

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: P270549

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270549  
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-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 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: 21559.2 lumens  
Efficiency: N/A  
Efficacy: 95.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G4

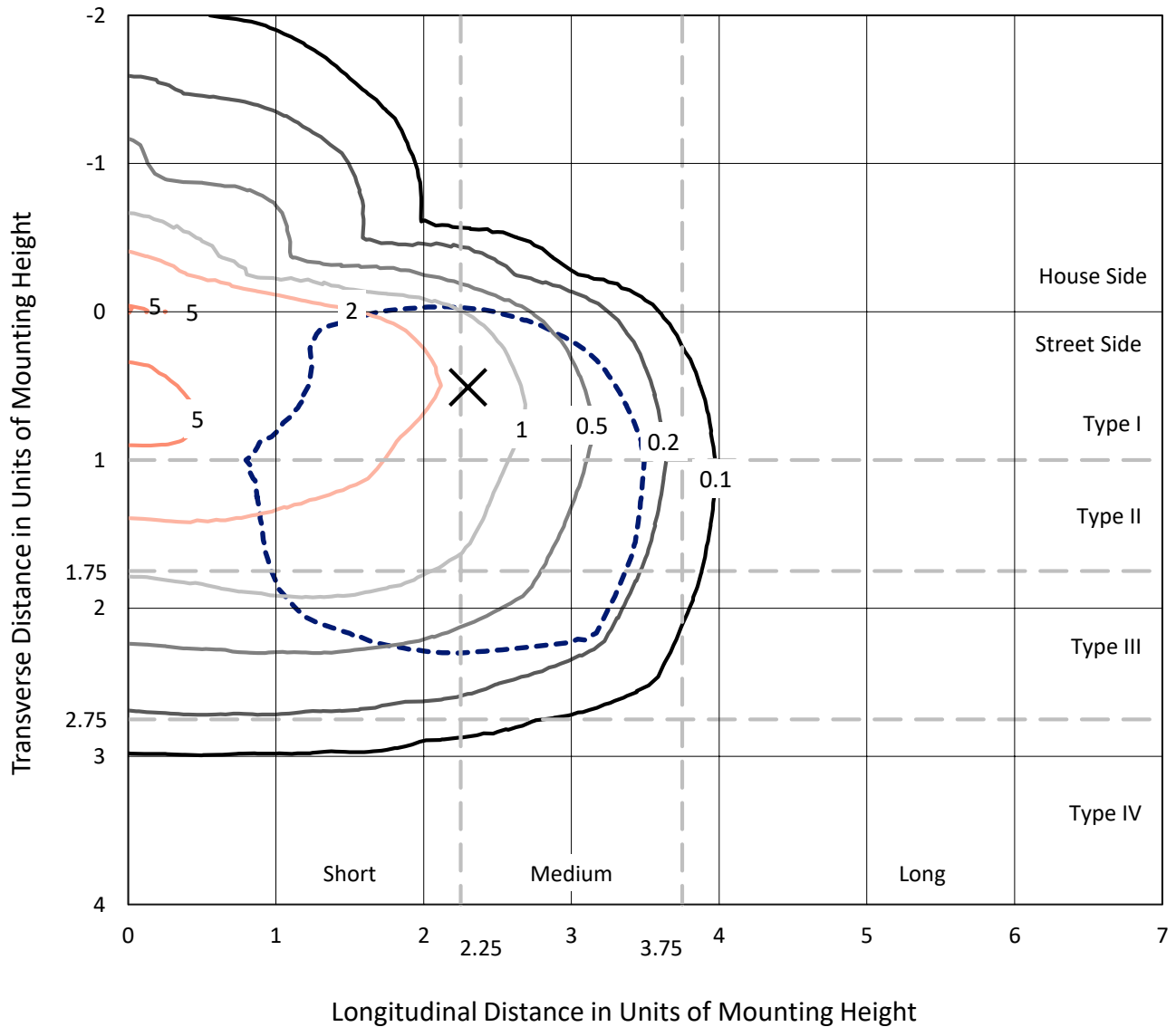
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

