

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: P197296

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197296
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20249 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

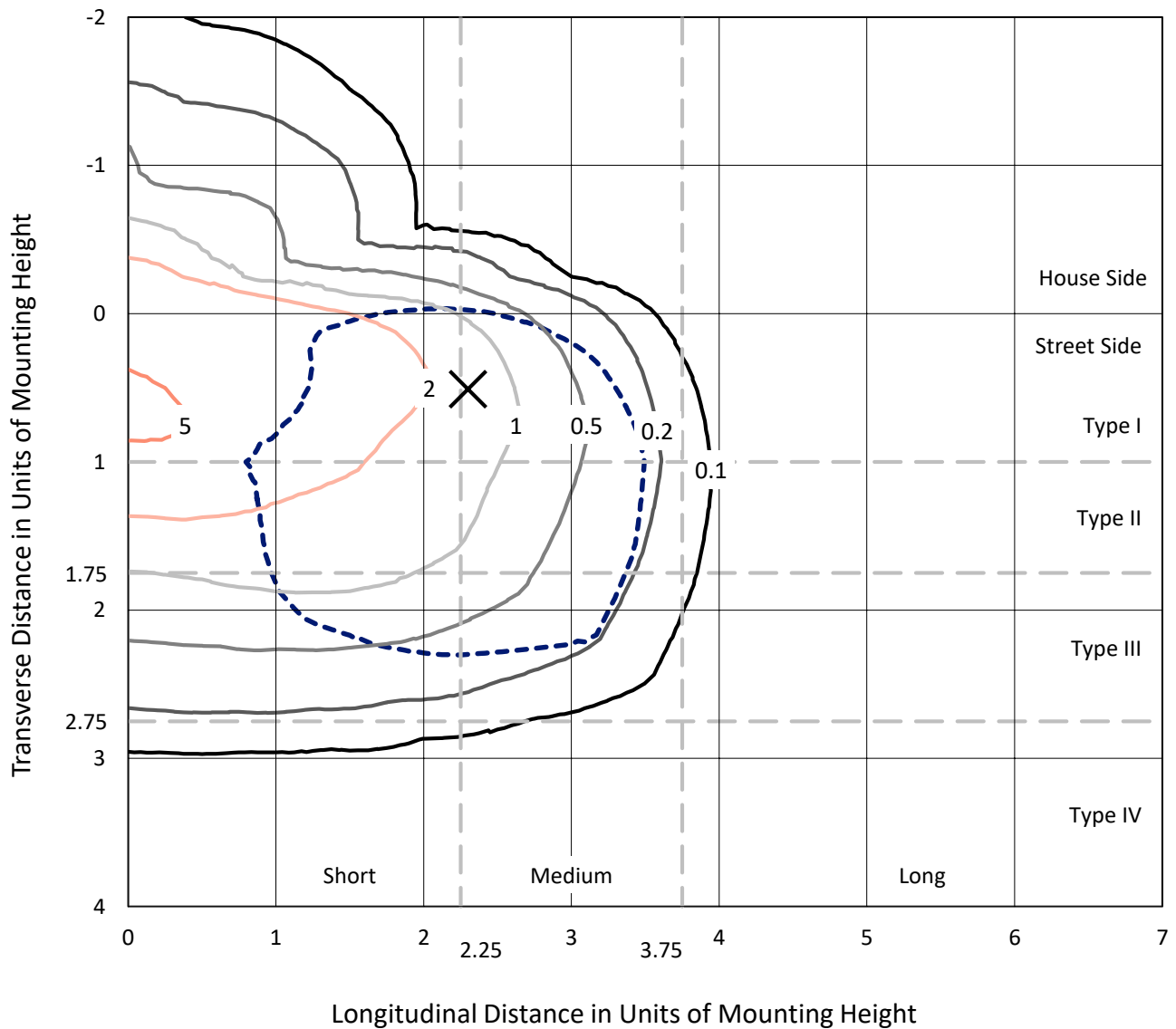
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197296
 CATALOG NUMBER: NAV-AF-04-D-UNV-T3R-8030

