

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: P197291

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197291  
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-05-D-UNV-T3R-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 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: 20164 lumens  
Efficiency: N/A  
Efficacy: 96.0 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 - G3

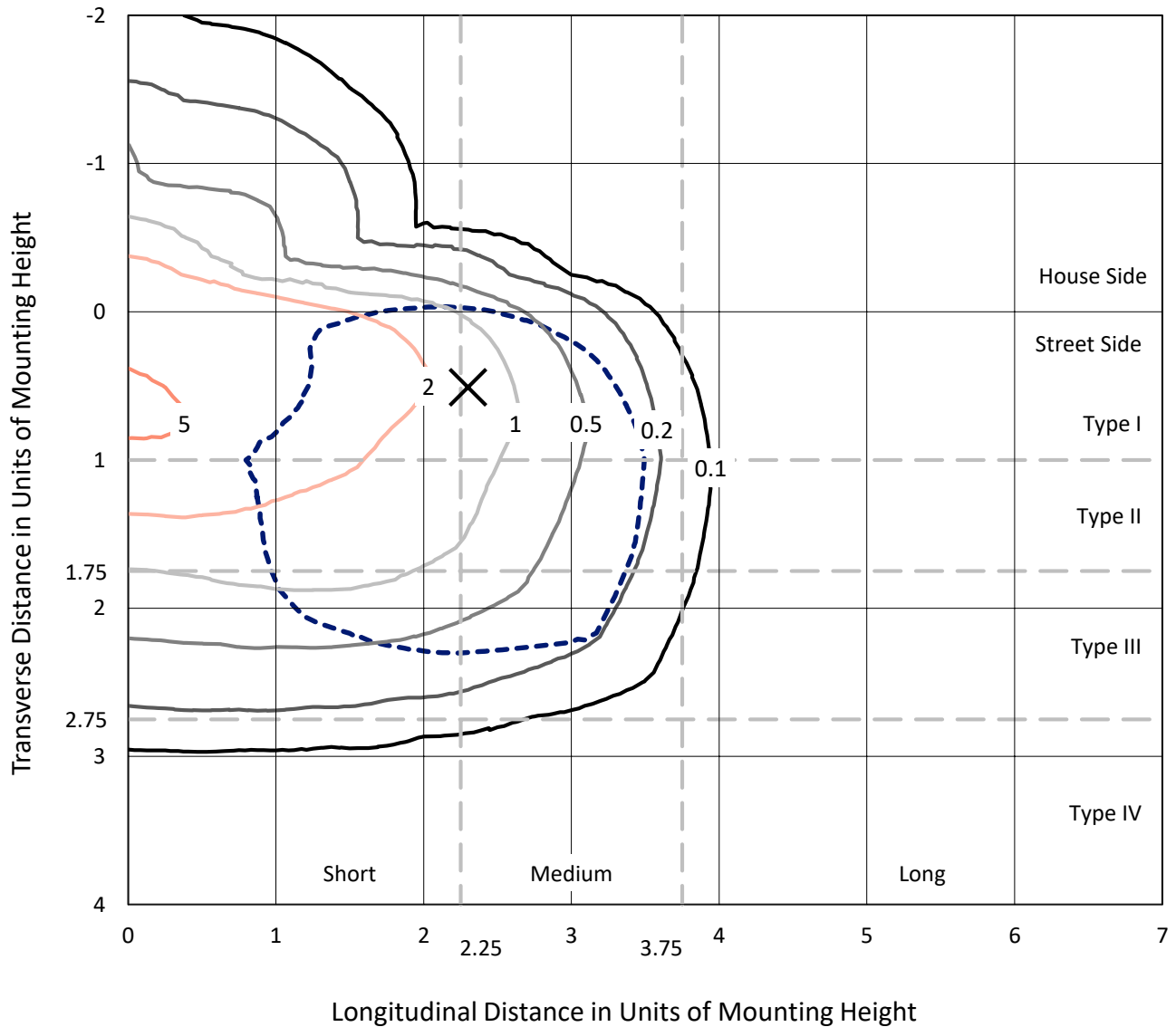
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

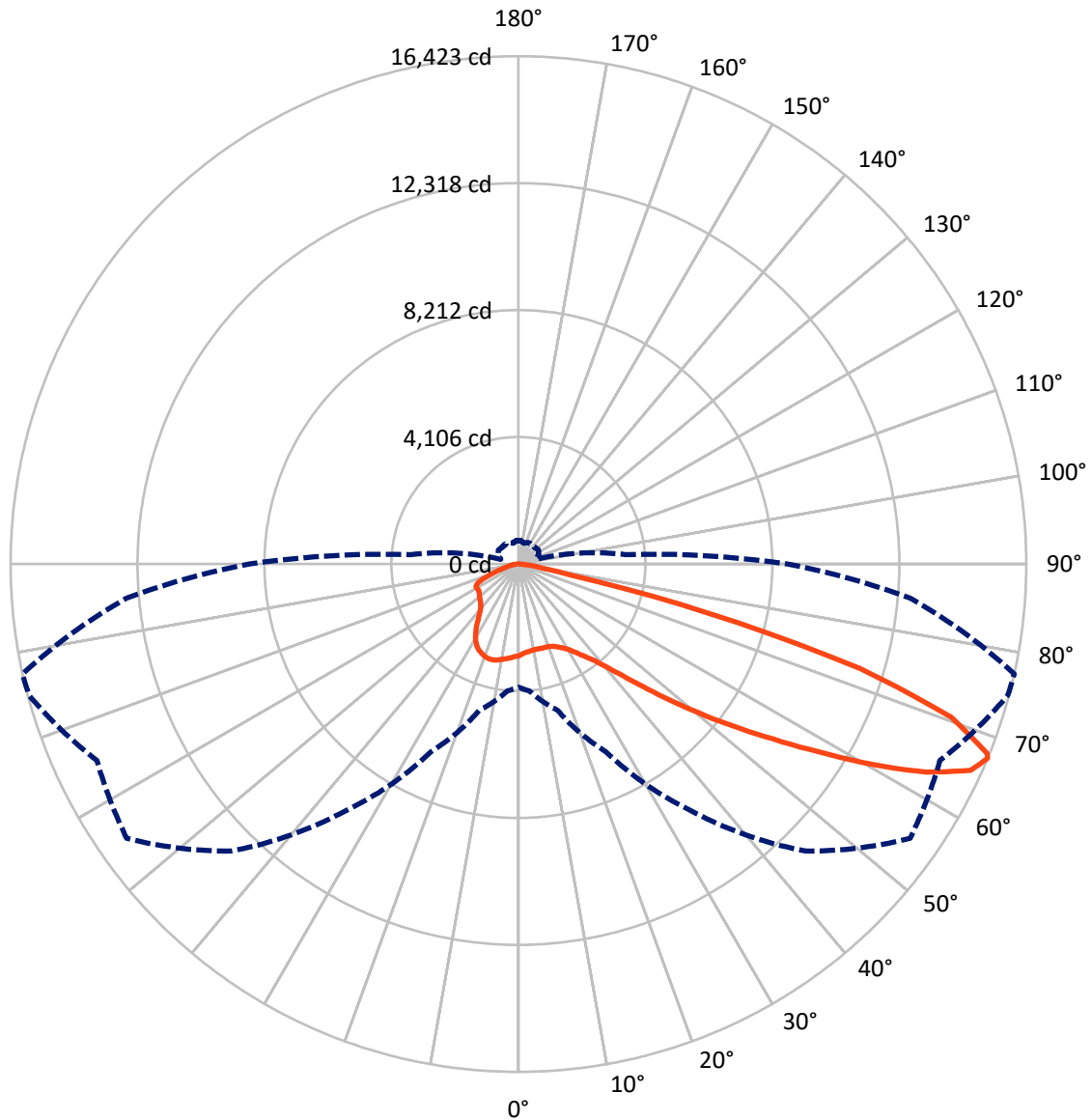
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 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	3465.2	0.0	3465.2
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	16698.8	0.0	16698.8
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	20164.0	0.0	20164.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	264.3	1.3
10°-20°	732.0	3.6
20°-30°	1243.7	6.2
30°-40°	1989.6	9.9
40°-50°	3063.0	15.2
50°-60°	4249.6	21.1
60°-70°	5668.7	28.1
70°-80°	2697.7	13.4
80°-90°	255.4	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°	20164.0	100.0
0°-180°	20164.0	100.0



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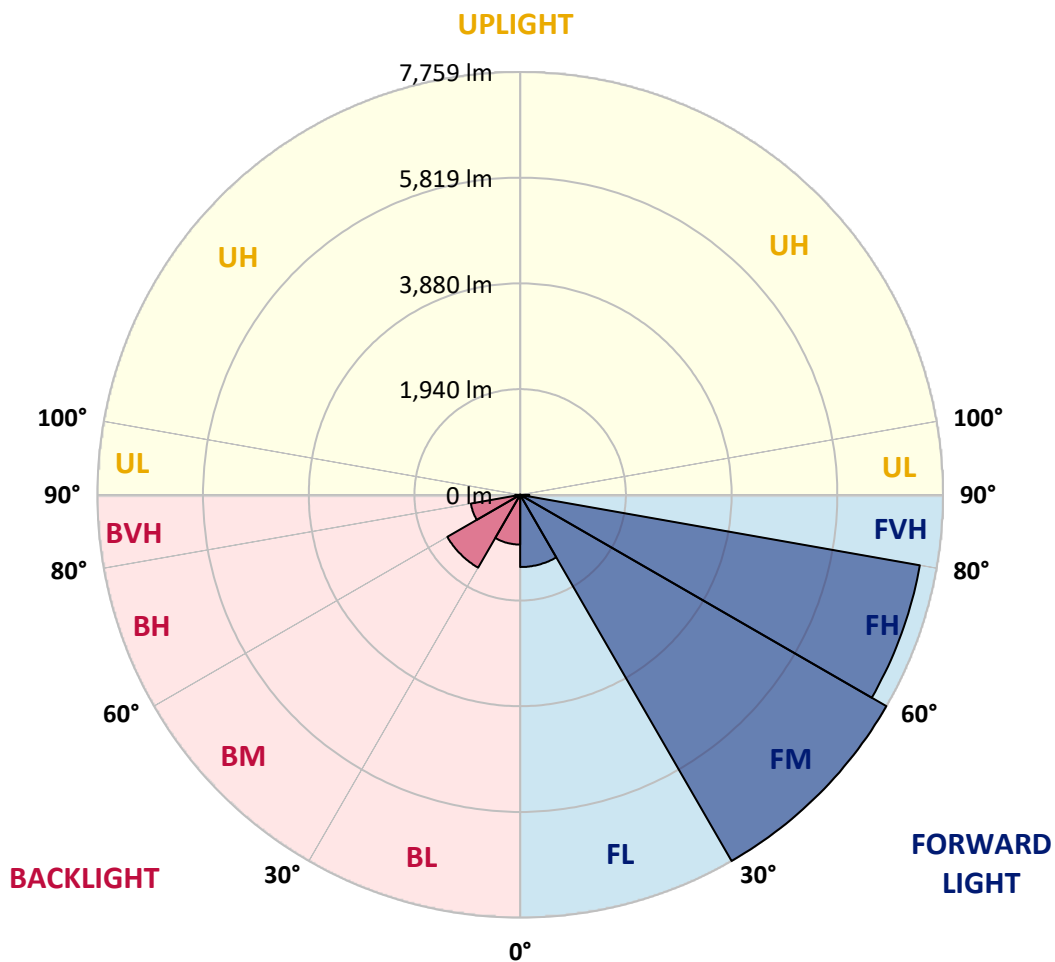
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1326.0	6.6			
FM	(30°-60°)	7759.3	38.5			
FH	(60°-80°)	7447.6	36.9			G3/7500
FVH	(80°-90°)	165.9	0.8			G2/225
BL	(0°-30°)	914.0	4.5	B2/1000		
BM	(30°-60°)	1542.9	7.7	B2/2500		
BH	(60°-80°)	918.8	4.6	B2/1000		G2/1000
