

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: P196792

Luminaire Tested: **NAV-AF-04-D-UNV-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196792
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-04-D-UNV-T3-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 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: 23602.2 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

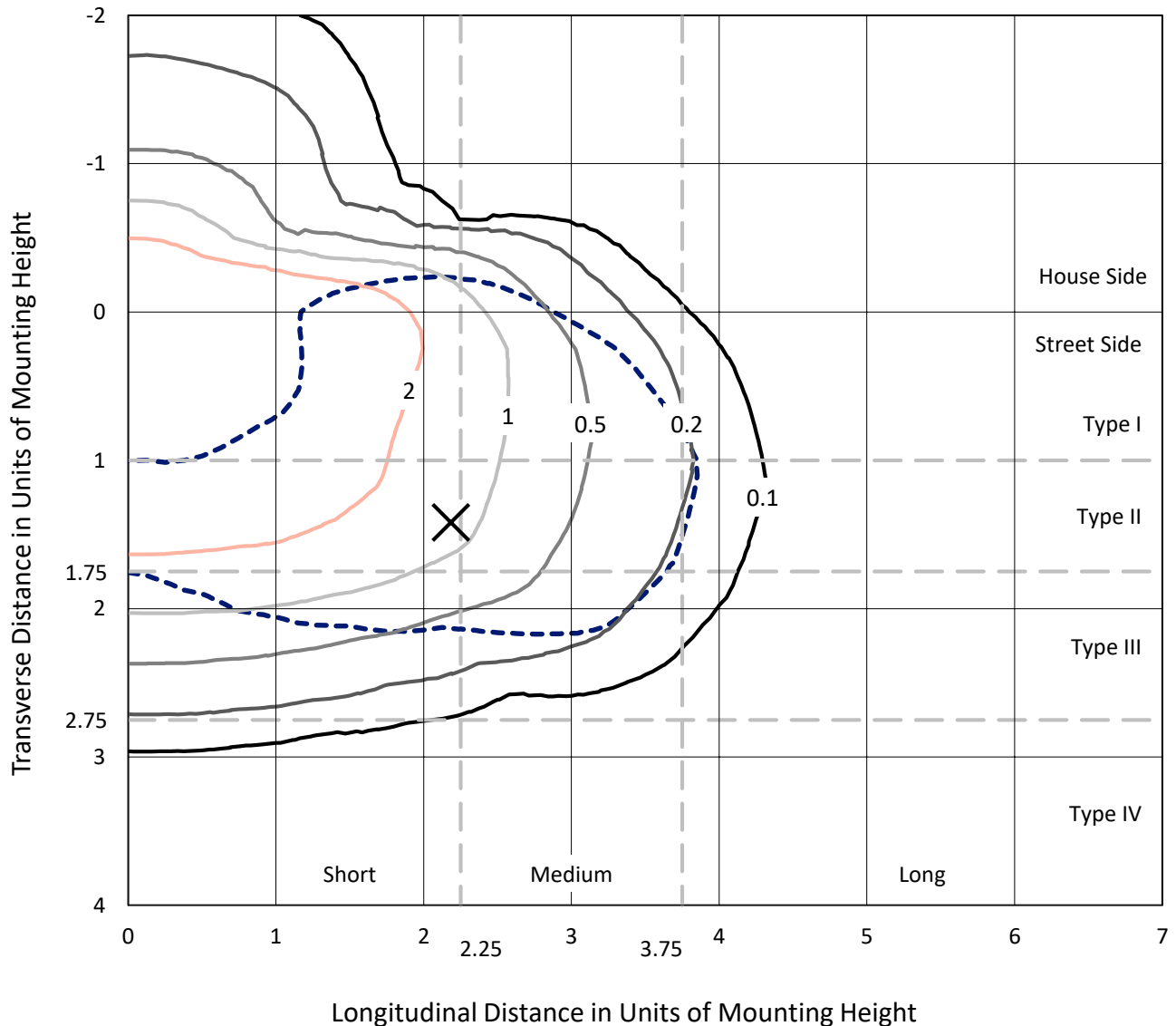
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196792
 CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030

