

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: P196810

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196810  
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-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19390.2 lumens  
Efficiency: N/A  
Efficacy: 113.4 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

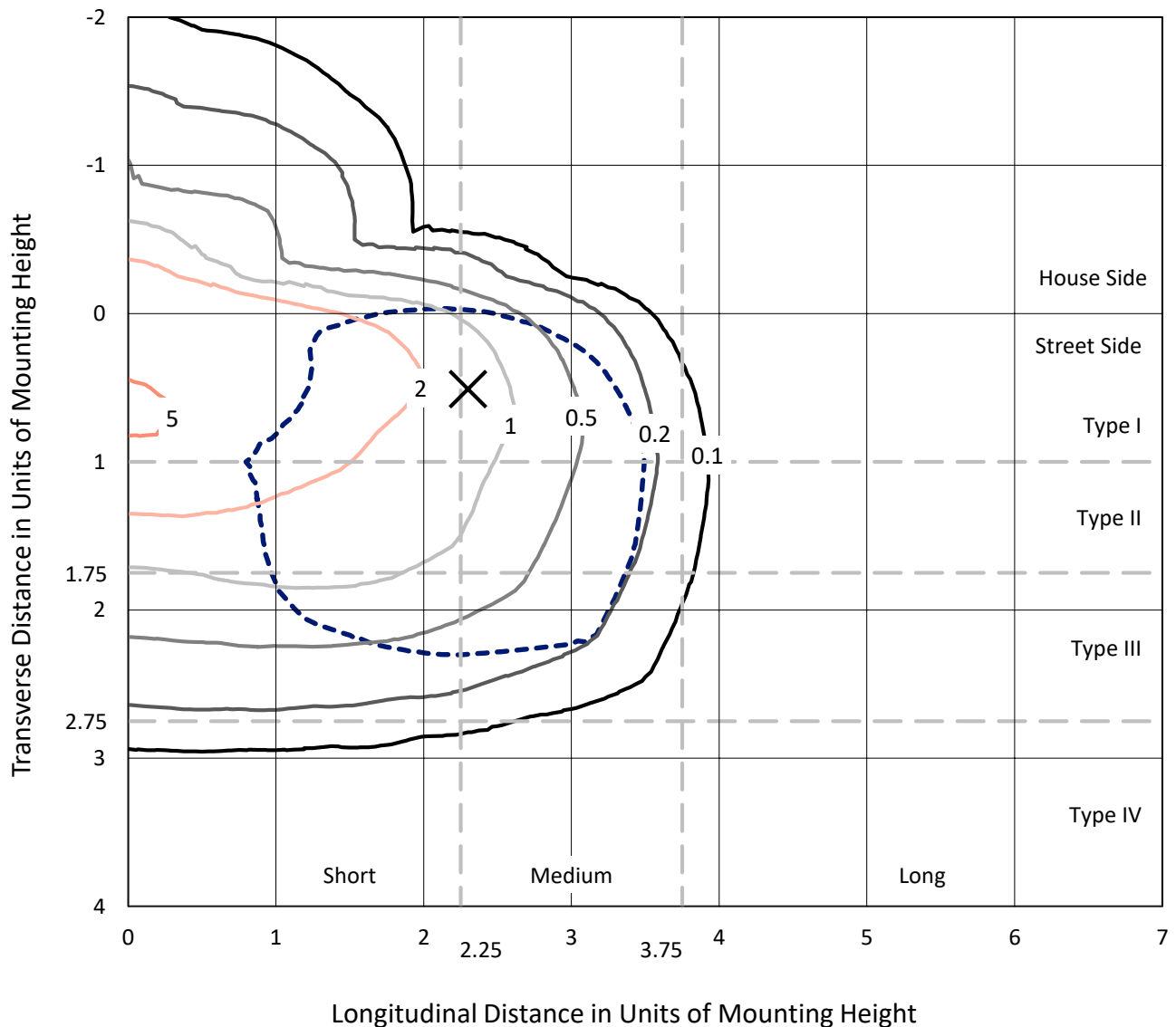
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

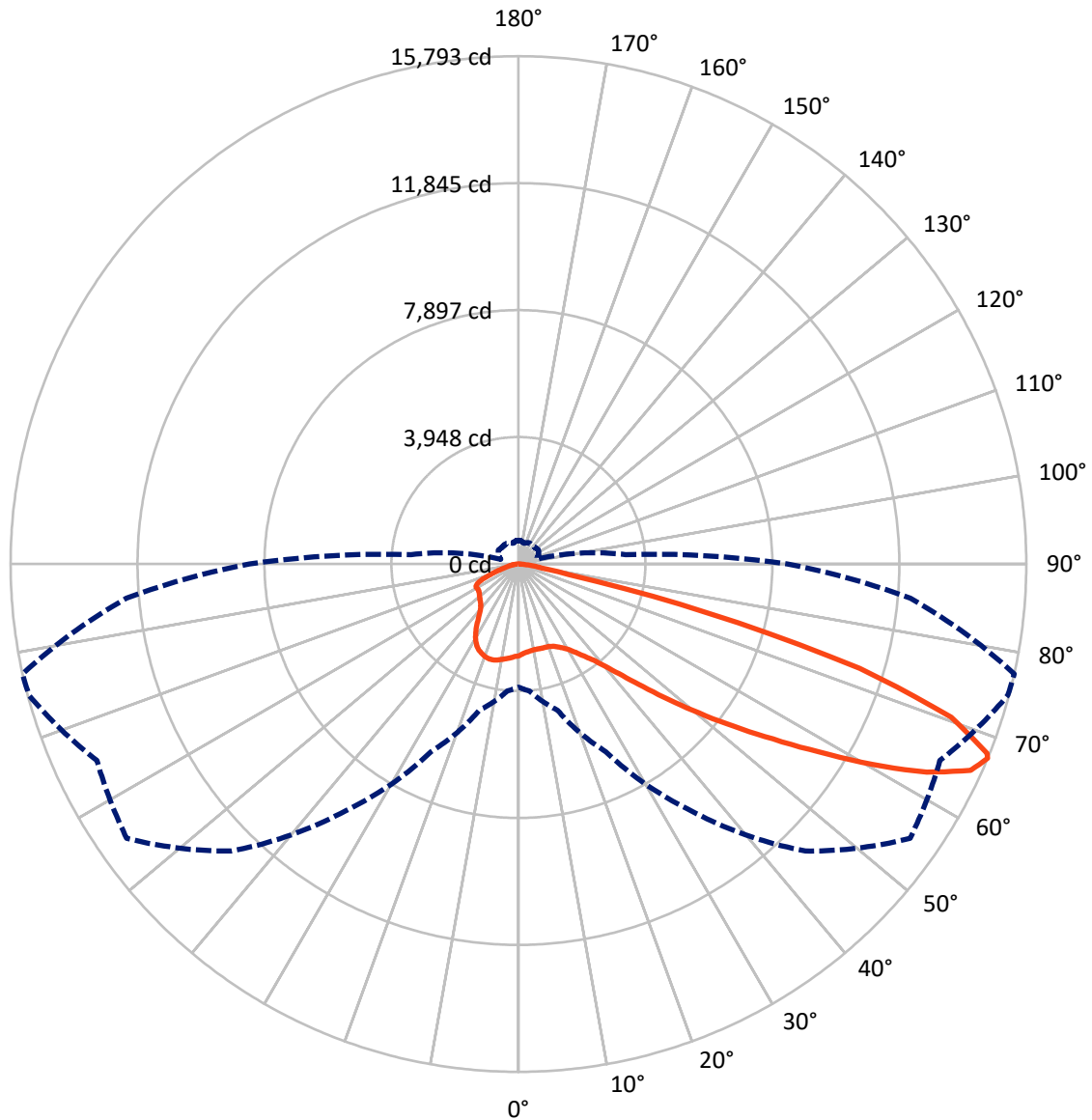
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 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	3332.2	0.0	3332.2
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	16058.0	0.0	16058.0
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	19390.2	0.0	19390.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.2	1.3
10°-20°	703.9	3.6
20°-30°	1196.0	6.2
30°-40°	1913.3	9.9
40°-50°	2945.5	15.2
50°-60°	4086.5	21.1
60°-70°	5451.2	28.1
70°-80°	2594.2	13.4
80°-90°	245.6	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°	19390.2	100.0
0°-180°	19390.2	100.0

**Coefficient of Utilization**



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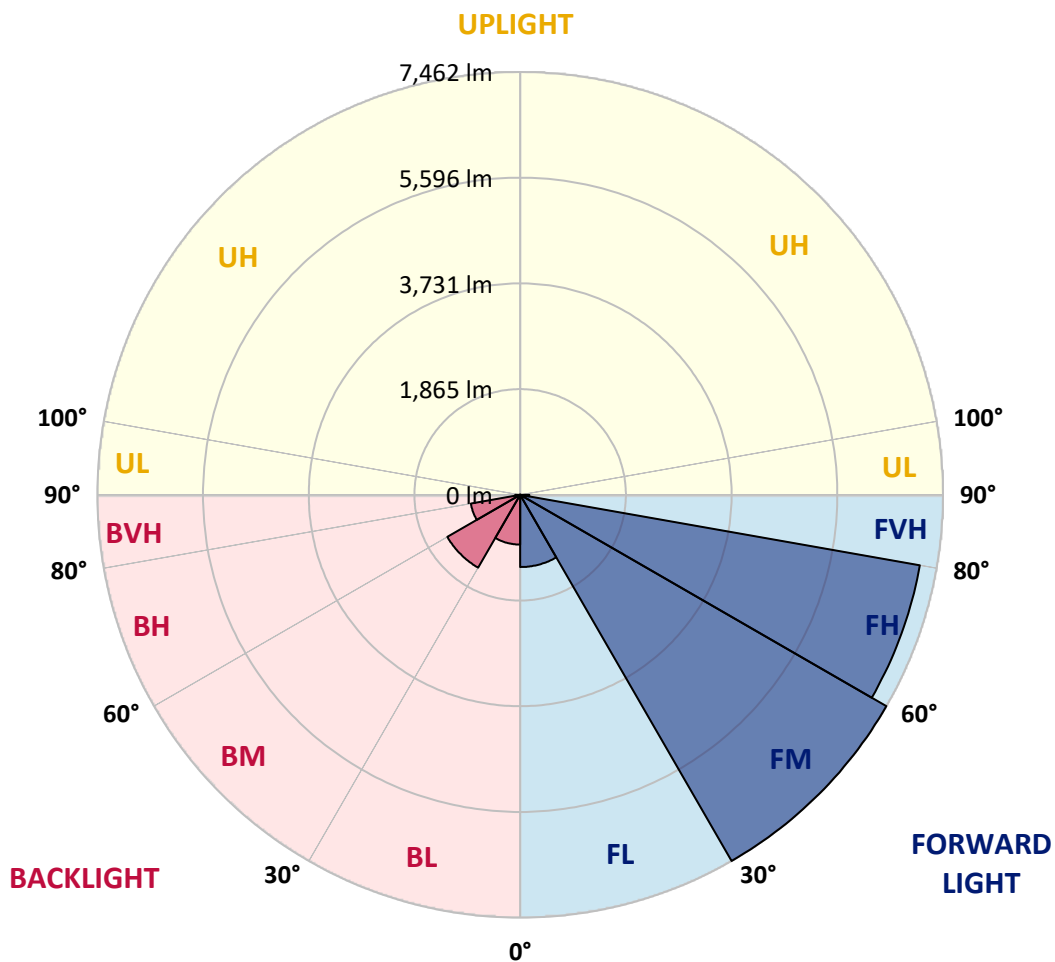
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1275.1	6.6			
FM	(30°-60°)	7461.6	38.5			
FH	(60°-80°)	7161.8	36.9			G3/7500
FVH	(80°-90°)	159.5	0.8			G2/225
BL	(0°-30°)	878.9	4.5	B2/1000		
BM	(30°-60°)	1483.7	7.7	B2/2500		
BH	(60°-80°)	883.5	4.6	B2/1000		G2/1000
