

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: P196806

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196806
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-06-D-UNV-T3R-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23347.6 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

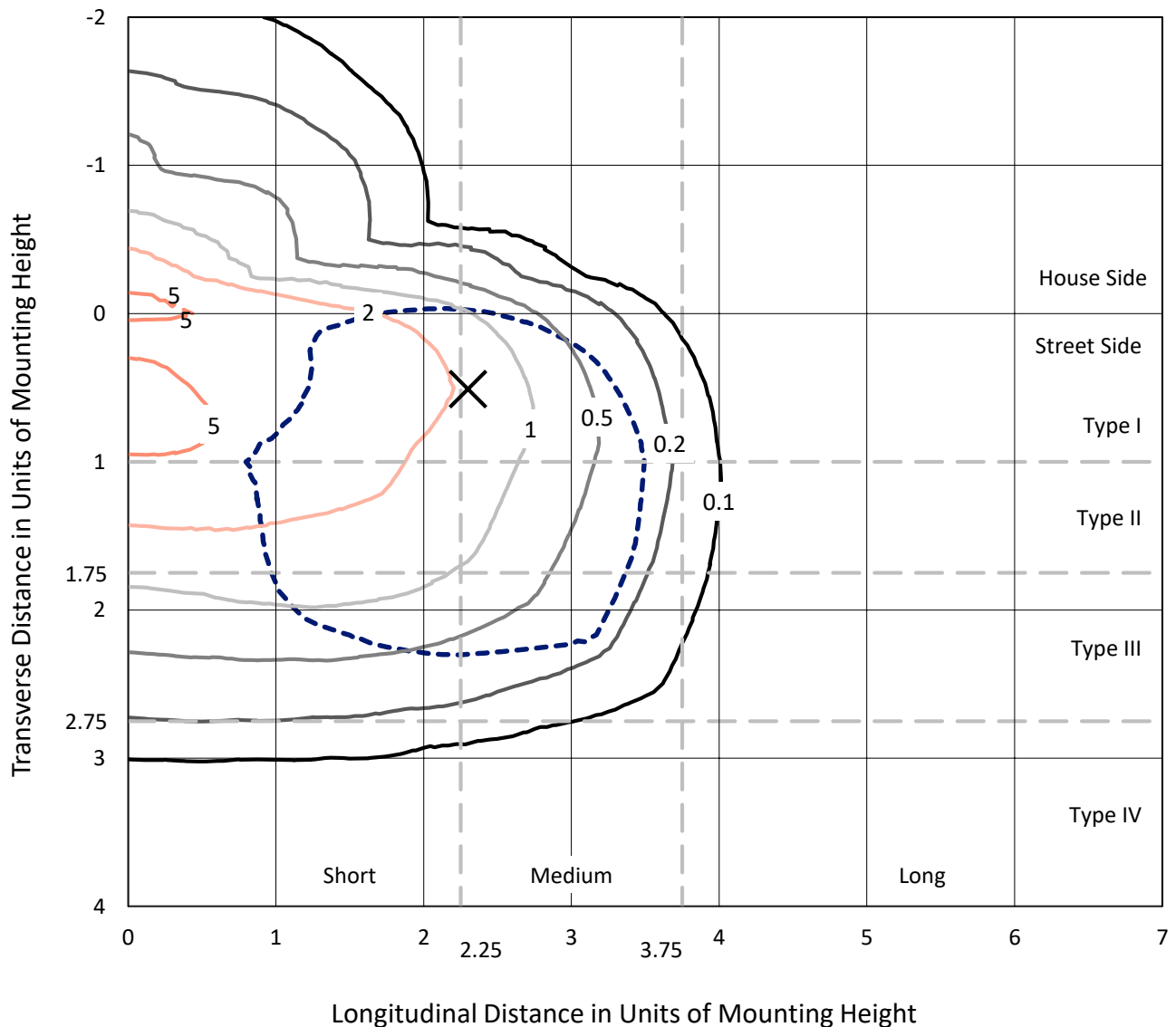
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

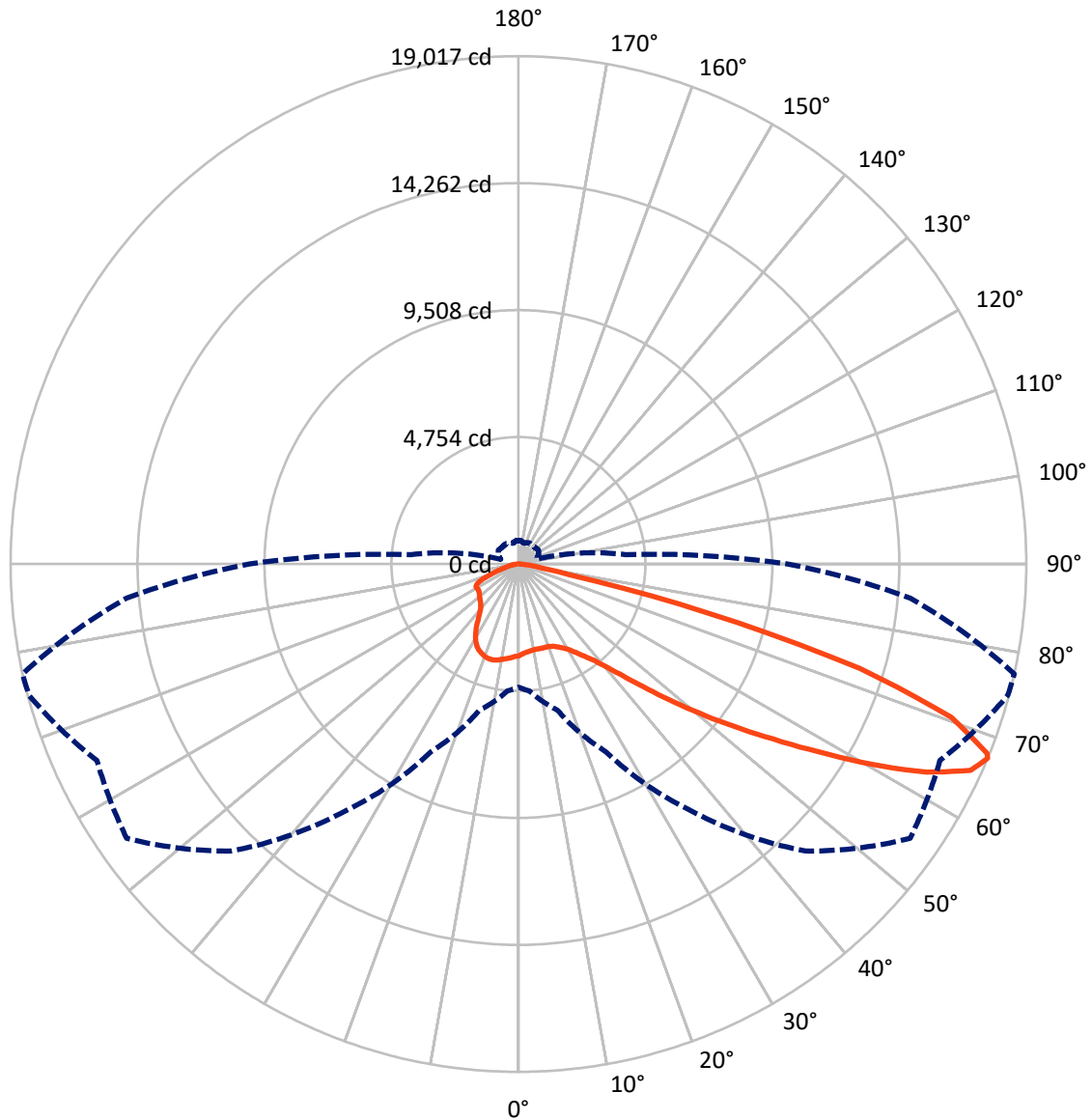
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4012.3	0.0	4012.3
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	19335.3	0.0	19335.3
	% Fixture	82.8	0.0	82.8
Total	Lumens	23347.6	0.0	23347.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.0	1.3
10°-20°	847.5	3.6
20°-30°	1440.0	6.2
30°-40°	2303.7	9.9
40°-50°	3546.6	15.2
50°-60°	4920.6	21.1
60°-70°	6563.7	28.1
70°-80°	3123.7	13.4
80°-90°	295.8	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°	23347.6	100.0
0°-180°	23347.6	100.0



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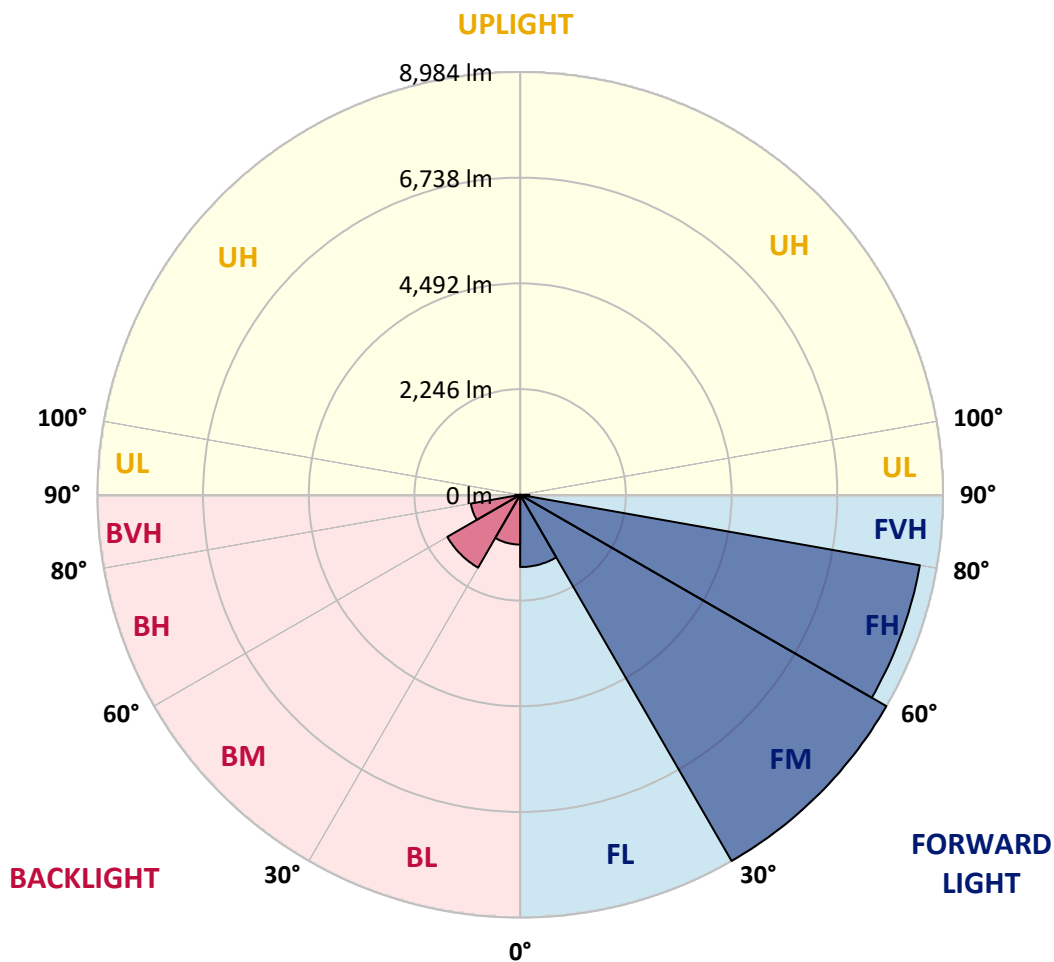
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1535.3	6.6			
FM	(30°-60°)	8984.4	38.5			
FH	(60°-80°)	8623.5	36.9			G4/12000
FVH	(80°-90°)	192.1	0.8			G2/225
BL	(0°-30°)	1058.3	4.5	B3/2500		
BM	(30°-60°)	1786.5	7.7	B2/2500		
BH	(60°-80°)	1063.8	4.6	B3/2500		G3/2500
BVH	(80°-90°)	103.7	0.4			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2
2.5°	3081.1	3095.6	3097.1	3138.9	3157.6	3205.2	3257.2	3303.4	3343.8	3358.2	3384.2
