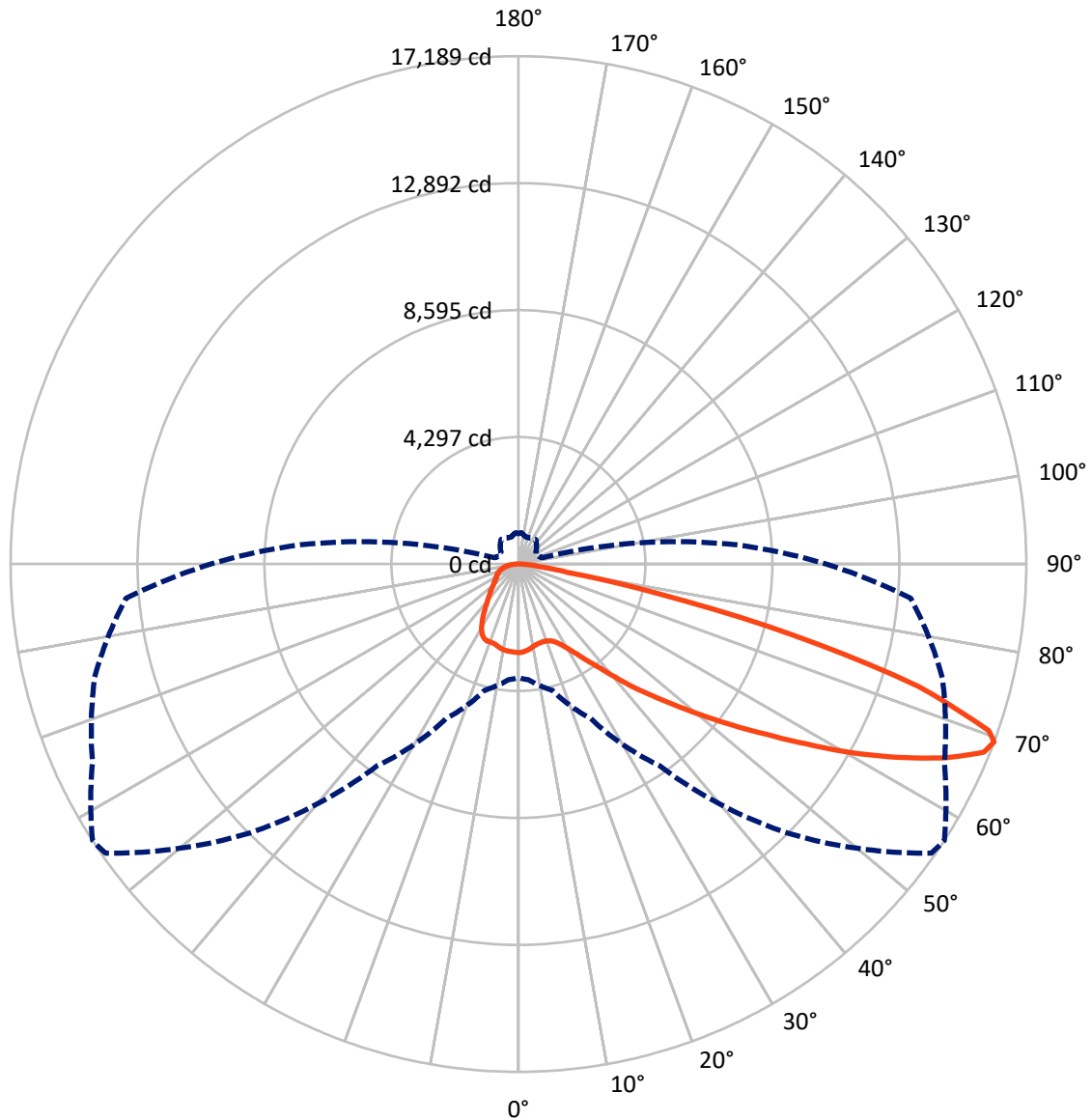
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5358.8	0.0	5358.8
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	18926.0	0.0	18926.0
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	24284.8	0.0	24284.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.9	1.2
10°-20°	798.7	3.3
20°-30°	1328.7	5.5
30°-40°	2169.7	8.9
40°-50°	3661.9	15.1
50°-60°	5696.3	23.5
60°-70°	6785.5	27.9
70°-80°	3161.1	13.0
80°-90°	402.1	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°	24284.8	100.0
0°-180°	24284.8	100.0



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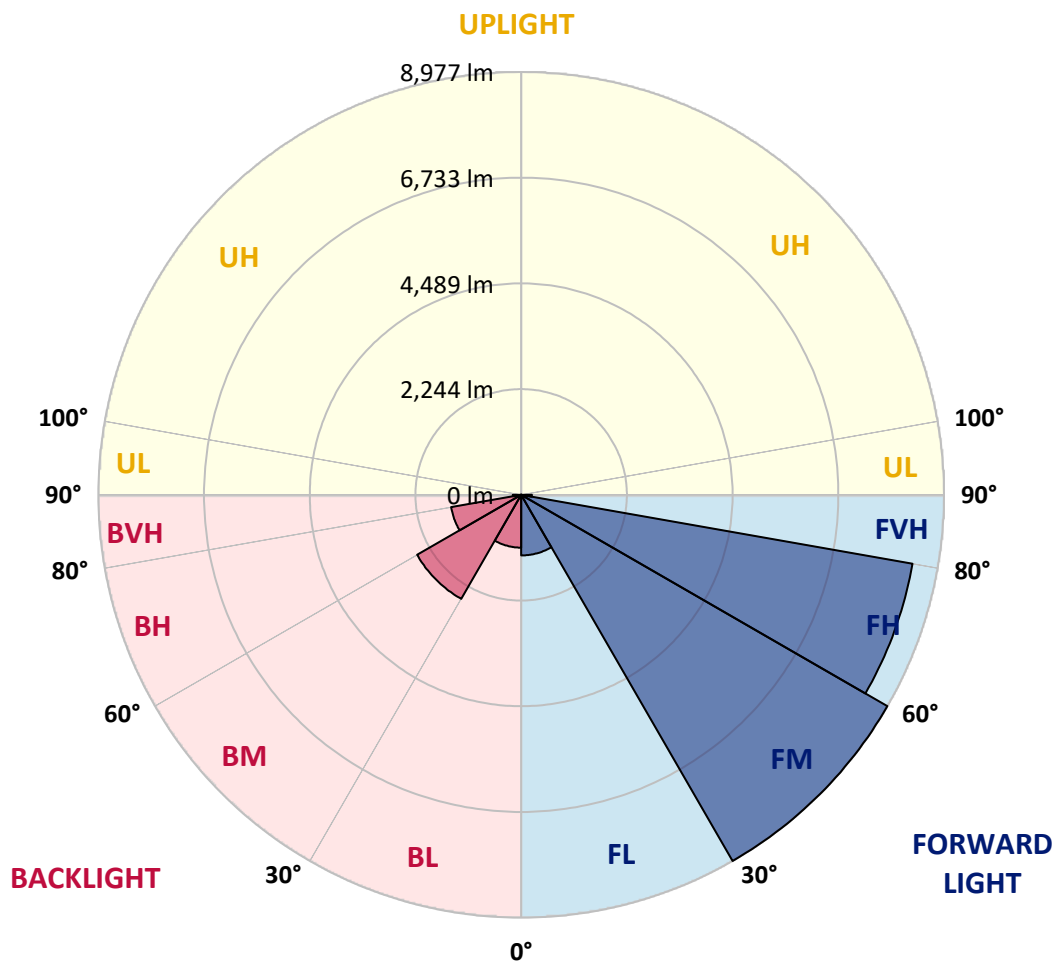
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1286.1	5.3			
FM	(30°-60°)	8977.4	37.0			
FH	(60°-80°)	8436.6	34.7			G4/12000
FVH	(80°-90°)	226.0	0.9			G3/500
BL	(0°-30°)	1122.2	4.6	B3/2500		
BM	(30°-60°)	2550.5	10.5	B3/5000		
BH	(60°-80°)	1510.0	6.2	B3/2500		G3/2500
BVH	(80°-90°)	176.0	0.7			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°	57°	65°	75°	85°
0°	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6
2.5°	2983.5	2983.5	2991.3	2991.3	2991.3	2988.1	2978.8	2982.0	2975.8	2971.1	2963.3
5°	2922.9	2926.0	2935.4	2938.4	2943.1	2944.7	2944.7	2943.1	2944.7	2944.7	2940.0
7.5°	2838.9	2842.1	2852.9	2859.1	2873.2	2885.5	2891.8	2891.8	2899.6	2905.8	2907.3
10°	2787.6	2787.6	2793.9	2793.9	2804.7	2811.0	2831.1	2829.6	2851.4	2871.6	2880.9
12.5°	2781.4	2781.4	2778.3	2767.4	2761.3	2759.6	2779.9	2782.9	2815.6	2851.4	2868.5
15°	2801.7	2801.7	2792.2	2770.6	2747.2	2736.3	2756.5	2762.8	2798.5	2840.5	2866.9
17.5°	2866.9	2865.4	2845.1	2801.7	2761.3	2744.1	2750.3	2756.5	2789.2	2837.4	2870.0
20°	3011.5	3011.5	2968.0	2888.7	2818.7	2778.3	2769.0	2773.6	2797.0	2842.1	2884.0