BVH	(80°-90°)	86.1	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-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8
2.5°	2558.9	2570.9	2572.1	2606.8	2622.4	2662.0	2705.2	2743.5	2777.1	2789.1	2810.5
5°	2302.4	2302.4	2306.0	2328.8	2373.1	2436.6	2526.5	2624.9	2727.8	2753.0	2816.6
7.5°	2168.1	2170.6	2172.9	2195.8	2230.5	2286.8	2376.7	2511.0	2682.4	2724.3	2835.8
10°	2180.2	2176.6	2164.5	2159.7	2174.2	2210.1	2288.0	2425.9	2644.0	2708.7	2870.5
12.5°	2368.3	2361.1	2321.5	2264.1	2211.3	2198.1	2252.1	2382.7	2626.0	2708.7	2929.2
15°	2690.7	2695.5	2617.7	2497.7	2359.9	2266.5	2259.3	2367.1	2620.0	2715.8	2997.5
17.5°	3110.2	3112.6	3004.7	2830.9	2602.0	2409.0	2308.4	2367.1	2620.0	2723.1	3063.5
20°	3556.1	3539.4	3417.1	3198.9	2901.7	2606.8	2398.2	2381.6	2627.2	2733.8	3125.8
22.5°	3938.5	3922.9	3794.6	3565.6	3225.4	2840.5	2519.3	2429.5	2666.8	2778.3	3213.4
25°	4272.8	4282.4	4157.8	3900.0	3547.6	3104.3	2700.4	2539.7	2749.5	2858.5	3321.2
27.5°	4679.1	4661.1	4517.4	4271.6	3879.7	3377.5	2926.8	2678.7	2847.8	2955.6	3453.0
30°	5149.0	5140.5	4946.3	4693.4	4245.3	3683.1	3150.9	2828.6	2976.0	3088.6	3618.4
32.5°	5719.5	5718.3	5509.7	5199.3	4656.3	4028.3	3415.9	3033.5	3162.9	3276.8	3837.7
35°	6365.5	6364.3	6148.6	5738.7	5129.7	4410.7	3727.5	3282.8	3394.2	3514.1	4099.0
37.5°	6813.7	6806.6	6693.9	6295.9	5653.5	4855.3	4117.0	3618.4	3656.8	3791.0	4414.3
40°	6900.0	6943.2	7040.2	6805.3	6225.3	5349.2	4507.7	3979.1	4015.2	4187.7	4810.9
42.5°	6806.6	6862.9	7185.3	7251.2	6796.9	5947.2	4996.8	4479.0	4524.5	4739.0	5277.2
