

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: P270710

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270710  
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-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 2700K, 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: 20973.3 lumens  
Efficiency: N/A  
Efficacy: 108.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B2 - 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

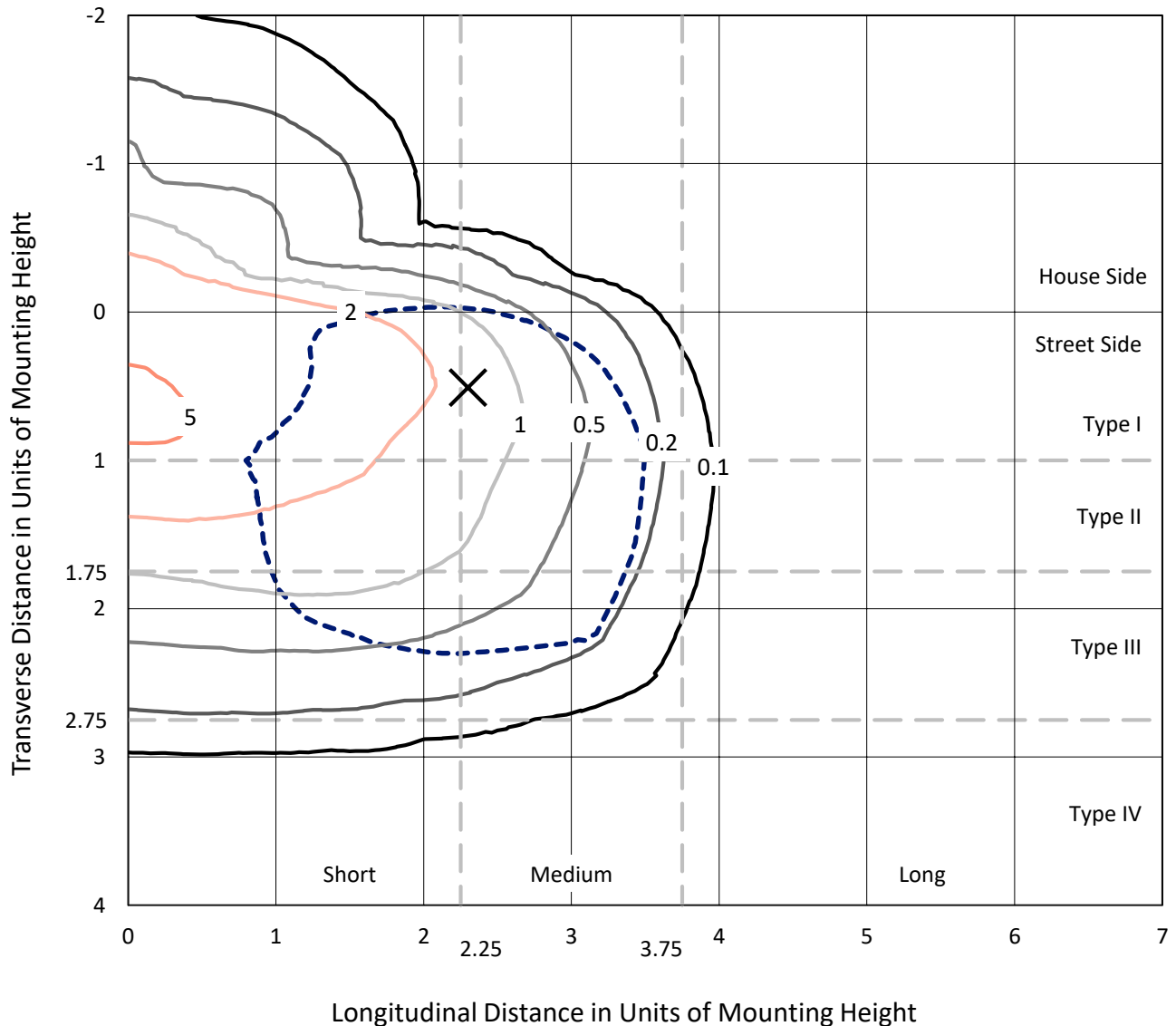


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### Iso-Footcandle Lines of Horizontal Illumination

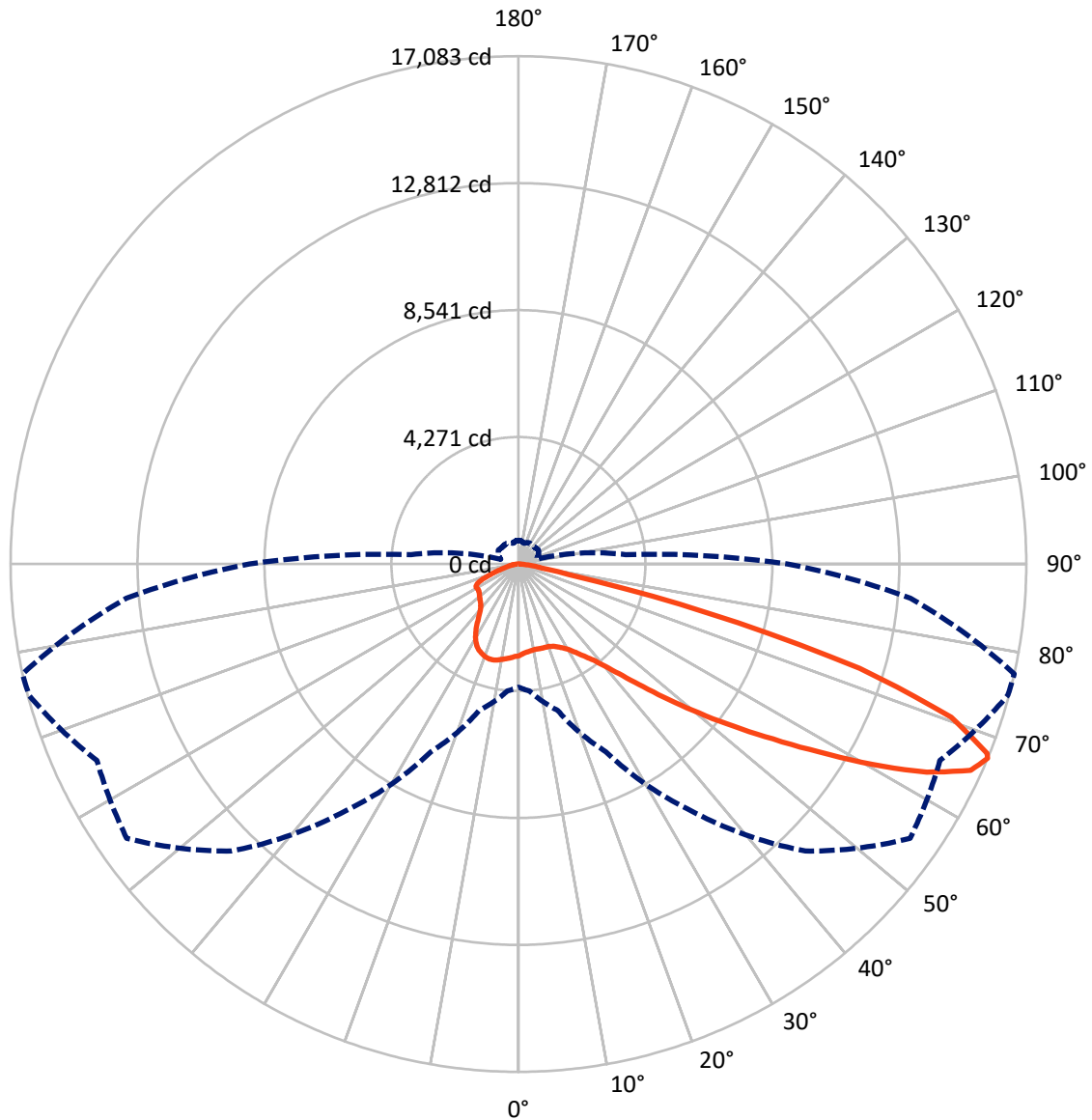
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 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
<b>House Side</b>	Lumens	3604.3	0.0	3604.3
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	17369.0	0.0	17369.0
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	20973.3	0.0	20973.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.9	1.3
10°-20°	761.3	3.6
20°-30°	1293.6	6.2
30°-40°	2069.4	9.9
40°-50°	3185.9	15.2
50°-60°	4420.2	21.1
60°-70°	5896.2	28.1
70°-80°	2806.0	13.4
80°-90°	265.7	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°	20973.3	100.0
0°-180°	20973.3	100.0



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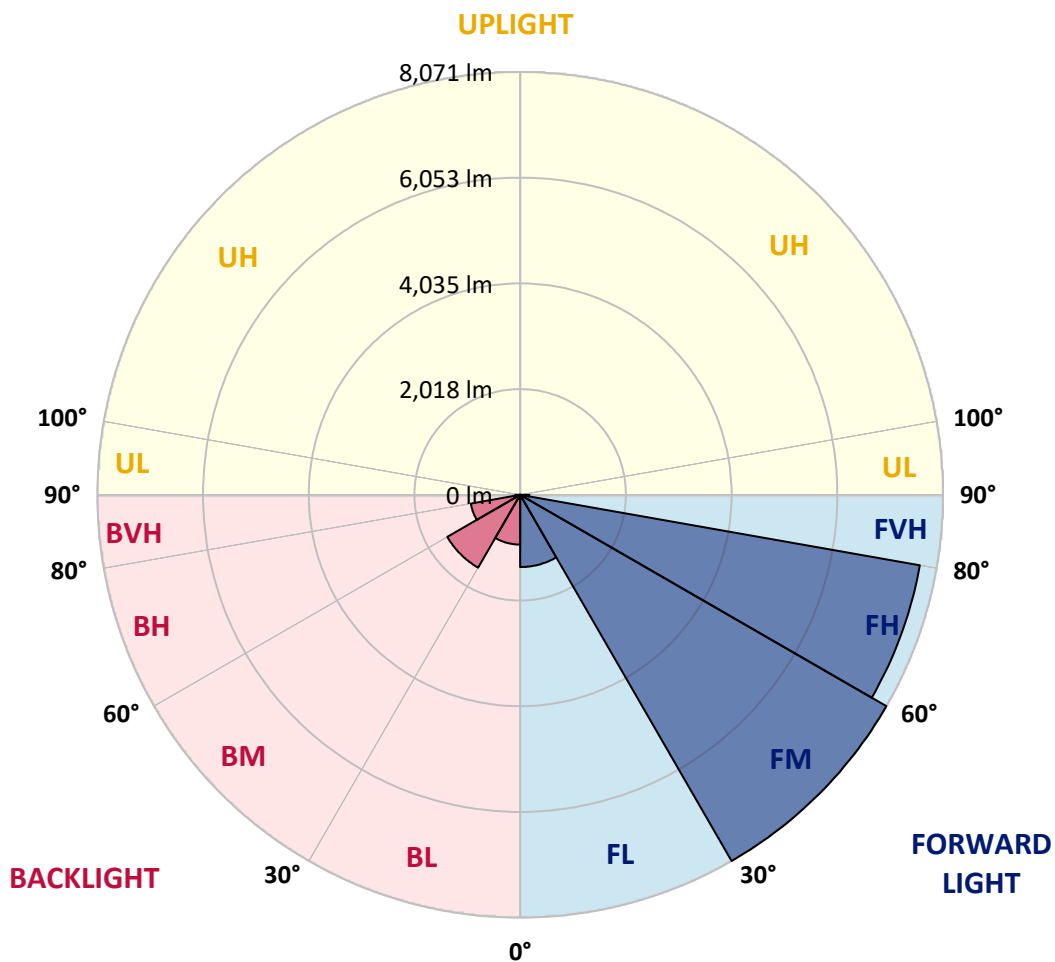
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1379.2	6.6			
FM	(30°-60°)	8070.7	38.5			
FH	(60°-80°)	7746.5	36.9			G4/12000
FVH	(80°-90°)	172.6	0.8			G2/225
BL	(0°-30°)	950.7	4.5	B2/1000		
