

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: P197273

Luminaire Tested: **NAV-AF-05-D-UNV-T3-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197273  
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-T3-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24544 lumens  
Efficiency: N/A  
Efficacy: 88.0 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

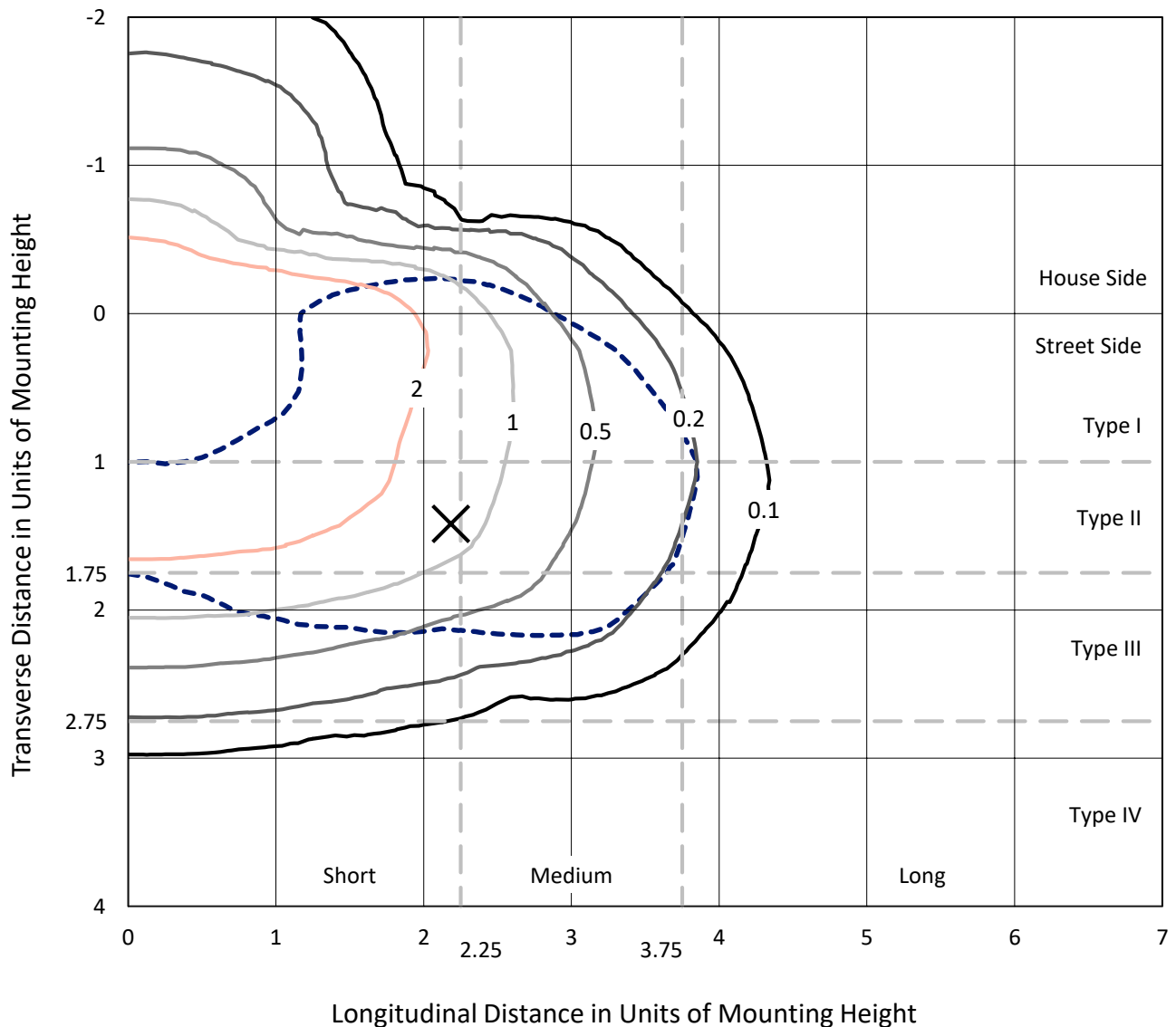
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

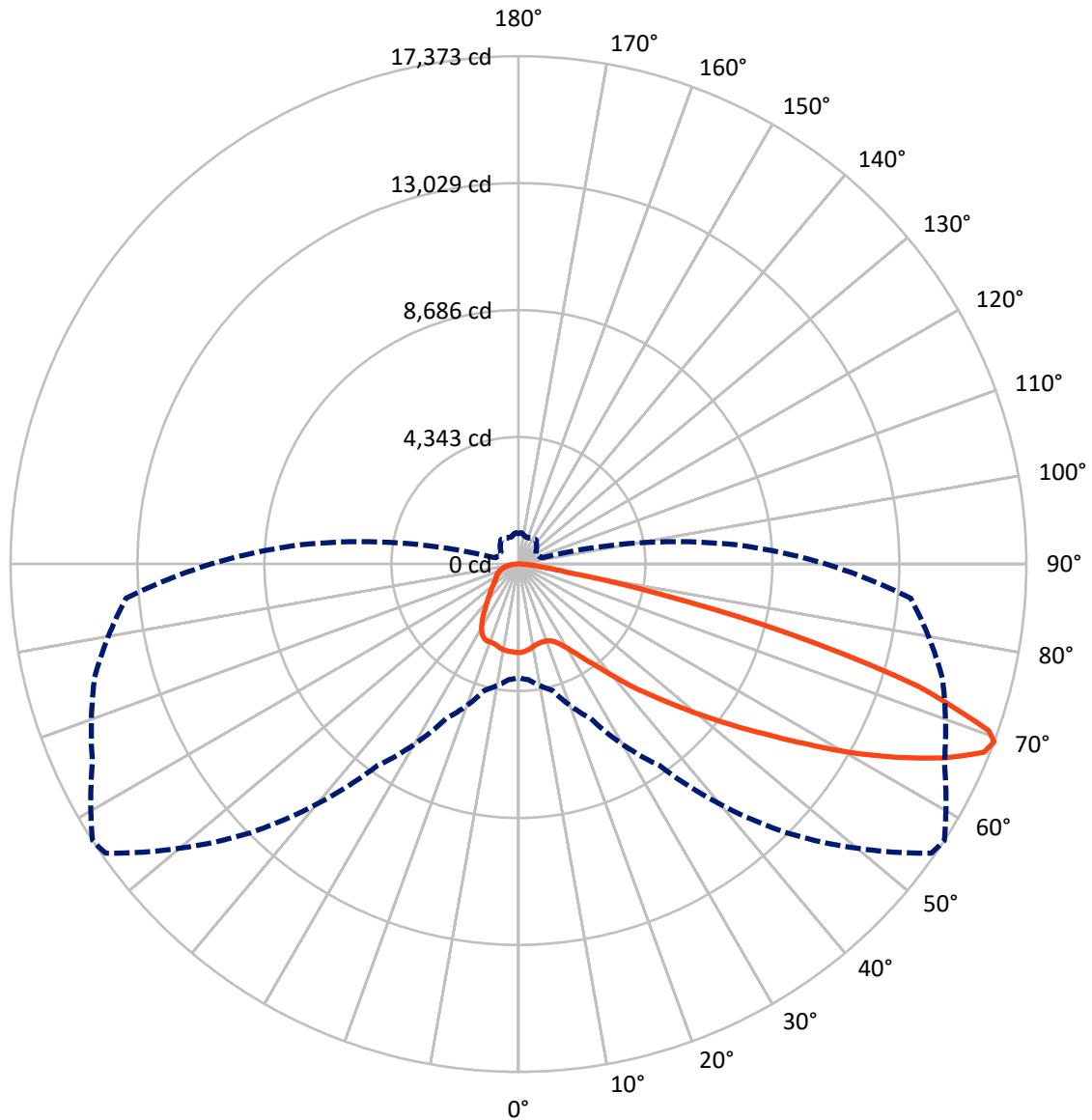
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 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	5416.0	0.0	5416.0
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	19128.0	0.0	19128.0
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	24544.0	0.0	24544.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	283.9	1.2
10°-20°	807.2	3.3
20°-30°	1342.8	5.5
30°-40°	2192.8	8.9
40°-50°	3701.0	15.1
50°-60°	5757.1	23.5
60°-70°	6857.9	27.9
70°-80°	3194.9	13.0
80°-90°	406.4	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°	24544.0	100.0
0°-180°	24544.0	100.0



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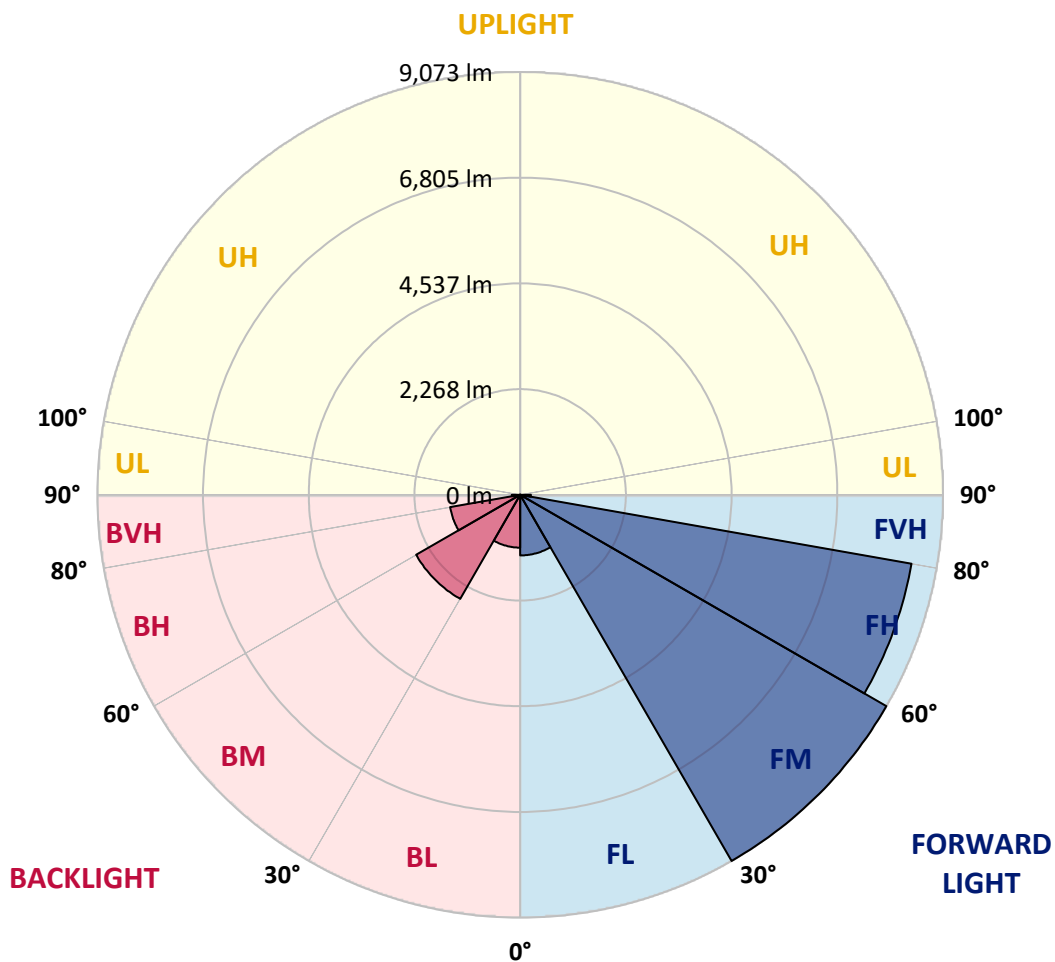
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1299.8	5.3			
FM	(30°-60°)	9073.2	37.0			
FH	(60°-80°)	8526.6	34.7			G4/12000
FVH	(80°-90°)	228.4	0.9			G3/500
BL	(0°-30°)	1134.2	4.6	B3/2500		
BM	(30°-60°)	2577.7	10.5	B3/5000		
BH	(60°-80°)	1526.1	6.2	B3/2500		G3/2500