5°	2772.4	2772.4	2776.6	2804.0	2857.4	2933.9	3042.3	3160.6	3284.7	3314.9	3391.4
7.5°	2610.6	2613.6	2616.4	2643.8	2685.7	2753.6	2861.8	3023.4	3229.8	3280.3	3414.5
10°	2625.1	2620.8	2606.4	2600.6	2617.9	2661.2	2755.0	2920.9	3183.6	3261.5	3456.3
12.5°	2851.6	2843.0	2795.4	2726.1	2662.6	2646.7	2711.7	2869.0	3162.0	3261.5	3527.1
15°	3239.9	3245.6	3151.8	3007.6	2841.7	2729.0	2720.3	2850.2	3154.8	3270.2	3609.4
17.5°	3745.0	3747.9	3618.0	3408.8	3133.1	2900.8	2779.5	2850.2	3154.8	3278.9	3688.7
20°	4281.9	4261.6	4114.4	3851.8	3493.9	3138.9	2887.7	2867.5	3163.4	3291.9	3763.8
22.5°	4742.2	4723.5	4569.0	4293.4	3883.5	3420.3	3033.5	2925.3	3211.0	3345.2	3869.1
25°	5144.8	5156.4	5006.3	4696.1	4271.7	3737.8	3251.4	3058.0	3310.5	3441.8	3999.0
27.5°	5634.1	5612.4	5439.3	5143.4	4671.5	4066.8	3524.1	3225.5	3429.0	3558.8	4157.8
30°	6199.8	6189.6	5955.9	5651.4	5111.7	4434.9	3794.0	3405.8	3583.3	3718.9	4356.9
32.5°	6886.7	6885.3	6634.2	6260.4	5606.6	4850.4	4112.9	3652.6	3808.4	3945.6	4621.0
35°	7664.6	7663.1	7403.4	6909.9	6176.8	5310.8	4488.3	3952.8	4087.1	4231.3	4935.6
37.5°	8204.4	8195.6	8060.0	7581.0	6807.4	5846.3	4957.2	4356.9	4403.0	4564.8	5315.1
40°	8308.3	8360.2	8477.1	8194.2	7495.7	6440.9	5427.7	4791.2	4834.6	5042.5	5792.8
42.5°	8195.6	8263.5	8651.7	8731.1	8184.2	7161.0	6016.5	5393.0	5447.8	5706.3	6354.2
45°	8097.5	8156.7	8643.1	9028.4	8863.8	7946.0	6751.1	6127.6	6231.6	6551.9	6995.0
47.5°	7930.1	7985.0	8472.7	9081.7	9252.1	8702.3	7635.7	7010.8	7189.8	7578.0	7725.1
