

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: P196787

Luminaire Tested: **NAV-AF-05-D-UNV-T3-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196787  
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-05-D-UNV-T3-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23502.8 lumens  
Efficiency: N/A  
Efficacy: 111.9 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

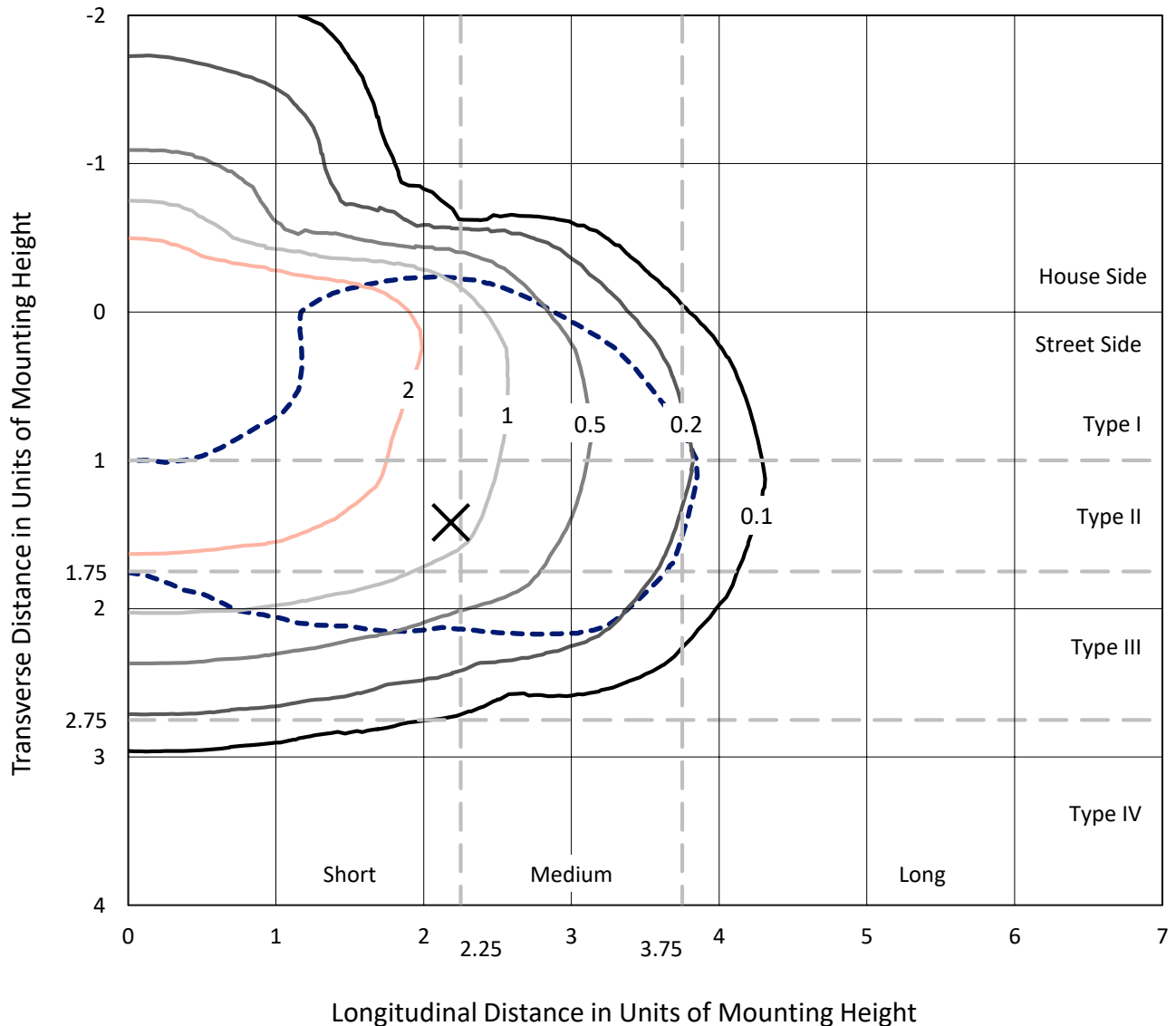
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

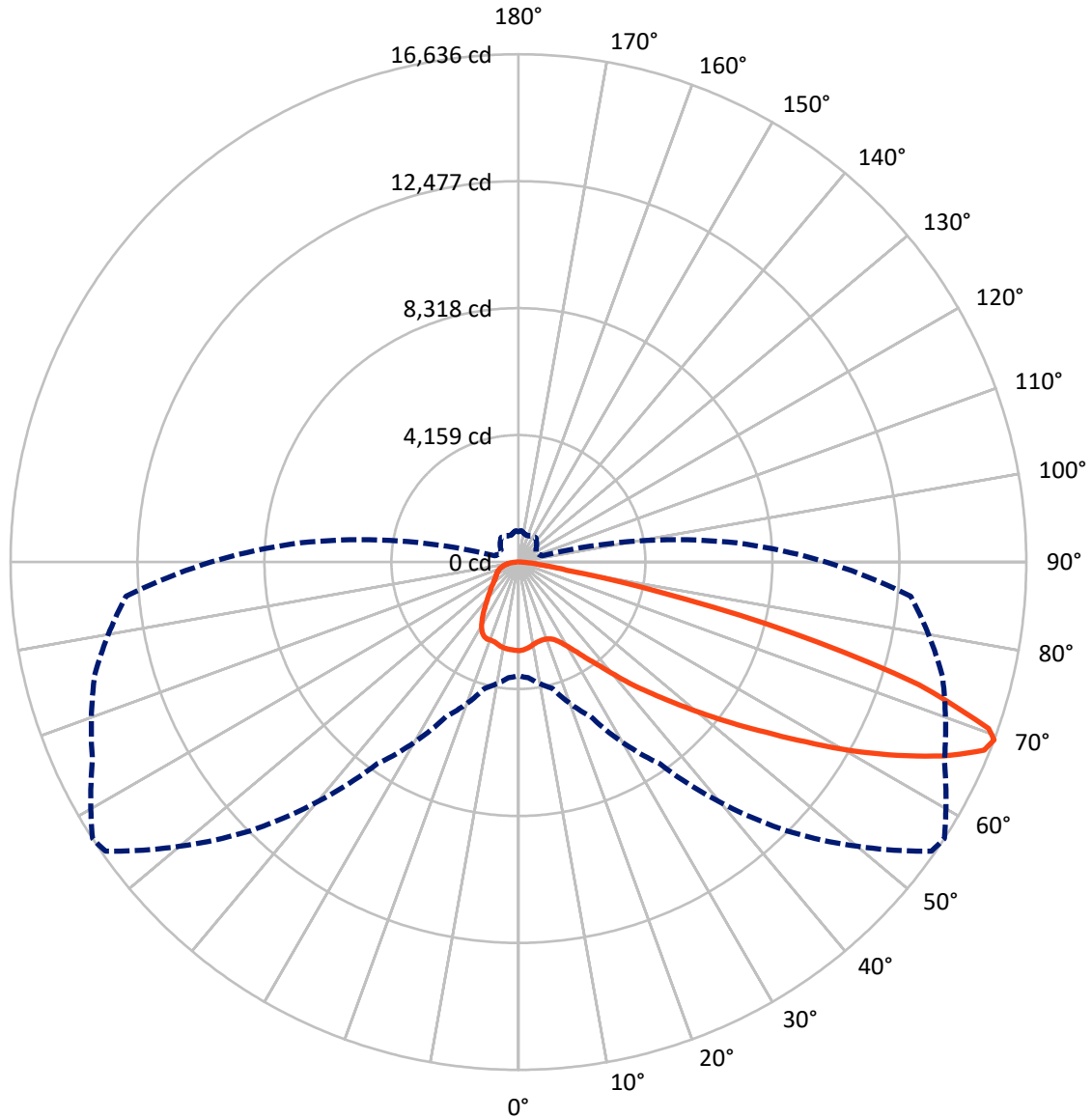
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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	5186.2	0.0	5186.2
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	18316.5	0.0	18316.5
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	23502.8	0.0	23502.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	271.9	1.2
10°-20°	773.0	3.3
20°-30°	1285.9	5.5
30°-40°	2099.8	8.9
40°-50°	3544.0	15.1
50°-60°	5512.8	23.5
60°-70°	6567.0	27.9
70°-80°	3059.3	13.0
80°-90°	389.1	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°	23502.8	100.0
0°-180°	23502.8	100.0

**Coefficient of Utilization**



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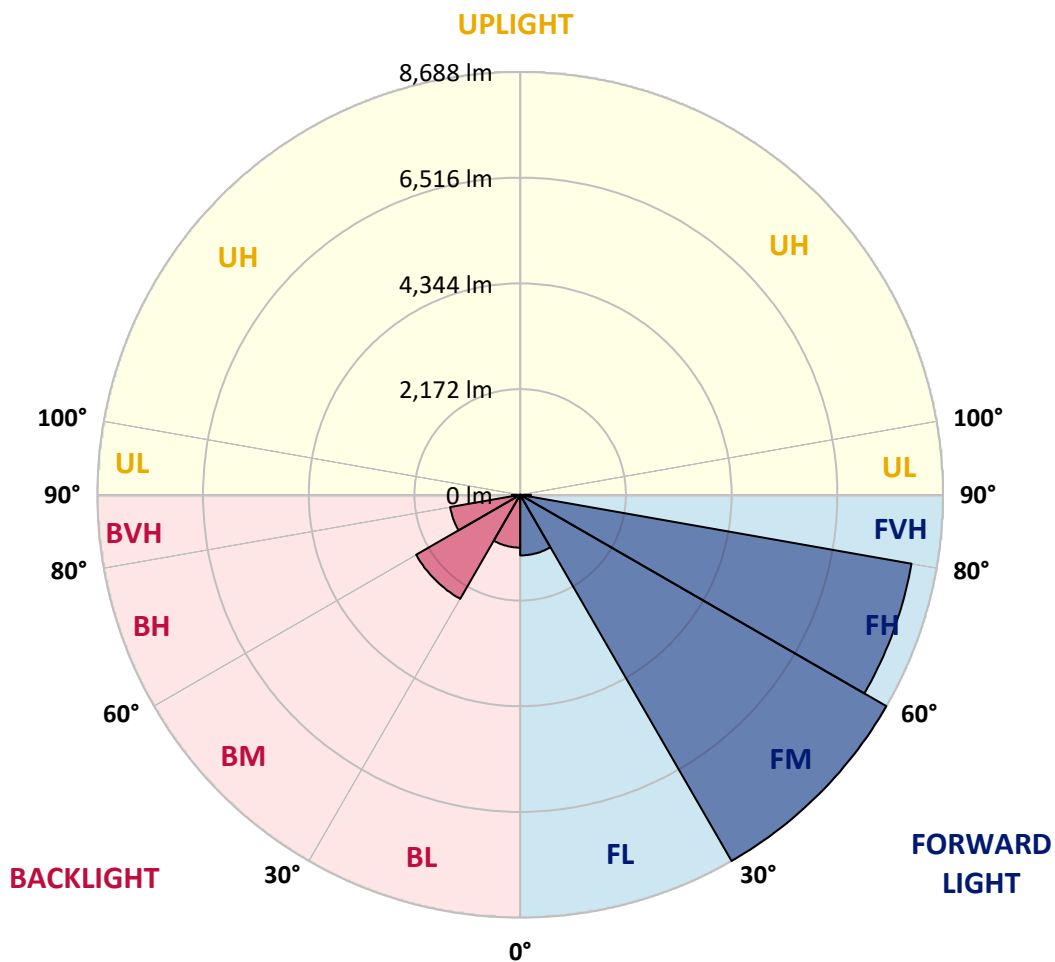
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1244.7	5.3			
FM	(30°-60°)	8688.3	37.0			
FH	(60°-80°)	8164.9	34.7			G4/12000
FVH	(80°-90°)	218.7	0.9			G2/225
BL	(0°-30°)	1086.1	4.6	B3/2500		
BM	(30°-60°)	2468.3	10.5	B2/2500		
BH	(60°-80°)	1461.4	6.2	B3/2500		G3/2500