BVH	(80°-90°)	177.9	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°	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7
2.5°	3015.4	3015.4	3023.2	3023.2	3023.2	3020.1	3010.7	3013.8	3007.5	3002.8	2994.9
5°	2954.1	2957.2	2966.7	2969.8	2974.5	2976.1	2976.1	2974.5	2976.1	2976.1	2971.4
7.5°	2869.2	2872.4	2883.4	2889.7	2903.8	2916.4	2922.7	2922.7	2930.5	2936.8	2938.4
10°	2817.4	2817.4	2823.7	2823.7	2834.7	2840.9	2861.4	2859.8	2881.8	2902.2	2911.7
12.5°	2811.1	2811.1	2808.0	2797.0	2790.7	2789.1	2809.5	2812.7	2845.7	2881.8	2899.1
15°	2831.5	2831.5	2822.1	2800.1	2776.5	2765.5	2786.0	2792.2	2828.4	2870.8	2897.5
17.5°	2897.5	2895.9	2875.5	2831.5	2790.7	2773.4	2779.7	2786.0	2819.0	2867.7	2900.7
20°	3043.6	3043.6	2999.7	2919.5	2848.8	2808.0	2798.5	2803.2	2826.8	2872.4	2914.8
22.5°	3299.8	3304.5	3225.9	3093.9	2972.9	2886.5	2848.8	2853.5	2864.5	2908.5	2955.7
25°	3676.9	3664.3	3552.8	3365.8	3177.2	3029.5	2952.5	2957.2	2957.2	2998.1	3046.8
27.5°	4076.0	4079.2	3918.9	3717.7	3469.5	3249.5	3126.9	3125.4	3123.8	3163.1	3214.9
30°	4527.0	4528.5	4343.1	4110.6	3826.2	3544.9	3361.1	3359.5	3345.3	3394.1	3461.6
32.5°	5020.4	5018.8	4803.5	4541.1	4225.3	3906.3	3667.5	3665.9	3654.9	3720.9	3802.6
35°	5567.2	5567.2	5353.5	5029.8	4688.8	4333.7	4057.2	4055.6	4061.9	4151.4	4228.4
37.5°	6225.6	6239.7	5982.0	5589.2	5216.8	4838.1	4516.0	4506.6	4459.4	4610.3	4737.5
40°	6912.2	6951.5	6684.4	6225.6	5823.3	5432.1	5076.9	5070.7	5029.8	5190.1	5395.9
42.5°	7655.5	7745.0	7448.1	6979.8	6541.4	6118.7	5762.0	5744.8	5587.6	5837.5	6159.6
45°	8629.7	8687.8	8257.3	7833.0	7419.8	6937.4	6513.1	6420.4	6263.3	6583.8	7001.8