50°	7921.6	7946.0	8240.5	8902.9	9386.3	9276.6	8615.6	8044.1	8318.4	8765.8	8533.3
52.5°	7702.1	7873.9	8140.8	8617.1	9389.2	9611.4	9581.2	9177.0	9599.8	10094.9	9419.5
55°	6360.0	6557.7	7808.9	8477.1	9371.8	9898.6	10462.8	10382.1	11043.1	11564.0	10412.4
57.5°	5938.6	6022.3	6850.7	8519.0	9516.2	10373.4	11344.6	11676.5	12694.0	13262.7	11603.0
60°	5823.1	5911.2	6658.7	8539.1	9907.3	11237.9	12541.0	13138.5	14635.1	15238.3	12955.2
62.5°	5694.7	5808.7	6673.1	8557.9	10594.3	12516.5	14128.6	14724.6	16628.0	17166.4	14222.3
65°	5319.5	5471.0	6406.2	8439.6	11346.1	14121.3	16226.8	16378.4	18274.7	18616.6	14987.2
67°	4608.0	4774.0	5673.1	7755.6	11276.8	15202.3	17905.2	17413.0	18974.6	19016.5	14739.0
67.5°	4382.8	4554.6	5424.8	7471.2	11079.1	15343.6	18202.5	17556.0	18968.8	18922.6	14508.1
70°	2951.2	3144.6	3841.7	5485.5	8886.9	14280.0	18130.4	17115.8	17724.8	17195.2	12464.6
72.5°	1464.8	1470.6	1916.5	3004.6	5384.4	10242.1	15124.3	14642.3	14368.0	13368.0	9146.7
75°	705.7	718.7	904.8	1327.7	2270.1	5287.7	10314.2	9879.9	8412.2	7283.7	4577.8
77.5°	538.3	551.3	702.9	864.5	946.7	1724.5	5108.8	4128.9	2437.5	1946.8	1290.2
80°	415.6	440.2	593.2	663.9	626.4	691.3	1606.2	1264.2	948.2	870.2	639.2
82.5°	324.7	339.1	503.6	503.6	433.0	463.3	747.6	730.3	588.8	531.1	343.5
85°	229.5	258.3	405.6	375.2	284.3	287.3	447.4	428.7	303.0	243.8	134.2
87.5°	102.4	131.3	288.7	245.3	151.6	116.9	183.2	157.4	119.7	92.4	62.1