BVH	(80°-90°)	170.4	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°	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0
2.5°	2887.4	2887.4	2895.0	2895.0	2895.0	2892.0	2883.0	2886.0	2880.0	2875.3	2867.8
5°	2828.7	2831.8	2840.8	2843.8	2848.3	2849.8	2849.8	2848.3	2849.8	2849.8	2845.3
7.5°	2747.6	2750.5	2761.1	2767.1	2780.6	2792.6	2798.6	2798.6	2806.3	2812.3	2813.8
10°	2697.8	2697.8	2703.8	2703.8	2714.4	2720.4	2740.0	2738.5	2759.6	2779.1	2788.2
12.5°	2691.8	2691.8	2688.9	2678.3	2672.3	2670.8	2690.3	2693.3	2724.9	2759.6	2776.1
15°	2711.4	2711.4	2702.4	2681.3	2658.8	2648.2	2667.8	2673.8	2708.4	2749.0	2774.6
17.5°	2774.6	2773.1	2753.6	2711.4	2672.3	2655.8	2661.8	2667.8	2699.4	2746.0	2777.6
20°	2914.5	2914.5	2872.4	2795.6	2727.9	2688.9	2679.8	2684.3	2706.9	2750.5	2791.1
22.5°	3159.8	3164.2	3089.1	2962.7	2846.9	2764.0	2727.9	2732.5	2743.0	2785.1	2830.3
25°	3520.9	3508.9	3402.0	3222.9	3042.5	2901.0	2827.3	2831.8	2831.8	2870.9	2917.5
27.5°	3903.1	3906.1	3752.6	3560.0	3322.2	3111.6	2994.2	2992.7	2991.3	3028.8	3078.5
30°	4335.0	4336.4	4158.9	3936.2	3663.9	3394.4	3218.4	3216.9	3203.4	3250.0	3314.8
32.5°	4807.4	4805.9	4599.7	4348.5	4046.0	3740.6	3511.9	3510.4	3499.8	3563.1	3641.3
35°	5331.0	5331.0	5126.3	4816.3	4489.9	4149.8	3885.0	3883.5	3889.5	3975.3	4049.0
37.5°	5961.5	5975.1	5728.3	5352.1	4995.5	4632.8	4324.4	4315.4	4270.2	4414.6	4536.6
40°	6619.0	6656.6	6400.9	5961.5	5576.3	5201.7	4861.6	4855.6	4816.3	4969.8	5167.0
42.5°	7330.7	7416.5	7132.1	6683.7	6264.0	5859.1	5517.6	5500.9	5350.5	5589.8	5898.3