Iso-Footcandle Lines of Horizontal Illumination

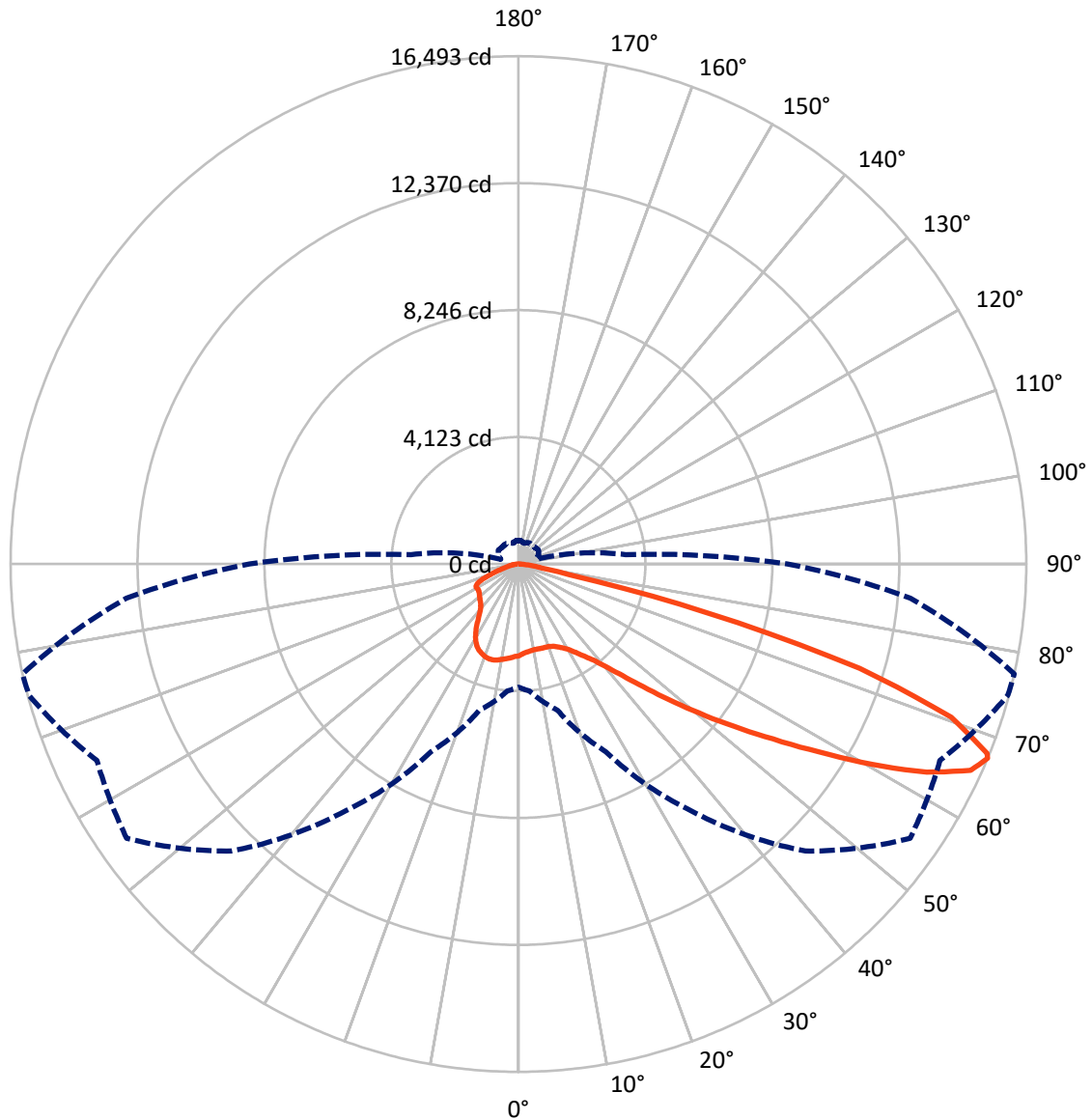
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P197296
CATALOG NUMBER: NAV-AF-04-D-UNV-T3R-8030

Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P197296

CATALOG NUMBER: NAV-AF-04-D-UNV-T3R-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3479.8	0.0	3479.8
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	16769.2	0.0	16769.2
	% Fixture	82.8	0.0	82.8
Total	Lumens	20249.0	0.0	20249.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.4	1.3
10°-20°	735.1	3.6
20°-30°	1248.9	6.2
30°-40°	1998.0	9.9
40°-50°	3075.9	15.2
50°-60°	4267.5	21.1
60°-70°	5692.6	28.1
70°-80°	2709.1	13.4
80°-90°	256.5	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°	20249.0	100.0
0°-180°	20249.0	100.0