47.5°	9292.8	9264.5	8995.8	8711.4	8445.9	7983.9	7331.8	7213.9	7022.2	7446.5	7906.9
50°	9704.5	9724.9	9574.1	9559.9	9545.8	9223.7	8255.7	8114.3	7892.7	8395.6	8933.0
52.5°	9976.3	9883.6	9910.3	10230.9	10619.0	10465.0	9300.7	9143.5	8915.7	9418.5	10025.0
55°	9863.2	9740.6	9987.3	10619.0	11531.9	11566.5	10447.7	10285.9	10091.0	10505.9	11338.7
57.5°	9394.9	9456.2	9845.9	10724.3	12155.7	12553.3	11766.1	11601.1	11217.7	11638.8	12586.3
60°	8736.5	8860.7	9456.2	10557.7	12592.6	13321.7	13213.2	13103.3	12443.3	12741.8	13896.8
62.5°	8029.5	8152.0	8884.3	10273.3	12396.2	14002.0	14633.7	14566.2	13796.2	13804.1	14728.0
65°	6984.5	7034.8	7782.8	9497.1	11850.9	14616.4	16055.8	15996.1	15089.4	14710.7	14960.6
67.5°	5274.9	5337.8	5952.2	7496.8	10191.6	14283.3	17191.8	17182.4	15867.2	15047.0	14407.4
69°	3895.3	3972.3	4473.6	5820.2	8427.0	13013.7	17245.3	17372.5	16077.8	15012.4	13472.5
70°	2850.4	2938.4	3401.9	4619.7	7019.1	11612.1	16788.0	17061.4	15997.6	14794.0	12743.4
72.5°	1211.5	1241.3	1469.2	2085.1	3560.6	7001.8	13750.6	14325.7	14448.3	13255.7	9955.9
75°	758.9	768.4	857.9	1070.1	1583.9	2895.9	8904.7	9688.8	10787.1	10284.3	6665.5
77.5°	572.0	579.8	631.7	736.9	983.6	1081.1	4131.0	4926.1	6178.4	6049.6	3317.1
80°	438.4	443.1	477.7	535.8	693.0	677.2	1340.3	1684.5	2578.5	2275.3	1173.8
82.5°	344.1	345.7	375.5	386.5	484.0	455.7	672.5	749.5	1041.8	865.8	573.5
85°	304.8	309.6	339.4	282.8	309.6	275.0	369.3	400.7	553.1	521.7	216.8
87.5°	155.6	163.4	284.4	242.0	155.6	130.4	161.8	174.4	224.7	243.6	105.3