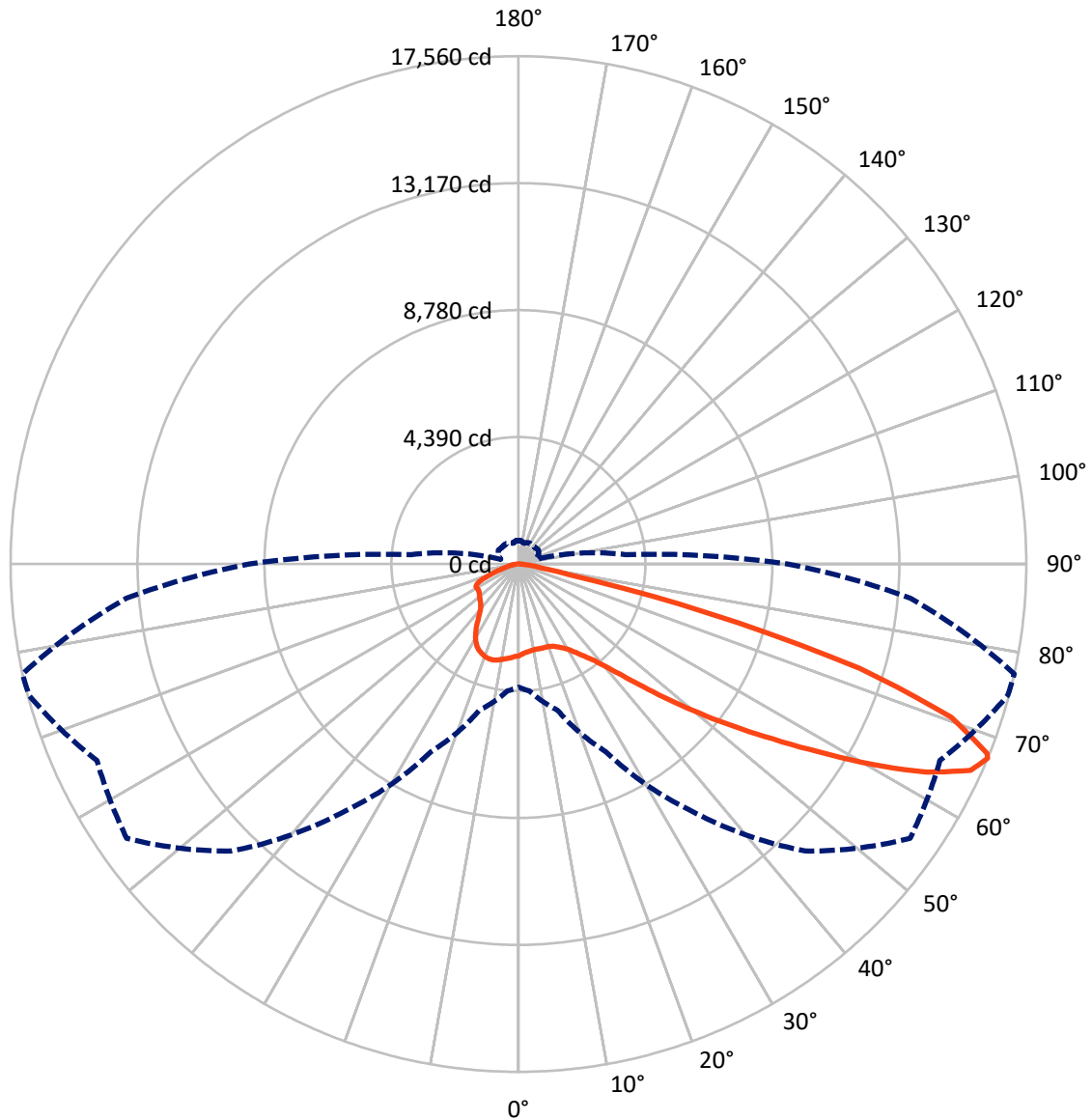
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 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	3704.9	0.0	3704.9
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	17854.3	0.0	17854.3
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	21559.2	0.0	21559.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.6	1.3
10°-20°	782.6	3.6
20°-30°	1329.7	6.2
30°-40°	2127.3	9.9
40°-50°	3274.9	15.2
50°-60°	4543.7	21.1
60°-70°	6060.9	28.1
70°-80°	2884.4	13.4
80°-90°	273.1	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°	21559.2	100.0
0°-180°	21559.2	100.0