BVH	(80°-90°)	89.5	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°	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6
2.5°	2661.0	2673.5	2674.7	2710.9	2727.1	2768.2	2813.1	2852.9	2887.8	2900.3	2922.7
5°	2394.3	2394.3	2398.0	2421.7	2467.8	2533.9	2627.4	2729.6	2836.7	2862.9	2929.0
7.5°	2254.7	2257.2	2259.7	2283.4	2319.5	2378.1	2471.6	2611.1	2789.4	2833.0	2948.9
10°	2267.2	2263.4	2250.9	2246.0	2260.9	2298.3	2379.3	2522.7	2749.5	2816.8	2985.1
12.5°	2462.8	2455.4	2414.2	2354.4	2299.6	2285.8	2341.9	2477.8	2730.8	2816.8	3046.1
15°	2798.1	2803.1	2722.1	2597.4	2454.1	2356.9	2349.4	2461.6	2724.6	2824.3	3117.2
17.5°	3234.3	3236.8	3124.7	2943.9	2705.9	2505.2	2400.5	2461.6	2724.6	2831.8	3185.7
20°	3698.0	3680.5	3553.4	3326.6	3017.5	2710.9	2494.0	2476.5	2732.0	2843.0	3250.5
22.5°	4095.6	4079.4	3946.0	3708.0	3354.0	2953.9	2619.9	2526.4	2773.2	2889.1	3341.5
25°	4443.3	4453.3	4323.7	4055.7	3689.3	3228.1	2808.1	2641.1	2859.2	2972.6	3453.7
27.5°	4865.8	4847.1	4697.6	4442.1	4034.5	3512.3	3043.6	2785.6	2961.4	3073.6	3590.8
30°	5354.4	5345.7	5143.8	4880.8	4414.6	3830.1	3276.7	2941.4	3094.7	3211.9	3762.8
32.5°	5947.7	5946.4	5729.6	5406.8	4842.2	4189.1	3552.2	3154.6	3289.2	3407.6	3990.9
35°	6619.5	6618.2	6393.9	5967.6	5334.5	4586.6	3876.2	3413.8	3529.7	3654.4	4262.6
37.5°	7085.6	7078.1	6961.0	6547.2	5879.1	5049.1	4281.3	3762.8	3802.7	3942.3	4590.4
40°	7175.4	7220.2	7321.2	7076.9	6473.7	5562.6	4687.6	4138.0	4175.3	4354.8	5002.9
42.5°	7078.1	7136.7	7472.0	7540.5	7068.2	6184.5	5196.1	4657.7	4705.1	4928.2	5487.8