45°	6725.0	6774.2	7178.2	7498.1	7361.5	6599.2	5606.7	5089.0	5175.3	5441.4	5809.4
47.5°	6586.0	6631.6	7036.7	7542.3	7683.8	7227.2	6341.5	5822.5	5971.1	6293.6	6415.8
50°	6578.8	6599.2	6843.7	7393.8	7795.3	7704.2	7155.3	6680.6	6908.5	7280.0	7087.0
52.5°	6396.6	6539.2	6761.0	7156.5	7797.8	7982.3	7957.2	7621.5	7972.7	8383.8	7822.9
55°	5282.0	5446.1	6485.3	7040.2	7783.3	8220.7	8689.5	8622.3	9171.2	9603.9	8647.6
57.5°	4932.0	5001.6	5689.4	7075.0	7903.2	8615.1	9421.8	9697.5	10542.4	11014.7	9636.3
60°	4836.2	4909.2	5530.0	7091.8	8228.0	9333.0	10415.3	10911.5	12154.4	12655.4	10759.3
62.5°	4729.5	4824.2	5542.0	7107.4	8798.5	10394.9	11733.8	12228.8	13809.6	14256.7	11811.7
65°	4417.8	4543.6	5320.4	7009.1	9422.9	11727.8	13476.5	13602.2	15177.2	15461.2	12447.0
67°	3827.0	3964.8	4711.5	6441.0	9365.3	12625.5	14870.3	14461.7	15758.5	15793.2	12240.8
67.5°	3640.0	3782.5	4505.3	6204.9	9201.3	12742.9	15117.2	14580.3	15753.6	15715.3	12049.0
70°	2451.0	2611.7	3190.5	4555.7	7380.7	11859.5	15057.3	14214.7	14720.5	14280.6	10351.9
72.5°	1216.5	1221.3	1591.7	2495.4	4471.8	8506.1	12560.8	12160.4	11932.8	11102.2	7596.4
75°	586.0	596.9	751.4	1102.7	1885.3	4391.4	8566.0	8205.3	6986.4	6049.0	3801.7
77.5°	447.1	457.8	583.7	718.0	786.2	1432.3	4242.9	3429.0	2024.3	1616.8	1071.5
80°	345.2	365.6	492.6	551.3	520.2	574.0	1333.9	1049.9	787.4	722.8	531.0
82.5°	269.7	281.7	418.3	418.3	359.6	384.7	620.8	606.5	489.1	441.1	285.2
85°	190.5	214.5	336.7	311.6	236.1	238.5	371.6	355.9	251.8	202.5	111.5