BM	(30°-60°)	1604.8	7.7	B2/2500		
BH	(60°-80°)	955.7	4.6	B2/1000		G2/1000
BVH	(80°-90°)	93.1	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-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8
2.5°	2767.8	2780.8	2782.1	2819.7	2836.5	2879.2	2926.0	2967.5	3003.8	3016.7	3040.0
5°	2490.5	2490.5	2494.2	2518.8	2566.8	2635.5	2732.9	2839.2	2950.7	2977.8	3046.5
7.5°	2345.1	2347.8	2350.3	2374.9	2412.6	2473.6	2570.8	2715.9	2901.3	2946.7	3067.3
10°	2358.1	2354.3	2341.3	2336.1	2351.7	2390.6	2474.8	2623.9	2859.8	2929.8	3104.8
12.5°	2561.6	2553.9	2511.1	2448.9	2391.8	2377.5	2435.9	2577.2	2840.4	2929.8	3168.4
15°	2910.4	2915.5	2831.3	2701.7	2552.7	2451.5	2443.7	2560.3	2834.0	2937.6	3242.3
17.5°	3364.2	3366.8	3250.1	3062.1	2814.5	2605.8	2496.8	2560.3	2834.0	2945.5	3313.6
20°	3846.5	3828.2	3696.0	3460.1	3138.6	2819.7	2594.0	2575.9	2841.7	2957.1	3381.0
22.5°	4259.9	4243.1	4104.4	3856.8	3488.6	3072.5	2725.0	2627.8	2884.5	3005.0	3475.6
25°	4621.6	4632.0	4497.2	4218.5	3837.3	3357.7	2920.7	2747.0	2973.8	3091.8	3592.3
27.5°	5061.1	5041.6	4886.2	4620.3	4196.4	3653.2	3165.7	2897.5	3080.3	3196.9	3735.0
30°	5569.3	5560.1	5350.2	5076.7	4591.9	3983.9	3408.2	3059.4	3218.9	3340.7	3913.8
32.5°	6186.4	6185.1	5959.5	5623.7	5036.4	4357.1	3694.6	3281.1	3421.1	3544.4	4151.1
35°	6885.1	6883.8	6650.5	6207.2	5548.7	4770.7	4031.9	3550.8	3671.5	3801.0	4433.7
37.5°	7370.1	7362.1	7240.3	6810.1	6115.1	5251.8	4453.1	3913.8	3955.2	4100.6	4774.6
40°	7463.4	7510.0	7615.0	7360.9	6733.4	5785.9	4875.7	4304.0	4342.9	4529.7	5203.7