45°	6993.4	7044.5	7464.5	7797.3	7655.2	6862.5	5830.5	5292.1	5381.8	5658.5	6041.2
47.5°	6848.8	6896.2	7317.4	7843.4	7990.5	7515.6	6594.6	6054.9	6209.4	6544.7	6671.8
50°	6841.3	6862.5	7116.8	7688.9	8106.4	8011.7	7440.8	6947.3	7184.1	7570.5	7369.8
52.5°	6651.9	6800.2	7030.8	7442.1	8108.9	8300.8	8274.7	7925.7	8290.9	8718.4	8135.1
55°	5492.8	5663.5	6744.1	7321.2	8093.9	8548.9	9036.2	8966.4	9537.2	9987.2	8992.6
57.5°	5128.8	5201.1	5916.5	7357.3	8218.6	8958.9	9797.7	10084.4	10963.1	11454.2	10020.8
60°	5029.1	5105.1	5750.8	7374.8	8556.3	9705.5	10831.0	11347.0	12639.5	13160.4	11188.7
62.5°	4918.2	5016.6	5763.2	7391.0	9149.6	10809.8	12202.0	12716.7	14360.7	14825.6	12283.0
65°	4594.1	4725.0	5532.6	7288.8	9799.0	12195.7	14014.2	14145.1	15782.8	16078.2	12943.6
67°	3979.7	4123.0	4899.5	6698.0	9739.1	13129.3	15463.7	15038.7	16387.3	16423.4	12729.2
67.5°	3785.2	3933.5	4685.1	6452.5	9568.4	13251.4	15720.5	15162.1	16382.3	16342.4	12529.8
70°	2548.8	2715.8	3317.8	4737.5	7675.2	12332.8	15658.2	14782.0	15307.9	14850.5	10764.9
72.5°	1265.1	1270.1	1655.2	2594.9	4650.2	8845.5	13062.0	12645.7	12408.9	11545.1	7899.5
75°	609.5	620.7	781.5	1146.7	1960.5	4566.7	8907.8	8532.7	7265.1	6290.4	3953.5
77.5°	464.9	476.1	607.0	746.6	817.6	1489.4	4412.2	3565.9	2105.1	1681.4	1114.3
80°	359.0	380.1	512.3	573.3	540.9	597.0	1387.2	1091.8	818.9	751.6	552.1
82.5°	280.4	292.9	435.0	435.0	373.9	400.1	645.6	630.7	508.5	458.7	296.6
85°	198.2	223.1	350.2	324.1	245.5	248.0	386.4	370.2	261.7	210.6	115.9