87.5°	85.1	109.0	239.8	203.8	125.8	97.1	152.2	130.7	99.4	76.7	51.6
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°	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8	2853.8
2.5°	2834.5	2853.8	2883.7	2901.7	2925.6	2935.2	2944.9	2961.6	2974.8	2971.2	2965.2
5°	2861.0	2893.3	2930.5	2942.5	2942.5	2930.5	2923.2	2924.5	2920.8	2918.5	2911.2
7.5°	2899.3	2943.7	2970.0	2957.9	2920.8	2874.1	2829.9	2803.4	2778.3	2762.6	2767.4
10°	2953.2	3002.3	3003.5	2950.8	2862.1	2760.2	2672.7	2616.4	2562.4	2538.5	2545.7
12.5°	3031.1	3080.2	3038.3	2924.5	2768.6	2609.2	2448.6	2332.3	2228.2	2202.8	2195.8
15°	3115.0	3153.3	3060.0	2868.2	2634.3	2371.9	2102.2	1928.4	1812.2	1791.9	1784.6
17.5°	3188.0	3209.7	3049.1	2767.4	2422.3	2008.7	1694.7	1577.2	1553.3	1565.2	1565.2
20°	3252.8	3245.6	3002.3	2611.7	2087.8	1606.0	1423.8	1422.7	1455.0	1485.0	1487.3
22.5°	3334.4	3278.0	2928.0	2380.3	1688.7	1339.9	1308.8	1339.9	1375.9	1409.5	1413.0
25°	3431.4	3314.0	2828.6	2050.7	1358.0	1216.5	1229.7	1256.1	1278.9	1305.2	1306.4
27.5°	3528.5	3341.5	2688.4	1663.6	1178.2	1137.4	1151.8	1162.6	1168.5	1185.4	1185.4
30°	3641.2	3363.1	2485.7	1332.8	1095.5	1067.9	1059.5	1054.7	1059.5	1082.3	1083.6
32.5°	3782.5	3401.5	2208.9	1143.4	1057.1	1018.8	975.5	951.6	968.5	1009.2	1016.3
35°	3943.1	3447.0	1877.0	1067.9	1044.0	994.8	915.7	878.6	884.6	921.7	927.7
37.5°	4144.5	3505.7	1549.8	1049.9	1057.1	992.4	888.2	835.4	809.1	810.2	809.1
40°	4402.3	3564.5	1290.8	1054.7	1085.9	998.4	874.9	792.2	737.1	739.4	744.3