45°	8263.6	8319.2	7907.0	7500.7	7105.0	6643.1	6236.8	6148.0	5997.6	6304.5	6704.8
47.5°	8898.5	8871.6	8614.2	8341.8	8087.6	7645.2	7020.8	6907.9	6724.4	7130.6	7571.4
50°	9292.8	9312.3	9168.0	9154.4	9140.8	8832.4	7905.5	7770.1	7557.9	8039.4	8554.0
52.5°	9553.1	9464.4	9489.9	9796.8	10168.5	10021.0	8906.0	8755.6	8537.4	9019.0	9599.7
55°	9444.8	9327.4	9563.6	10168.5	11042.8	11075.8	10004.6	9849.5	9662.9	10060.1	10857.6
57.5°	8996.4	9055.1	9428.2	10269.3	11640.1	12020.7	11267.0	11108.9	10741.9	11145.0	12052.3
60°	8365.9	8484.7	9055.1	10109.9	12058.4	12756.6	12652.7	12547.4	11915.4	12201.3	13307.2
62.5°	7688.8	7806.1	8507.4	9837.4	11870.3	13408.1	14012.9	13948.2	13211.0	13218.4	14103.1
65°	6688.2	6736.4	7452.6	9094.2	11348.1	13996.3	15374.6	15317.5	14449.2	14086.7	14325.8
67.5°	5051.2	5111.3	5699.6	7178.8	9759.2	13677.4	16462.5	16453.5	15194.0	14408.7	13796.2
69°	3730.0	3803.8	4283.7	5573.4	8069.5	12461.6	16513.7	16635.5	15395.7	14375.6	12901.0
70°	2729.4	2813.8	3257.6	4423.7	6721.3	11119.5	16075.8	16337.6	15318.9	14166.3	12202.8
72.5°	1160.2	1188.6	1406.8	1996.7	3409.6	6704.8	13167.3	13717.9	13835.4	12693.3	9533.5
75°	726.8	735.8	821.5	1024.7	1516.7	2773.1	8526.9	9277.8	10329.5	9848.0	6382.8
77.5°	547.7	555.2	604.9	705.7	942.0	1035.2	3955.7	4717.2	5916.3	5792.9	3176.3
80°	419.8	424.4	457.5	513.1	663.5	648.6	1283.5	1613.0	2469.2	2178.7	1124.0
82.5°	329.5	331.0	359.6	370.2	463.5	436.4	644.0	717.8	997.5	829.1	549.2
85°	291.9	296.4	325.0	270.9	296.4	263.4	353.6	383.7	529.7	499.6	207.6
87.5°	148.9	156.5	272.4	231.7	148.9	124.9	154.9	167.0	215.1	233.3	100.8