87.5°	88.5	113.4	249.3	211.9	130.9	101.0	158.3	135.9	103.4	79.8	53.6
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°	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6	2967.6
2.5°	2947.7	2967.6	2998.8	3017.5	3042.4	3052.4	3062.3	3079.8	3093.5	3089.8	3083.5
5°	2975.1	3008.7	3047.4	3059.8	3059.8	3047.4	3039.9	3041.1	3037.4	3034.9	3027.4
7.5°	3015.0	3061.1	3088.5	3076.0	3037.4	2988.8	2942.7	2915.3	2889.1	2872.9	2877.9
10°	3071.1	3122.2	3123.4	3068.6	2976.3	2870.4	2779.4	2720.8	2664.7	2639.8	2647.3
12.5°	3152.1	3203.2	3159.6	3041.1	2879.1	2713.4	2546.3	2425.4	2317.0	2290.8	2283.4
15°	3239.3	3279.2	3182.0	2982.6	2739.5	2466.6	2186.1	2005.4	1884.5	1863.3	1855.8
17.5°	3315.3	3337.8	3170.8	2877.9	2518.9	2088.9	1762.4	1640.2	1615.3	1627.8	1627.8
20°	3382.7	3375.2	3122.2	2715.8	2171.2	1670.1	1480.7	1479.4	1513.1	1544.3	1546.7
22.5°	3467.4	3408.8	3044.9	2475.3	1756.1	1393.4	1361.0	1393.4	1430.8	1465.7	1469.5
25°	3568.4	3446.2	2941.4	2132.5	1412.1	1265.1	1278.8	1306.2	1329.9	1357.3	1358.5
27.5°	3669.3	3474.9	2795.6	1730.0	1225.2	1182.8	1197.8	1209.0	1215.2	1232.7	1232.7
30°	3786.5	3497.3	2585.0	1386.0	1139.2	1110.5	1101.8	1096.8	1101.8	1125.5	1126.7
32.5°	3933.5	3537.2	2297.1	1189.0	1099.3	1059.4	1014.5	989.6	1007.1	1049.4	1056.9
35°	4100.6	3584.6	1951.8	1110.5	1085.6	1034.5	952.2	913.6	919.8	958.5	964.7
37.5°	4310.0	3645.6	1611.6	1091.8	1099.3	1032.0	923.6	868.7	841.3	842.5	841.3
40°	4577.9	3706.7	1342.3	1096.8	1129.2	1038.2	909.9	823.9	766.5	769.0	774.0