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°	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2	3436.2
2.5°	3413.0	3436.2	3472.3	3493.9	3522.7	3534.3	3545.8	3566.0	3581.9	3577.5	3570.4
5°	3444.8	3483.7	3528.5	3543.0	3543.0	3528.5	3519.9	3521.3	3516.9	3514.1	3505.5
7.5°	3491.0	3544.4	3576.2	3561.8	3516.9	3460.7	3407.2	3375.6	3345.2	3326.5	3332.3
10°	3556.0	3615.1	3616.6	3553.0	3446.2	3323.5	3218.2	3150.4	3085.5	3056.6	3065.3
12.5°	3649.7	3709.0	3658.4	3521.3	3333.7	3141.7	2948.4	2808.4	2682.9	2652.5	2643.8
15°	3750.8	3797.0	3684.3	3453.4	3172.1	2856.0	2531.3	2322.1	2182.0	2157.6	2148.9
17.5°	3838.9	3864.7	3671.4	3332.3	2916.5	2418.8	2040.6	1899.2	1870.3	1884.7	1884.7
20°	3916.7	3908.1	3615.1	3144.6	2513.9	1933.8	1714.5	1713.0	1752.0	1788.0	1791.0
22.5°	4014.8	3947.0	3525.6	2866.1	2033.5	1613.4	1575.9	1613.4	1656.7	1697.2	1701.5
25°	4131.7	3990.3	3405.8	2469.3	1635.1	1464.8	1480.7	1512.4	1539.9	1571.5	1573.0
27.5°	4248.6	4023.5	3237.1	2003.0	1418.6	1369.6	1386.8	1399.8	1407.0	1427.3	1427.3
30°	4384.3	4049.4	2993.1	1604.8	1319.1	1285.9	1275.7	1270.0	1275.7	1303.1	1304.7
32.5°	4554.6	4095.7	2659.7	1376.7	1272.9	1226.7	1174.7	1145.9	1166.2	1215.2	1223.8
35°	4748.0	4150.5	2260.0	1285.9	1257.0	1197.8	1102.5	1057.8	1065.1	1109.7	1116.9
37.5°	4990.4	4221.2	1866.0	1264.2	1272.9	1195.0	1069.4	1005.8	974.1	975.5	974.1
40°	5300.7	4291.9	1554.3	1270.0	1307.5	1202.2	1053.5	954.0	887.5	890.5	896.3
42.5°	5625.4	4338.1	1356.6	1287.3	1349.4	1212.2	1047.7	903.5	845.6	894.8	939.5