42.5°	7362.1	7423.1	7771.9	7843.2	7351.9	6432.8	5404.7	4844.6	4893.8	5126.0	5708.0
45°	7274.0	7327.2	7764.1	8110.3	7962.4	7137.9	6064.5	5504.5	5597.9	5885.6	6283.6
47.5°	7123.6	7173.0	7611.1	8158.1	8311.2	7817.3	6859.2	6297.8	6458.6	6807.4	6939.5
50°	7116.0	7137.9	7402.5	7997.5	8431.8	8333.2	7739.4	7226.1	7472.5	7874.4	7665.5
52.5°	6918.8	7073.2	7312.9	7740.8	8434.4	8634.0	8606.8	8243.7	8623.5	9068.3	8461.6
55°	5713.2	5890.8	7014.8	7615.0	8418.7	8892.0	9398.8	9326.3	9920.1	10388.0	9353.5
57.5°	5334.7	5409.9	6154.0	7652.7	8548.5	9318.5	10190.9	10489.1	11403.1	11914.0	10423.0
60°	5230.9	5310.1	5981.5	7670.7	8899.8	10095.1	11265.6	11802.4	13146.8	13688.6	11637.7
62.5°	5115.6	5218.0	5994.5	7687.6	9516.9	11243.6	12691.8	13227.2	14937.0	15420.7	12776.0
65°	4778.5	4914.6	5754.7	7581.3	10192.3	12685.2	14576.6	14712.8	16416.3	16723.4	13463.1
67°	4139.4	4288.5	5096.2	6966.9	10130.0	13656.3	16084.3	15642.2	17045.0	17082.6	13240.1
67.5°	3937.1	4091.4	4873.1	6711.4	9952.4	13783.2	16351.4	15770.6	17039.8	16998.3	13032.7
70°	2651.1	2824.8	3451.0	4927.7	7983.1	12827.8	16286.6	15375.2	15922.3	15446.5	11197.0
72.5°	1315.8	1321.0	1721.6	2699.0	4836.8	9200.5	13586.2	13153.3	12906.8	12008.5	8216.5
75°	633.9	645.6	812.8	1192.7	2039.2	4750.0	9265.3	8875.2	7556.7	6543.0	4112.3
77.5°	483.6	495.2	631.4	776.6	850.4	1549.1	4589.3	3709.0	2189.6	1748.8	1159.0
80°	373.3	395.4	532.9	596.4	562.7	621.0	1442.9	1135.6	851.8	781.7	574.2
82.5°	291.7	304.6	452.4	452.4	389.0	416.2	671.6	656.0	528.9	477.1	308.6