22.5°	3265.0	3269.6	3191.8	3061.3	2941.6	2856.1	2818.7	2823.3	2834.3	2877.8	2924.4
25°	3638.0	3625.6	3515.3	3330.2	3143.6	2997.6	2921.3	2926.0	2926.0	2966.5	3014.6
27.5°	4033.0	4036.1	3877.5	3678.5	3432.8	3215.1	3093.9	3092.4	3090.8	3129.7	3181.0
30°	4479.2	4480.7	4297.3	4067.2	3785.7	3507.5	3325.6	3324.0	3310.1	3358.2	3425.0
32.5°	4967.3	4965.8	4752.8	4493.2	4180.7	3865.0	3628.7	3627.2	3616.3	3681.6	3762.4
35°	5508.4	5508.4	5296.9	4976.7	4639.3	4287.9	4014.4	4012.7	4019.0	4107.6	4183.8
37.5°	6159.8	6173.8	5918.9	5530.2	5161.7	4787.0	4468.2	4458.9	4412.3	4561.5	4687.5
40°	6839.2	6878.1	6613.8	6159.8	5761.9	5374.7	5023.3	5017.2	4976.7	5135.3	5339.0
42.5°	7574.6	7663.2	7369.4	6906.1	6472.3	6054.1	5701.2	5684.1	5528.6	5775.8	6094.5
45°	8538.6	8596.1	8170.1	7750.3	7341.4	6864.1	6444.4	6352.6	6197.1	6514.4	6927.8
47.5°	9194.7	9166.7	8900.8	8619.4	8356.7	7899.6	7254.4	7137.7	6948.1	7367.9	7823.4
50°	9602.0	9622.2	9472.9	9459.0	9445.0	9126.3	8168.6	8028.6	7809.4	8307.0	8838.6
52.5°	9871.0	9779.2	9805.7	10122.8	10506.8	10354.5	9202.5	9047.0	8821.5	9319.1	9919.1
55°	9759.1	9637.7	9881.9	10506.8	11410.2	11444.4	10337.4	10177.2	9984.5	10394.9	11218.9
57.5°	9295.8	9356.4	9742.0	10611.1	12027.4	12420.8	11641.8	11478.5	11099.2	11515.9	12453.4
60°	8644.3	8767.1	9356.4	10446.3	12459.6	13181.0	13073.7	12964.9	12311.9	12607.4	13750.0
62.5°	7944.6	8066.0	8790.4	10164.9	12265.3	13854.2	14479.3	14412.4	13650.6	13658.3	14572.4
65°	6910.7	6960.6	7700.6	9396.8	11725.8	14462.1	15886.2	15827.2	14930.1	14555.4	14802.6
67.5°	5219.2	5281.4	5889.3	7417.6	10083.9	14132.5	17010.3	17000.9	15699.6	14888.1	14255.3
69°	3854.2	3930.4	4426.3	5758.7	8338.0	12876.3	17063.1	17189.2	15908.0	14853.9	13330.3
70°	2820.3	2907.3	3366.0	4571.0	6945.0	11489.5	16610.8	16881.2	15828.7	14637.8	12608.9