REPORT NUMBER: P197296

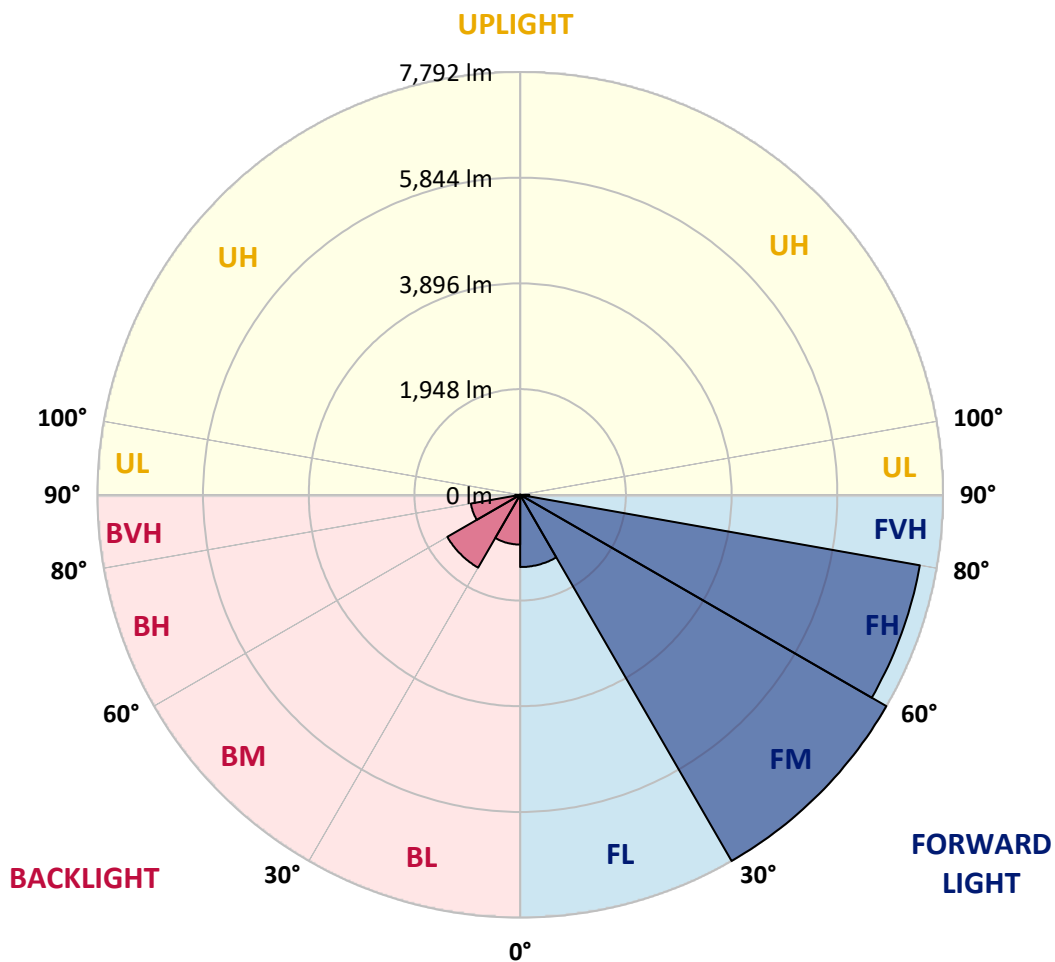
CATALOG NUMBER: NAV-AF-04-D-UNV-T3R-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1331.6	6.6			
FM	(30°-60°)	7792.0	38.5			
FH	(60°-80°)	7479.0	36.9			G3/7500
FVH	(80°-90°)	166.6	0.8			G2/225
BL	(0°-30°)	917.8	4.5	B2/1000		
BM	(30°-60°)	1549.4	7.7	B2/2500		
BH	(60°-80°)	922.6	4.6	B2/1000		G2/1000
BVH	(80°-90°)	89.9	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