85°	206.2	232.0	364.4	337.0	255.4	258.1	401.9	385.1	272.2	219.0	120.6
87.5°	92.0	117.9	259.3	220.4	136.2	105.0	164.6	141.4	107.5	83.0	55.8
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°	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8	3086.8
2.5°	3065.9	3086.8	3119.2	3138.6	3164.5	3174.9	3185.2	3203.4	3217.6	3213.7	3207.3
5°	3094.5	3129.4	3169.7	3182.7	3182.7	3169.7	3161.9	3163.2	3159.2	3156.7	3149.0
7.5°	3136.0	3184.0	3212.5	3199.6	3159.2	3108.8	3060.7	3032.3	3005.0	2988.2	2993.4
10°	3194.4	3247.5	3248.8	3191.7	3095.7	2985.5	2890.9	2830.0	2771.7	2745.8	2753.6
12.5°	3278.5	3331.8	3286.4	3163.2	2994.7	2822.2	2648.6	2522.8	2410.1	2382.8	2374.9
15°	3369.4	3410.9	3309.6	3102.2	2849.5	2565.6	2273.9	2086.0	1960.1	1938.2	1930.4
17.5°	3448.5	3471.7	3298.0	2993.4	2619.9	2172.8	1833.1	1706.1	1680.1	1693.0	1693.0
20°	3518.4	3510.7	3247.5	2824.8	2258.2	1737.1	1540.1	1538.8	1573.8	1606.2	1608.9
22.5°	3606.5	3545.6	3167.1	2574.6	1826.7	1449.3	1415.6	1449.3	1488.2	1524.6	1528.5
25°	3711.5	3584.5	3059.4	2218.2	1468.8	1315.8	1330.1	1358.6	1383.3	1411.7	1413.0
27.5°	3816.5	3614.3	2907.9	1799.3	1274.3	1230.3	1245.8	1257.4	1263.9	1282.2	1282.2
30°	3938.4	3637.6	2688.7	1441.6	1185.0	1155.1	1146.0	1140.8	1146.0	1170.6	1172.0
32.5°	4091.4	3679.2	2389.2	1236.7	1143.5	1102.0	1055.2	1029.4	1047.6	1091.6	1099.3
35°	4265.2	3728.4	2030.2	1155.1	1129.2	1076.0	990.4	950.2	956.8	996.8	1003.3
37.5°	4482.9	3791.9	1676.2	1135.6	1143.5	1073.5	960.6	903.5	875.0	876.3	875.0
40°	4761.6	3855.4	1396.2	1140.8	1174.5	1079.9	946.4	857.0	797.2	799.9	805.2