72.5°	1198.7	1228.3	1453.7	2063.1	3523.0	6927.8	13605.5	14174.5	14295.7	13115.7	9850.8
75°	750.9	760.3	848.8	1058.8	1567.2	2865.4	8810.7	9586.5	10673.3	10175.7	6595.2
77.5°	565.9	573.7	625.0	729.2	973.2	1069.7	4087.4	4874.1	6113.2	5985.7	3282.0
80°	433.7	438.4	472.6	530.2	685.7	670.1	1326.2	1666.7	2551.3	2251.2	1161.4
82.5°	340.4	342.1	371.5	382.5	478.8	450.9	665.4	741.6	1030.8	856.6	567.4
85°	301.7	306.3	335.8	279.9	306.3	272.1	365.4	396.5	547.3	516.2	214.5
87.5°	154.0	161.7	281.4	239.5	154.0	129.0	160.1	172.6	222.3	241.0	104.1
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°	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6
2.5°	2964.9	2966.5	2971.1	2978.8	2991.3	3006.9	3025.5	3044.2	3055.0	3062.8	3059.7
5°	2940.0	2941.6	2950.9	2964.9	2980.5	3003.7	3034.8	3058.1	3075.3	3086.1	3084.6
7.5°	2908.9	2913.6	2932.2	2947.7	2969.5	2988.1	3013.1	3034.8	3052.0	3062.8	3061.3
10°	2885.5	2890.2	2913.6	2933.8	2952.4	2955.5	2950.9	2944.7	2943.1	2950.9	2947.7
12.5°	2874.7	2884.0	2905.8	2919.8	2912.0	2882.5	2848.3	2834.3	2829.6	2845.1	2846.7
15°	2877.8	2885.5	2904.3	2895.0	2852.9	2803.2	2784.5	2795.4	2804.7	2814.0	2815.6
17.5°	2885.5	2890.2	2895.0	2860.7	2801.7	2769.0	2762.8	2751.8	2723.9	2708.4	2706.8
20°	2899.6	2905.8	2898.0	2843.6	2790.7	2747.2	2672.6	2605.8	2542.0	2507.8	2493.7
22.5°	2947.7	2952.4	2929.1	2876.2	2795.4	2653.9	2503.2	2388.1	2290.1	2237.3	2217.0
25°	3042.6	3050.3	3017.7	2950.9	2739.5	2492.2	2279.2	2123.7	2000.9	1937.2	1920.1
27.5°	3209.0	3216.8	3181.0	3006.9	2608.8	2276.2	2018.1	1864.1	1758.4	1704.0	1696.3
30°	3457.7	3468.6	3436.0	3005.3	2409.9	2000.9	1763.1	1672.9	1612.3	1574.9	1573.4
32.5°	3802.9	3843.3	3709.6	2952.4	2164.2	1722.6	1570.2	1539.2	1509.7	1484.8	1484.8
35°	4241.3	4336.2	3980.1	2842.1	1893.7	1533.0	1463.0	1433.5	1396.1	1369.7	1366.6