45°	6005.0	4325.1	1254.1	1303.1	1381.1	1216.6	1026.1	897.7	850.0	997.2	1080.9
47.5°	6440.9	4268.9	1196.4	1310.3	1389.8	1215.2	1010.2	916.3	886.1	1141.5	1236.9
50°	6914.2	4180.8	1150.2	1298.9	1385.4	1209.4	1027.5	939.5	900.6	1173.3	1246.8
52.5°	7432.3	4100.0	1102.5	1272.9	1363.8	1192.0	1049.2	929.4	860.1	1080.9	1137.2
55°	8045.7	4081.3	1049.2	1228.1	1327.7	1173.3	1037.6	897.7	815.4	958.2	992.8
57.5°	8747.0	4198.2	979.9	1173.3	1278.7	1135.8	1010.2	880.3	799.6	871.7	890.5
60°	9637.4	4456.4	906.3	1115.5	1218.0	1079.5	985.6	884.7	803.8	858.7	863.0
62.5°	10332.9	4688.9	839.8	1044.8	1137.2	1011.6	959.8	889.0	816.8	876.0	868.8
65°	10585.6	4574.8	757.6	939.5	1023.2	936.6	923.6	891.9	816.8	886.1	870.2
67°	10067.4	4030.7	679.7	834.2	914.9	870.2	889.0	880.3	802.4	884.7	857.2
67.5°	9820.7	3838.9	659.5	816.8	886.1	850.0	880.3	874.5	798.0	881.7	850.0
70°	8099.0	2753.6	557.0	685.5	741.8	749.0	826.9	837.0	763.4	828.4	770.6
72.5°	5762.6	1723.1	480.5	531.1	599.0	640.8	754.8	786.5	717.3	720.1	672.5
75°	2851.6	925.1	428.7	409.8	466.1	533.9	658.1	717.3	649.4	600.4	584.4
77.5°	962.6	523.9	362.2	330.5	362.2	428.7	545.5	626.4	572.9	507.9	497.9
80°	497.9	381.0	282.9	265.5	285.7	331.9	427.2	520.9	489.3	492.1	405.6
82.5°	310.3	232.4	203.4	202.0	216.5	254.0	314.5	422.9	420.0	359.4	261.2
85°	144.3	134.2	129.9	134.2	138.5	144.3	205.0	301.7	318.9	193.4	171.7
87.5°	60.6	59.2	52.0	56.3	62.1	60.6	82.3	128.5	178.9	121.3	111.1
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)