42.5°	4858.4	3746.6	1171.6	1111.8	1165.4	1047.0	904.9	780.2	730.4	772.8	811.4
45°	5186.2	3735.4	1083.1	1125.5	1192.8	1050.7	886.2	775.2	734.1	861.2	933.5
47.5°	5562.6	3686.8	1033.2	1131.7	1200.3	1049.4	872.5	791.4	765.3	985.9	1068.1
50°	5971.4	3610.7	993.4	1121.7	1196.5	1044.5	887.4	811.4	777.7	1013.3	1076.9
52.5°	6418.8	3540.9	952.2	1099.3	1177.8	1029.5	906.1	802.7	742.8	933.5	982.1
55°	6948.5	3524.7	906.1	1060.7	1146.7	1013.3	896.1	775.2	704.2	827.6	857.5
57.5°	7554.3	3625.7	846.3	1013.3	1104.3	980.9	872.5	760.3	690.5	752.8	769.0
60°	8323.3	3848.8	782.7	963.4	1051.9	932.3	851.3	764.0	694.2	741.6	745.3
62.5°	8924.0	4049.5	725.4	902.4	982.1	873.7	828.8	767.8	705.4	756.5	750.3
65°	9142.1	3951.0	654.3	811.4	883.7	808.9	797.7	770.3	705.4	765.3	751.6
67°	8694.7	3481.1	587.0	720.4	790.2	751.6	767.8	760.3	693.0	764.0	740.3
67.5°	8481.6	3315.3	569.6	705.4	765.3	734.1	760.3	755.3	689.2	761.5	734.1
70°	6994.6	2378.1	481.1	592.0	640.6	646.9	714.2	722.9	659.3	715.4	665.6
72.5°	4976.8	1488.2	415.0	458.7	517.2	553.4	651.9	679.3	619.4	621.9	580.8
75°	2462.8	798.9	370.2	354.0	402.6	461.2	568.3	619.4	560.9	518.5	504.8
77.5°	831.3	452.4	312.8	285.4	312.8	370.2	471.1	540.9	494.8	438.7	430.0
80°	430.0	329.0	244.3	229.3	246.8	286.7	368.9	449.9	422.5	425.0	350.2
82.5°	268.0	200.7	175.7	174.5	187.0	219.4	271.7	365.2	362.7	310.3	225.6
85°	124.6	115.9	112.2	115.9	119.7	124.6	177.0	260.5	275.4	167.0	148.3
87.5°	52.3	51.1	44.9	48.6	53.6	52.3	71.0	110.9	154.6	104.7	96.0
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)