REPORT NUMBER: P197296
 CATALOG NUMBER: NAV-AF-04-D-UNV-T3R-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1
2.5°	2672.2	2684.7	2686.0	2722.3	2738.6	2779.9	2824.9	2865.0	2900.0	2912.5	2935.1
5°	2404.4	2404.4	2408.1	2431.9	2478.2	2544.6	2638.4	2741.1	2848.7	2875.0	2941.3
7.5°	2264.2	2266.7	2269.2	2293.0	2329.3	2388.1	2482.0	2622.2	2801.1	2844.9	2961.3
10°	2276.7	2273.0	2260.4	2255.4	2270.4	2308.0	2389.4	2533.3	2761.1	2828.7	2997.6
12.5°	2473.2	2465.7	2424.4	2364.3	2309.2	2295.5	2351.8	2488.2	2742.3	2828.7	3059.0
15°	2809.9	2814.9	2733.6	2608.4	2464.5	2366.8	2359.3	2472.0	2736.1	2836.2	3130.3
17.5°	3248.0	3250.5	3137.8	2956.3	2717.3	2515.8	2410.6	2472.0	2736.1	2843.7	3199.2
20°	3713.6	3696.1	3568.4	3340.6	3030.2	2722.3	2504.5	2487.0	2743.6	2855.0	3264.2
22.5°	4112.8	4096.6	3962.6	3723.6	3368.1	2966.4	2630.9	2537.0	2784.9	2901.3	3355.6
25°	4462.0	4472.1	4341.9	4072.8	3704.8	3241.7	2819.9	2652.2	2871.2	2985.1	3468.3
27.5°	4886.3	4867.6	4717.4	4460.8	4051.5	3527.1	3056.5	2797.4	2973.9	3086.5	3605.9
30°	5377.0	5368.2	5165.5	4901.4	4433.3	3846.2	3290.5	2953.8	3107.8	3225.4	3778.7
32.5°	5972.8	5971.5	5753.7	5429.6	4862.6	4206.7	3567.1	3167.9	3303.0	3421.9	4007.7
35°	6647.4	6646.1	6420.8	5992.8	5357.0	4606.0	3892.6	3428.2	3544.6	3669.8	4280.6
37.5°	7115.5	7108.0	6990.3	6574.8	5903.9	5070.3	4299.3	3778.7	3818.7	3958.9	4609.7
40°	7205.6	7250.7	7352.0	7106.7	6500.9	5586.0	4707.4	4155.4	4192.9	4373.2	5024.0
42.5°	7108.0	7166.8	7503.5	7572.3	7098.0	6210.6	5218.0	4677.3	4724.9	4948.9	5510.9
45°	7022.9	7074.2	7496.0	7830.2	7687.5	6891.5	5855.1	5314.4	5404.5	5682.4	6066.6
47.5°	6877.7	6925.2	7348.3	7876.5	8024.2	7547.3	6622.4	6080.4	6235.6	6572.3	6700.0
50°	6870.2	6891.5	7146.8	7721.3	8140.6	8045.4	7472.2	6976.6	7214.4	7602.4	7400.9
52.5°	6679.9	6828.9	7060.4	7473.5	8143.1	8335.8	8309.5	7959.1	8325.8	8755.1	8169.4
55°	5515.9	5687.4	6772.5	7352.0	8128.1	8584.9	9074.3	9004.2	9577.4	10029.3	9030.5
57.5°	5150.4	5223.0	5941.5	7388.3	8253.2	8996.7	9839.0	10126.9	11009.3	11502.4	10063.1
60°	5050.3	5126.7	5775.0	7405.9	8592.4	9746.4	10876.6	11394.8	12692.7	13215.9	11235.8
62.5°	4938.9	5037.8	5787.5	7422.1	9188.2	10855.3	12253.4	12770.3	14421.2	14888.1	12334.8
65°	4613.5	4744.9	5556.0	7319.5	9840.3	12247.2	14073.3	14204.7	15849.3	16146.0	12998.1
67°	3996.4	4140.4	4920.1	6726.2	9780.2	13184.6	15528.9	15102.1	16456.4	16492.7	12782.9
67.5°	3801.2	3950.1	4704.9	6479.7	9608.7	13307.3	15786.8	15226.0	16451.4	16411.3	12582.6
70°	2559.6	2727.3	3331.8	4757.4	7707.5	12384.8	15724.2	14844.3	15372.5	14913.1	10810.3
72.5°	1270.4	1275.4	1662.2	2605.9	4669.8	8882.8	13117.0	12699.0	12461.2	11593.8	7932.8
75°	612.0	623.3	784.8	1151.5	1968.8	4586.0	8945.4	8568.6	7295.7	6317.0	3970.2
77.5°	466.9	478.1	609.5	749.7	821.1	1495.7	4430.8	3580.9	2114.0	1688.4	1119.0
80°	360.5	381.7	514.4	575.7	543.2	599.5	1393.1	1096.4	822.3	754.7	554.5
82.5°	281.6	294.1	436.8	436.8	375.5	401.8	648.3	633.3	510.7	460.6	297.9
85°	199.0	224.0	351.7	325.4	246.6	249.1	388.0	371.7	262.8	211.5	116.4