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°	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0	2904.0
2.5°	2869.3	2870.9	2875.3	2883.0	2895.0	2910.0	2928.0	2946.1	2956.7	2964.2	2961.2
5°	2845.3	2846.9	2855.8	2869.3	2884.5	2907.0	2937.1	2959.7	2976.2	2986.7	2985.3
7.5°	2815.2	2819.8	2837.8	2852.9	2873.9	2892.0	2916.0	2937.1	2953.6	2964.2	2962.7
10°	2792.6	2797.1	2819.8	2839.3	2857.3	2860.4	2855.8	2849.8	2848.3	2855.8	2852.9
12.5°	2782.1	2791.1	2812.3	2825.8	2818.3	2789.6	2756.5	2743.0	2738.5	2753.6	2755.1
15°	2785.1	2792.6	2810.7	2801.6	2761.1	2712.9	2694.9	2705.4	2714.4	2723.4	2724.9
17.5°	2792.6	2797.1	2801.6	2768.6	2711.4	2679.8	2673.8	2663.3	2636.2	2621.1	2619.6
20°	2806.3	2812.3	2804.6	2752.0	2700.9	2658.8	2586.5	2521.8	2460.1	2426.9	2413.4
22.5°	2852.9	2857.3	2834.7	2783.6	2705.4	2568.4	2422.5	2311.2	2216.4	2165.2	2145.7
25°	2944.6	2952.1	2920.5	2855.8	2651.1	2412.0	2205.8	2055.3	1936.5	1874.8	1858.3
27.5°	3105.5	3113.2	3078.5	2910.0	2524.9	2202.7	1953.0	1804.1	1701.8	1649.2	1641.6
30°	3346.4	3356.9	3325.3	2908.5	2332.2	1936.5	1706.3	1619.0	1560.3	1524.1	1522.7
32.5°	3680.4	3719.5	3590.2	2857.3	2094.5	1667.2	1519.7	1489.6	1461.1	1437.0	1437.0
35°	4104.8	4196.5	3851.9	2750.5	1832.8	1483.6	1415.9	1387.3	1351.2	1325.7	1322.6
37.5°	4611.9	4754.8	4038.6	2560.9	1606.9	1394.8	1352.7	1306.0	1248.9	1199.2	1187.2
40°	5308.5	5341.5	4130.3	2252.5	1438.5	1346.6	1293.9	1235.2	1163.1	1107.5	1101.5
42.5°	6008.0	5899.8	4112.2	1921.5	1342.1	1303.0	1233.9	1169.1	1104.4	1057.7	1057.7