42.5°	5053.3	3896.9	1218.6	1156.4	1212.2	1088.9	941.2	811.6	759.6	803.8	844.0
45°	5394.3	3885.3	1126.6	1170.6	1240.6	1092.9	921.8	806.4	763.6	895.8	971.0
47.5°	5785.9	3834.8	1074.7	1177.0	1248.5	1091.6	907.5	823.1	796.0	1025.4	1111.1
50°	6211.1	3755.6	1033.2	1166.8	1244.5	1086.4	923.0	844.0	809.0	1054.0	1120.0
52.5°	6676.5	3683.1	990.4	1143.5	1225.1	1070.8	942.5	834.9	772.6	971.0	1021.6
55°	7227.5	3666.3	942.5	1103.2	1192.7	1054.0	932.1	806.4	732.5	860.8	891.8
57.5°	7857.5	3771.3	880.2	1054.0	1148.7	1020.3	907.5	790.8	718.3	783.1	799.9
60°	8657.3	4003.2	814.1	1002.1	1094.1	969.7	885.4	794.7	722.1	771.4	775.2
62.5°	9282.1	4212.1	754.4	938.5	1021.6	908.7	862.2	798.6	733.7	786.9	780.4
65°	9509.1	4109.6	680.6	844.0	919.1	841.4	829.7	801.2	733.7	796.0	781.7
67°	9043.6	3620.8	610.6	749.4	821.9	781.7	798.6	790.8	720.8	794.7	770.0
67.5°	8822.0	3448.5	592.4	733.7	796.0	763.6	790.8	785.6	716.8	792.0	763.6
70°	7275.4	2473.6	500.4	615.8	666.4	672.8	742.8	751.9	685.8	744.2	692.2
72.5°	5176.6	1547.9	431.6	477.1	538.1	575.6	678.0	706.5	644.4	646.9	604.1
75°	2561.6	831.0	385.1	368.1	418.7	479.6	591.2	644.4	583.4	539.3	525.0
77.5°	864.7	470.6	325.4	296.9	325.4	385.1	490.0	562.7	514.6	456.2	447.3
80°	447.3	342.3	254.1	238.5	256.6	298.1	383.8	467.9	439.5	442.1	364.4
82.5°	278.7	208.8	182.7	181.5	194.5	228.2	282.5	379.9	377.3	322.9	234.6
85°	129.6	120.6	116.7	120.6	124.4	129.6	184.2	271.0	286.5	173.7	154.2
87.5°	54.4	53.2	46.7	50.6	55.8	54.4	73.9	115.4	160.7	109.0	99.8
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)