Iso-Footcandle Lines of Horizontal Illumination

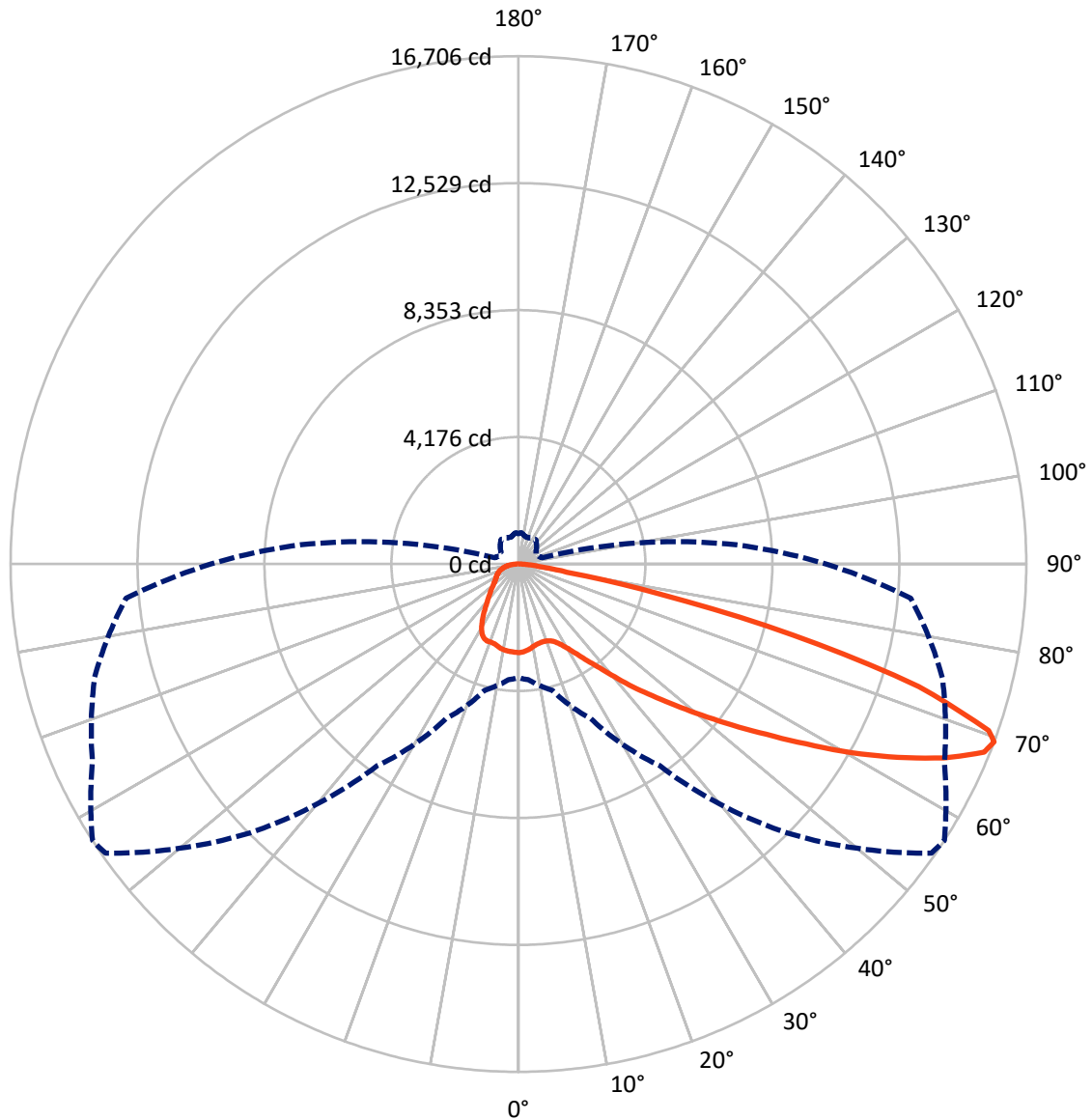
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P196792
CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196792

CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5208.2	0.0	5208.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	18394.0	0.0	18394.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	23602.2	0.0	23602.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.0	1.2
10°-20°	776.3	3.3
20°-30°	1291.3	5.5
30°-40°	2108.7	8.9
40°-50°	3559.0	15.1
50°-60°	5536.1	23.5
60°-70°	6594.8	27.9
70°-80°	3072.3	13.0
80°-90°	390.7	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°	23602.2	100.0
0°-180°	23602.2	100.0