45°	6804.1	6387.3	3975.3	1588.9	1254.9	1253.4	1178.2	1116.4	1066.8	1032.2	1024.7
47.5°	7565.4	6825.1	3739.1	1343.7	1164.6	1203.7	1142.1	1092.4	1047.2	1014.2	1008.1
50°	8489.3	7332.2	3487.8	1172.2	1077.3	1160.2	1127.0	1101.5	1057.7	1000.6	994.6
52.5°	9407.1	7925.0	3293.7	1042.8	1000.6	1125.5	1136.0	1139.0	1098.4	987.0	979.5
55°	10392.7	8558.5	3089.1	942.0	937.5	1109.0	1157.0	1154.1	1134.5	990.1	978.0
57.5°	11330.0	9194.9	2783.6	871.3	887.7	1092.4	1161.7	1113.5	1078.8	1005.0	985.5
60°	12106.5	9721.6	2335.2	821.5	845.6	1059.3	1131.5	1059.3	1000.6	1002.1	984.1
62.5°	12484.2	9869.1	1786.1	764.4	811.0	1005.0	1087.9	1018.7	964.5	1008.1	997.5
65°	12196.8	9449.3	1273.0	711.8	768.8	942.0	1062.3	984.1	946.4	1038.2	1026.2
67.5°	11164.5	8305.8	923.9	665.1	728.2	877.3	1014.2	952.4	928.3	1060.8	1033.7
69°	10067.7	7171.2	800.5	638.0	699.7	842.6	982.6	936.0	914.8	1029.2	990.1
70°	9155.8	6297.0	738.8	621.4	675.6	823.0	958.4	925.3	901.3	991.5	944.9
72.5°	6564.9	4070.1	621.4	571.8	612.4	779.4	905.8	886.2	850.1	895.3	865.3
75°	3966.3	2124.5	528.2	520.6	546.2	719.3	844.1	820.0	783.9	788.5	773.4
77.5°	1822.1	981.0	442.4	460.4	477.0	644.0	768.8	741.8	708.6	696.6	698.1
80°	799.0	573.3	370.2	392.7	401.7	579.3	687.7	657.5	621.4	686.1	636.4
82.5°	431.8	332.4	288.9	304.0	329.5	504.0	597.3	558.2	523.6	609.3	492.0
85°	174.5	170.0	195.6	210.7	228.7	362.6	499.6	458.9	416.9	373.1	364.2
87.5°	75.3	81.3	96.2	102.2	121.9	225.7	335.5	293.4	294.9	252.8	248.2
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)