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°	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7	3032.7
2.5°	2996.5	2998.1	3002.8	3010.7	3023.2	3038.9	3057.8	3076.6	3087.6	3095.5	3092.4
5°	2971.4	2972.9	2982.4	2996.5	3012.2	3035.8	3067.2	3090.8	3108.1	3119.1	3117.5
7.5°	2939.9	2944.7	2963.5	2979.2	3001.2	3020.1	3045.2	3067.2	3084.5	3095.5	3093.9
10°	2916.4	2921.1	2944.7	2965.1	2983.9	2987.1	2982.4	2976.1	2974.5	2982.4	2979.2
12.5°	2905.4	2914.8	2936.8	2950.9	2943.1	2913.2	2878.7	2864.5	2859.8	2875.5	2877.1
15°	2908.5	2916.4	2935.2	2925.8	2883.4	2833.1	2814.2	2825.2	2834.7	2844.1	2845.7
17.5°	2916.4	2921.1	2925.8	2891.2	2831.5	2798.5	2792.2	2781.2	2753.0	2737.2	2735.7
20°	2930.5	2936.8	2928.9	2873.9	2820.5	2776.5	2701.1	2633.5	2569.1	2534.5	2520.4
22.5°	2979.2	2983.9	2960.4	2906.9	2825.2	2682.2	2529.8	2413.5	2314.6	2261.1	2240.7
25°	3075.1	3082.9	3049.9	2982.4	2768.7	2518.8	2303.6	2146.4	2022.3	1957.9	1940.6
27.5°	3243.2	3251.1	3214.9	3038.9	2636.7	2300.4	2039.6	1884.0	1777.2	1722.2	1714.3
30°	3494.6	3505.6	3472.6	3037.4	2435.5	2022.3	1781.9	1690.7	1629.5	1591.7	1590.2
32.5°	3843.5	3884.3	3749.2	2983.9	2187.3	1741.0	1587.0	1555.6	1525.8	1500.6	1500.6
35°	4286.6	4382.4	4022.6	2872.4	1913.9	1549.3	1478.6	1448.8	1411.0	1384.3	1381.2
37.5°	4816.1	4965.4	4217.4	2674.4	1678.2	1456.6	1412.6	1363.9	1304.2	1252.3	1239.8
40°	5543.6	5578.2	4313.3	2352.3	1502.2	1406.3	1351.3	1290.1	1214.6	1156.5	1150.2
42.5°	6274.3	6161.2	4294.4	2006.6	1401.6	1360.8	1288.5	1220.9	1153.3	1104.6	1104.6