42.5°	4671.9	3602.9	1126.7	1069.1	1120.7	1006.9	870.1	750.3	702.3	743.1	780.2
45°	4987.1	3592.0	1041.6	1082.3	1147.0	1010.3	852.1	745.4	706.0	828.1	897.7
47.5°	5349.2	3545.3	993.6	1088.3	1154.3	1009.2	839.0	761.1	735.9	948.1	1027.1
50°	5742.2	3472.2	955.3	1078.7	1150.6	1004.4	853.4	780.2	747.9	974.4	1035.6
52.5°	6172.5	3405.1	915.7	1057.1	1132.6	990.0	871.4	771.9	714.3	897.7	944.4
55°	6681.9	3389.4	871.4	1019.9	1102.7	974.4	861.7	745.4	677.2	795.9	824.6
57.5°	7264.4	3486.6	813.8	974.4	1061.9	943.2	839.0	731.2	664.0	724.0	739.4
60°	8003.9	3701.1	752.7	926.5	1011.5	896.5	818.6	734.7	667.6	713.1	716.7
62.5°	8581.6	3894.1	697.5	867.7	944.4	840.2	797.0	738.3	678.4	727.5	721.5
65°	8791.3	3799.4	629.3	780.2	849.8	777.8	767.1	740.7	678.4	735.9	722.8
67°	8361.1	3347.4	564.6	692.8	759.9	722.8	738.3	731.2	666.4	734.7	712.0
67.5°	8156.1	3188.0	547.7	678.4	735.9	706.0	731.2	726.3	662.7	732.4	706.0
70°	6726.2	2286.8	462.6	569.4	616.0	622.0	686.8	695.1	634.0	688.0	640.0
72.5°	4785.8	1431.1	399.2	441.1	497.3	532.2	626.8	653.3	595.7	598.0	558.6
75°	2368.3	768.3	355.9	340.4	387.1	443.5	546.6	595.7	539.3	498.6	485.4
77.5°	799.4	435.1	300.8	274.5	300.8	355.9	453.1	520.2	475.9	421.8	413.5
80°	413.5	316.5	234.9	220.4	237.3	275.7	354.8	432.6	406.3	408.7	336.7
82.5°	257.7	193.0	169.1	167.8	179.7	211.0	261.2	351.2	348.7	298.4	217.0
85°	119.8	111.5	107.8	111.5	115.0	119.8	170.2	250.5	264.9	160.6	142.6
87.5°	50.4	49.1	43.1	46.8	51.6	50.4	68.3	106.6	148.6	100.6	92.4
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)