REPORT NUMBER: P196792

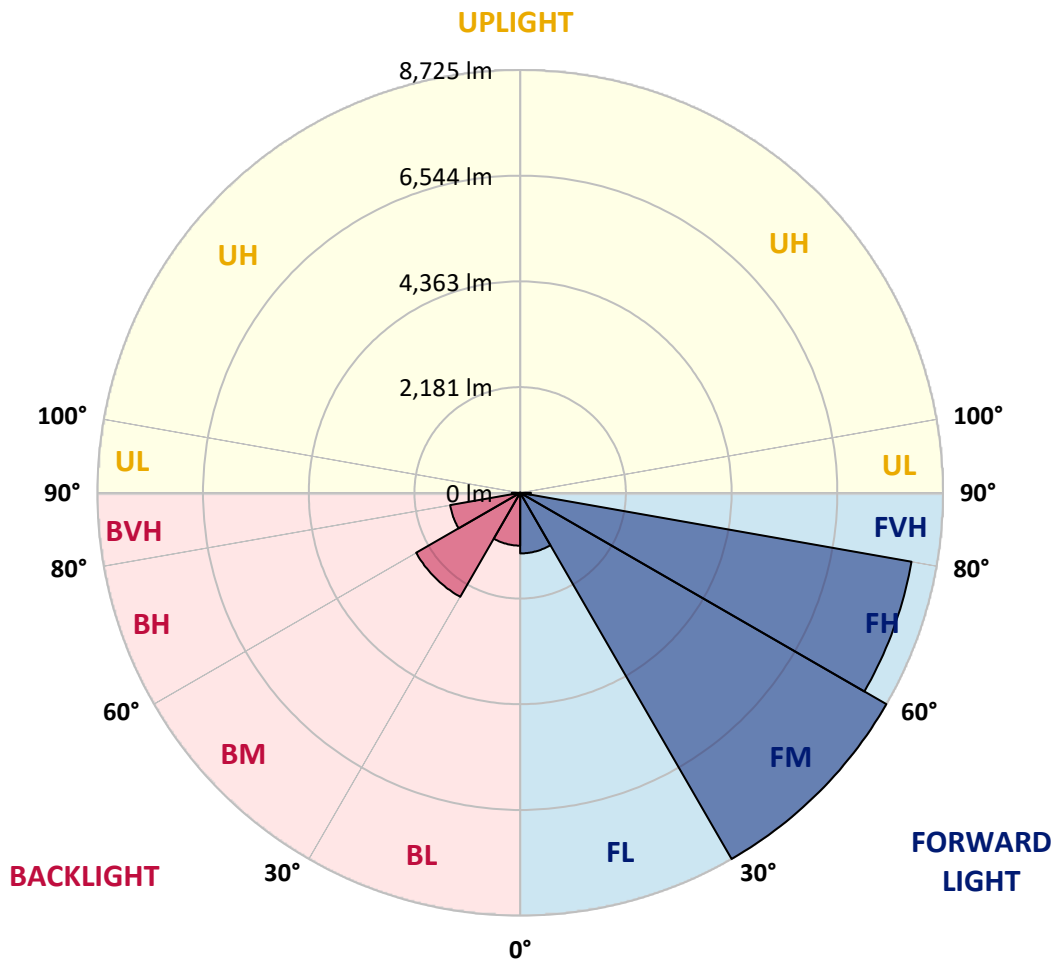
CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1249.9	5.3			
FM	(30°-60°)	8725.0	37.0			
FH	(60°-80°)	8199.4	34.7			G4/12000
FVH	(80°-90°)	219.6	0.9			G2/225
BL	(0°-30°)	1090.7	4.6	B3/2500		
BM	(30°-60°)	2478.8	10.5	B2/2500		
BH	(60°-80°)	1467.6	6.2	B3/2500		G3/2500
BVH	(80°-90°)	171.1	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