45°	7105.5	6670.3	4151.4	1659.3	1310.5	1308.9	1230.3	1165.9	1114.1	1077.9	1070.1
47.5°	7900.6	7127.5	3904.7	1403.2	1216.2	1257.1	1192.6	1140.8	1093.6	1059.1	1052.8
50°	8865.4	7657.0	3642.3	1224.1	1125.1	1211.5	1176.9	1150.2	1104.6	1044.9	1038.6
52.5°	9823.9	8276.2	3439.6	1088.9	1044.9	1175.3	1186.3	1189.5	1147.1	1030.8	1022.9
55°	10853.1	8937.7	3225.9	983.6	978.9	1158.1	1208.3	1205.2	1184.8	1033.9	1021.4
57.5°	11832.1	9602.3	2906.9	909.8	927.1	1140.8	1213.1	1162.8	1126.6	1049.6	1029.2
60°	12642.9	10152.3	2438.7	857.9	883.1	1106.2	1181.6	1106.2	1044.9	1046.5	1027.6
62.5°	13037.3	10306.3	1865.2	798.2	846.9	1049.6	1136.1	1063.8	1007.2	1052.8	1041.8
65°	12737.1	9867.9	1329.3	743.2	802.9	983.6	1109.4	1027.6	988.4	1084.2	1071.6
67.5°	11659.2	8673.7	964.8	694.5	760.5	916.1	1059.1	994.6	969.5	1107.8	1079.5
69°	10513.7	7488.9	835.9	666.2	730.7	879.9	1026.1	977.4	955.4	1074.8	1033.9
70°	9561.5	6576.0	771.5	649.0	705.5	859.5	1000.9	966.4	941.2	1035.5	986.8
72.5°	6855.7	4250.4	649.0	597.1	639.5	813.9	945.9	925.5	887.8	934.9	903.5
75°	4142.0	2218.7	551.5	543.7	570.4	751.1	881.5	856.4	818.7	823.4	807.7
77.5°	1902.9	1024.5	462.0	480.8	498.1	672.5	802.9	774.7	740.1	727.5	729.1
80°	834.4	598.7	386.5	410.1	419.5	605.0	718.1	686.7	649.0	716.5	664.7
82.5°	451.0	347.3	301.7	317.4	344.1	526.4	623.8	583.0	546.8	636.4	513.8
85°	182.3	177.6	204.3	220.0	238.8	378.7	521.7	479.3	435.3	389.7	380.3
87.5°	78.6	84.9	100.6	106.8	127.3	235.7	350.4	306.4	308.0	264.0	259.3
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)