37.5°	4765.2	4912.9	4172.9	2646.2	1660.5	1441.2	1397.7	1349.5	1290.5	1239.1	1226.7
40°	5485.1	5519.3	4267.8	2327.4	1486.3	1391.5	1337.1	1276.4	1201.8	1144.3	1138.0
42.5°	6208.1	6096.1	4249.0	1985.3	1386.8	1346.4	1274.9	1208.0	1141.2	1093.0	1093.0
45°	7030.5	6599.9	4107.6	1641.8	1296.7	1295.1	1217.3	1153.6	1102.3	1066.5	1058.8
47.5°	7817.2	7052.2	3863.5	1388.3	1203.4	1243.8	1180.1	1128.7	1082.1	1047.9	1041.7
50°	8771.8	7576.2	3603.9	1211.2	1113.2	1198.7	1164.5	1138.0	1093.0	1033.9	1027.7
52.5°	9720.2	8188.7	3403.3	1077.5	1033.9	1162.9	1173.8	1176.9	1135.0	1019.9	1012.1
55°	10738.5	8843.3	3191.8	973.2	968.6	1145.8	1195.6	1192.5	1172.3	1023.1	1010.6
57.5°	11707.2	9501.0	2876.2	900.2	917.3	1128.7	1200.2	1150.5	1114.7	1038.6	1018.3
60°	12509.4	10045.1	2412.9	848.8	873.8	1094.6	1169.1	1094.6	1033.9	1035.4	1016.8
62.5°	12899.6	10197.5	1845.5	789.8	838.0	1038.6	1124.1	1052.5	996.6	1041.7	1030.8
65°	12602.7	9763.8	1315.3	735.4	794.4	973.2	1097.6	1016.8	977.9	1072.8	1060.3
67.5°	11536.1	8582.1	954.6	687.2	752.5	906.4	1047.9	984.2	959.2	1096.1	1068.1
69°	10402.7	7409.8	827.2	659.2	722.9	870.6	1015.3	967.0	945.3	1063.5	1023.1
70°	9460.6	6506.6	763.3	642.1	698.1	850.5	990.3	956.2	931.3	1024.6	976.4
72.5°	6783.3	4205.6	642.1	590.8	632.8	805.4	935.9	915.7	878.4	925.1	894.0
75°	4098.2	2195.3	545.7	538.0	564.4	743.2	872.2	847.3	810.0	814.7	799.1
77.5°	1882.7	1013.6	457.1	475.8	492.9	665.4	794.4	766.5	732.2	719.9	721.4
80°	825.5	592.4	382.5	405.8	415.1	598.5	710.5	679.4	642.1	709.0	657.7
82.5°	446.2	343.6	298.5	314.0	340.4	520.8	617.2	576.8	541.0	629.6	508.4
85°	180.3	175.6	202.1	217.7	236.3	374.7	516.2	474.2	430.7	385.6	376.2
87.5°	77.7	84.0	99.5	105.7	125.9	233.2	346.7	303.2	304.7	261.2	256.6
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)