87.5°	88.9	113.9	250.3	212.8	131.4	101.4	159.0	136.4	103.9	80.1	53.8
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: P197296
 CATALOG NUMBER: NAV-AF-04-D-UNV-T3R-8030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1	2980.1
2.5°	2960.1	2980.1	3011.4	3030.2	3055.2	3065.2	3075.2	3092.8	3106.5	3102.8	3096.5
5°	2987.6	3021.4	3060.2	3072.7	3072.7	3060.2	3052.7	3054.0	3050.2	3047.7	3040.2
7.5°	3027.7	3074.0	3101.5	3089.0	3050.2	3001.4	2955.1	2927.6	2901.3	2885.0	2890.0
10°	3084.0	3135.3	3136.6	3081.5	2988.9	2882.5	2791.1	2732.3	2676.0	2650.9	2658.5
12.5°	3165.4	3216.7	3172.9	3054.0	2891.3	2724.8	2557.1	2435.7	2326.8	2300.5	2293.0
15°	3253.0	3293.0	3195.4	2995.1	2751.1	2477.0	2195.4	2013.9	1892.5	1871.2	1863.7
17.5°	3329.3	3351.9	3184.1	2890.0	2529.5	2097.7	1769.8	1647.1	1622.1	1634.6	1634.6
20°	3396.9	3389.4	3135.3	2727.3	2180.3	1677.2	1486.9	1485.7	1519.5	1550.8	1553.3
22.5°	3482.0	3423.2	3057.7	2485.7	1763.5	1399.3	1366.8	1399.3	1436.9	1471.9	1475.7
25°	3583.4	3460.7	2953.8	2141.5	1418.1	1270.4	1284.2	1311.7	1335.5	1363.0	1364.3
27.5°	3684.8	3489.5	2807.4	1737.3	1230.3	1187.8	1202.8	1214.1	1220.3	1237.9	1237.9
30°	3802.4	3512.1	2595.9	1391.8	1144.0	1115.2	1106.4	1101.4	1106.4	1130.2	1131.5
32.5°	3950.1	3552.1	2306.7	1194.1	1103.9	1063.9	1018.8	993.8	1011.3	1053.9	1061.4
35°	4117.8	3599.7	1960.0	1115.2	1090.2	1038.8	956.2	917.4	923.7	962.5	968.8
37.5°	4328.1	3661.0	1618.4	1096.4	1103.9	1036.3	927.5	872.4	844.8	846.1	844.8
40°	4597.2	3722.3	1348.0	1101.4	1134.0	1042.6	913.7	827.3	769.7	772.3	777.3
42.5°	4878.8	3762.4	1176.5	1116.5	1170.3	1051.4	908.7	783.5	733.5	776.0	814.8
45°	5208.0	3751.1	1087.7	1130.2	1197.8	1055.1	889.9	778.5	737.2	864.9	937.5
47.5°	5586.0	3702.3	1037.6	1136.5	1205.3	1053.9	876.1	794.8	768.5	990.0	1072.6
50°	5996.5	3626.0	997.5	1126.5	1201.6	1048.9	891.2	814.8	781.0	1017.6	1081.4
52.5°	6445.9	3555.9	956.2	1103.9	1182.8	1033.8	909.9	806.0	746.0	937.5	986.3
55°	6977.8	3539.6	909.9	1065.1	1151.5	1017.6	899.9	778.5	707.2	831.1	861.1
57.5°	7586.1	3641.0	849.9	1017.6	1108.9	985.0	876.1	763.5	693.4	756.0	772.3
60°	8358.4	3865.0	786.0	967.5	1056.4	936.2	854.9	767.2	697.2	744.7	748.5
62.5°	8961.6	4066.5	728.4	906.2	986.3	877.4	832.3	771.0	708.4	759.7	753.5
65°	9180.7	3967.7	657.1	814.8	887.4	812.3	801.0	773.5	708.4	768.5	754.7
67°	8731.3	3495.8	589.5	723.4	793.5	754.7	771.0	763.5	695.9	767.2	743.5
67.5°	8517.3	3329.3	572.0	708.4	768.5	737.2	763.5	758.5	692.1	764.7	737.2
70°	7024.1	2388.1	483.1	594.5	643.3	649.6	717.2	725.9	662.1	718.4	668.4
72.5°	4997.7	1494.4	416.8	460.6	519.4	555.7	654.6	682.1	622.1	624.6	583.3
75°	2473.2	802.3	371.7	355.5	404.3	463.1	570.7	622.1	563.2	520.7	506.9
77.5°	834.8	454.3	314.2	286.6	314.2	371.7	473.1	543.2	496.9	440.6	431.8
80°	431.8	330.4	245.3	230.3	247.8	287.9	370.5	451.8	424.3	426.8	351.7
82.5°	269.1	201.5	176.5	175.2	187.7	220.3	272.9	366.7	364.2	311.7	226.5
85°	125.2	116.4	112.6	116.4	120.2	125.2	177.7	261.6	276.6	167.7	148.9
87.5°	52.6	51.3	45.1	48.8	53.8	52.6	71.3	111.4	155.2	105.1	96.4
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)