REPORT NUMBER: P196792

CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2
2.5°	2899.6	2899.6	2907.2	2907.2	2907.2	2904.2	2895.2	2898.1	2892.1	2887.6	2880.0
5°	2840.7	2843.8	2852.9	2855.8	2860.4	2861.9	2861.9	2860.4	2861.9	2861.9	2857.3
7.5°	2759.2	2762.2	2772.8	2778.8	2792.3	2804.4	2810.4	2810.4	2818.1	2824.2	2825.7
10°	2709.3	2709.3	2715.3	2715.3	2725.9	2731.9	2751.5	2750.0	2771.3	2790.9	2799.9
12.5°	2703.2	2703.2	2700.3	2689.6	2683.6	2682.1	2701.8	2704.7	2736.5	2771.3	2787.9
15°	2722.8	2722.8	2713.8	2692.7	2670.0	2659.4	2679.0	2685.0	2719.9	2760.7	2786.3
17.5°	2786.3	2784.8	2765.2	2722.8	2683.6	2666.9	2673.0	2679.0	2710.8	2757.6	2789.4
20°	2926.8	2926.8	2884.6	2807.5	2739.4	2700.3	2691.2	2695.7	2718.4	2762.2	2802.9
22.5°	3173.1	3177.7	3102.1	2975.2	2858.9	2775.7	2739.4	2744.0	2754.7	2796.9	2842.3
25°	3535.8	3523.7	3416.4	3236.6	3055.3	2913.3	2839.2	2843.8	2843.8	2883.1	2929.9
27.5°	3919.5	3922.6	3768.5	3575.1	3336.3	3124.9	3007.0	3005.4	3004.0	3041.7	3091.6
30°	4353.2	4354.7	4176.4	3952.9	3679.3	3408.9	3232.1	3230.6	3216.9	3263.8	3328.8
32.5°	4827.7	4826.2	4619.2	4366.9	4063.2	3756.5	3526.8	3525.2	3514.7	3578.1	3656.7
35°	5353.6	5353.6	5148.1	4836.8	4508.9	4167.3	3901.4	3900.0	3906.0	3992.2	4066.2
37.5°	5986.7	6000.3	5752.5	5374.7	5016.6	4652.5	4342.7	4333.7	4288.3	4433.3	4555.8
40°	6647.0	6684.8	6427.9	5986.7	5599.9	5223.5	4882.1	4876.1	4836.8	4991.0	5188.8
42.5°	7361.7	7447.8	7162.3	6712.1	6290.4	5883.9	5541.0	5524.2	5373.3	5613.4	5923.3
45°	8298.6	8354.5	7940.4	7532.5	7135.0	6671.2	6263.2	6174.0	6022.9	6331.2	6733.1
47.5°	8936.2	8909.0	8650.6	8377.1	8121.8	7677.5	7050.5	6937.1	6752.8	7160.8	7603.5
50°	9332.1	9351.7	9206.7	9193.1	9179.5	8869.7	7938.9	7803.0	7589.9	8073.3	8590.2
52.5°	9593.5	9504.4	9530.0	9838.2	10211.5	10063.5	8943.8	8792.6	8573.6	9057.0	9640.4
55°	9484.7	9366.8	9604.1	10211.5	11089.4	11122.7	10046.8	9891.1	9703.9	10102.7	10903.5
57.5°	9034.4	9093.3	9468.1	10312.8	11689.3	12071.6	11314.6	11155.9	10787.1	11192.2	12103.3
60°	8401.3	8520.7	9093.3	10152.6	12109.3	12810.4	12706.2	12600.5	11965.8	12252.9	13363.5
62.5°	7721.4	7839.3	8543.3	9879.1	11920.5	13464.8	14072.1	14007.2	13266.8	13274.4	14162.8
65°	6716.5	6764.9	7484.2	9132.7	11396.2	14055.5	15439.7	15382.3	14510.4	14146.3	14386.5
67.5°	5072.5	5133.0	5723.8	7209.2	9800.5	13735.2	16532.1	16523.1	15258.4	14469.5	13854.6
69°	3745.9	3819.9	4301.9	5596.8	8103.6	12514.3	16583.5	16705.8	15460.8	14436.3	12955.5
70°	2741.0	2825.7	3271.3	4442.4	6749.7	11166.6	16143.8	16406.7	15383.7	14226.3	12254.4
72.5°	1165.0	1193.6	1412.8	2005.1	3423.9	6733.1	13223.0	13776.1	13893.9	12747.1	9573.9
75°	729.9	738.9	825.0	1029.0	1523.1	2784.8	8562.9	9317.0	10373.2	9889.7	6409.8
77.5°	550.0	557.6	607.5	708.6	945.8	1039.6	3972.4	4737.1	5941.3	5817.4	3189.9
80°	421.5	426.1	459.3	515.2	666.4	651.3	1288.9	1619.8	2479.6	2187.9	1128.7
82.5°	330.9	332.4	361.1	371.7	465.5	438.2	646.7	720.8	1001.8	832.5	551.5
85°	293.2	297.6	326.3	271.9	297.6	264.4	355.1	385.3	531.9	501.6	208.5
87.5°	149.5	157.2	273.4	232.7	149.5	125.4	155.5	167.7	216.2	234.3	101.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196792

CATALOG NUMBER: NAV-AF-04-D-UNV-T3-7030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2	2916.2
2.5°	2881.5	2883.1	2887.6	2895.2	2907.2	2922.3	2940.5	2958.6	2969.1	2976.8	2973.7
5°	2857.3	2858.9	2867.9	2881.5	2896.7	2919.3	2949.6	2972.2	2988.8	2999.3	2997.8
7.5°	2827.1	2831.7	2849.8	2864.9	2886.1	2904.2	2928.3	2949.6	2966.2	2976.8	2975.2
10°	2804.4	2808.9	2831.7	2851.3	2869.4	2872.4	2867.9	2861.9	2860.4	2867.9	2864.9
12.5°	2793.9	2802.9	2824.2	2837.7	2830.2	2801.4	2768.2	2754.7	2750.0	2765.2	2766.7
15°	2796.9	2804.4	2822.6	2813.5	2772.8	2724.4	2706.3	2716.8	2725.9	2735.0	2736.5
17.5°	2804.4	2808.9	2813.5	2780.3	2722.8	2691.2	2685.0	2674.5	2647.4	2632.2	2630.8
20°	2818.1	2824.2	2816.6	2763.7	2712.3	2670.0	2597.4	2532.5	2470.6	2437.2	2423.7
22.5°	2864.9	2869.4	2846.8	2795.4	2716.8	2579.3	2432.7	2320.8	2225.7	2174.4	2154.7
25°	2957.1	2964.6	2932.9	2867.9	2662.4	2422.2	2215.1	2064.0	1944.7	1882.7	1866.1
27.5°	3118.8	3126.4	3091.6	2922.3	2535.5	2212.2	1961.3	1811.7	1709.0	1656.1	1648.5
30°	3360.5	3371.0	3339.4	2920.8	2342.1	1944.7	1713.5	1625.9	1566.9	1530.7	1529.2
32.5°	3696.0	3735.2	3605.3	2869.4	2103.3	1674.2	1526.2	1495.9	1467.3	1443.0	1443.0
35°	4122.2	4214.2	3868.3	2762.2	1840.5	1489.9	1421.9	1393.2	1356.9	1331.3	1328.1
37.5°	4631.3	4774.8	4055.6	2571.8	1613.8	1400.7	1358.4	1311.5	1254.2	1204.2	1192.2
40°	5330.9	5364.2	4147.8	2262.0	1444.5	1352.4	1299.5	1240.5	1168.0	1112.1	1106.0
42.5°	6033.6	5924.7	4129.7	1929.6	1347.8	1308.6	1239.0	1174.1	1109.1	1062.2	1062.2
45°	6832.8	6414.3	3992.2	1595.6	1260.2	1258.6	1183.2	1121.2	1071.3	1036.6	1029.0
47.5°	7597.5	6854.1	3754.9	1349.4	1169.5	1208.9	1146.9	1097.0	1051.6	1018.4	1012.4
50°	8525.2	7363.2	3502.6	1177.0	1081.8	1165.0	1131.7	1106.0	1062.2	1004.8	998.7
52.5°	9446.9	7958.6	3307.6	1047.1	1004.8	1130.3	1140.7	1143.8	1103.1	991.2	983.7
55°	10436.7	8594.7	3102.1	945.8	941.4	1113.7	1162.0	1158.9	1139.3	994.3	982.1
57.5°	11378.0	9233.8	2795.4	874.8	891.5	1097.0	1166.6	1118.2	1083.5	1009.3	989.7
60°	12157.8	9762.8	2345.1	825.0	849.2	1063.7	1136.3	1063.7	1004.8	1006.4	988.2
62.5°	12537.0	9910.8	1793.6	767.6	814.4	1009.3	1092.5	1023.0	968.6	1012.4	1001.8
65°	12248.4	9489.2	1278.4	714.7	772.1	945.8	1066.8	988.2	950.4	1042.7	1030.6
67.5°	11211.8	8340.9	927.7	667.9	731.4	880.9	1018.4	956.4	932.3	1065.3	1038.1
69°	10110.3	7201.5	803.8	640.7	702.6	846.2	986.7	939.8	918.7	1033.6	994.3
70°	9194.6	6323.6	741.9	624.1	678.5	826.5	962.6	929.2	905.1	995.8	948.9
72.5°	6592.6	4087.3	624.1	574.1	615.0	782.8	909.6	890.0	853.8	899.1	868.8
75°	3983.0	2133.7	530.4	522.8	548.5	722.3	847.7	823.5	787.2	791.8	776.7
77.5°	1829.9	985.2	444.2	462.3	479.0	646.7	772.1	744.9	711.8	699.6	701.1
80°	802.4	575.7	371.7	394.4	403.5	581.7	690.5	660.4	624.1	689.0	639.1
82.5°	433.6	333.9	290.1	305.3	330.9	506.2	599.9	560.6	525.9	612.0	494.1
85°	175.3	170.8	196.4	211.5	229.7	364.2	501.6	460.8	418.6	374.8	365.7
87.5°	75.5	81.6	96.7	102.7	122.4	226.6	336.9	294.7	296.2	253.8	249.3
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)