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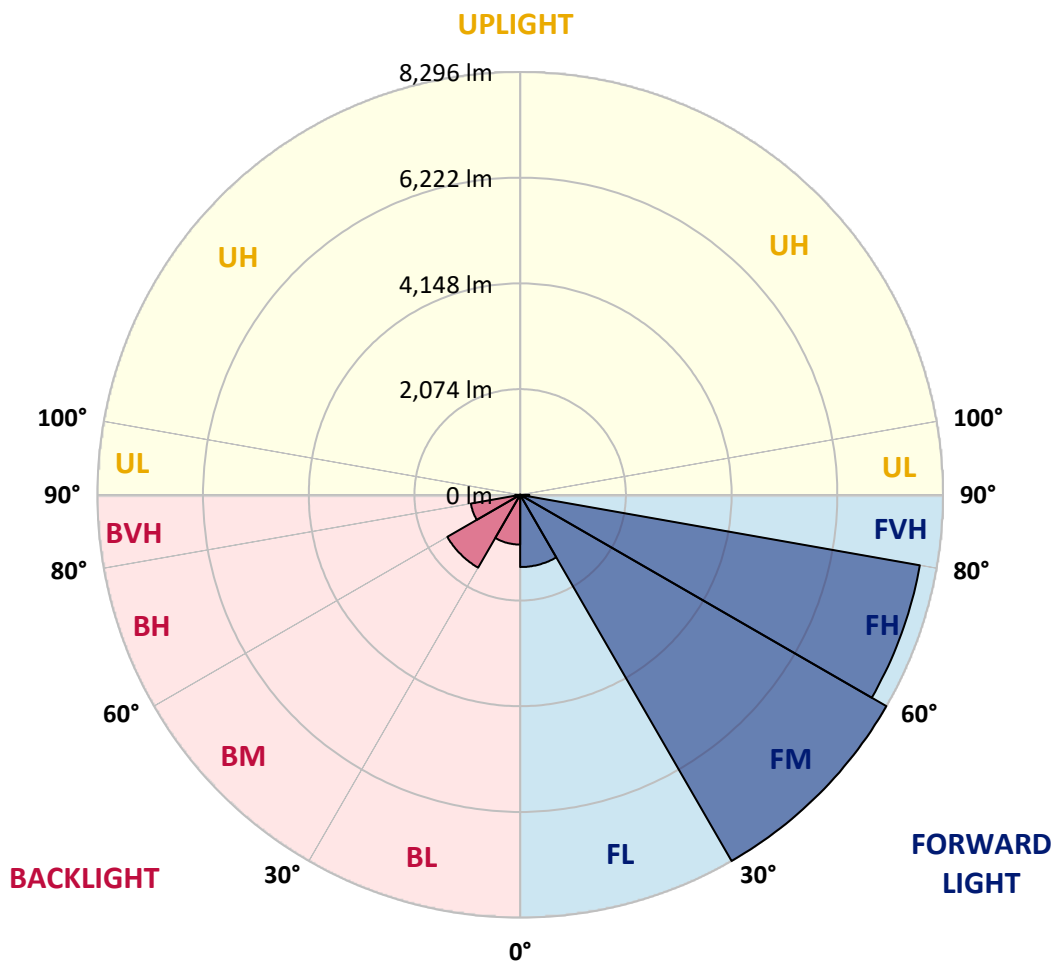
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1417.7	6.6			
FM	(30°-60°)	8296.2	38.5			
FH	(60°-80°)	7963.0	36.9			G4/12000
FVH	(80°-90°)	177.4	0.8			G2/225
BL	(0°-30°)	977.2	4.5	B2/1000		
BM	(30°-60°)	1649.6	7.7	B2/2500		
BH	(60°-80°)	982.3	4.6	B2/1000		G2/1000
BVH	(80°-90°)	95.7	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°	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0
2.5°	2845.1	2858.4	2859.8	2898.4	2915.8	2959.7	3007.7	3050.4	3087.7	3100.9	3124.9
5°	2560.0	2560.0	2563.9	2589.3	2638.6	2709.2	2809.2	2918.5	3033.0	3061.1	3131.6
7.5°	2410.7	2413.3	2416.0	2441.4	2480.0	2542.7	2642.5	2791.8	2982.5	3029.1	3153.1
10°	2424.0	2420.0	2406.6	2401.3	2417.3	2457.4	2544.0	2697.3	2939.8	3011.7	3191.6
12.5°	2633.2	2625.2	2581.3	2517.3	2458.8	2444.0	2503.9	2649.2	2919.8	3011.7	3257.0
15°	2991.7	2997.0	2910.4	2777.2	2623.9	2519.9	2512.0	2631.9	2913.2	3019.7	3332.8
17.5°	3458.1	3460.8	3340.8	3147.7	2893.1	2678.6	2566.5	2631.9	2913.2	3027.6	3406.2
20°	3953.9	3935.3	3799.3	3556.7	3226.3	2898.4	2666.6	2647.9	2921.1	3039.7	3475.5
22.5°	4379.0	4361.6	4219.1	3964.5	3586.0	3158.4	2801.2	2701.3	2965.0	3089.0	3572.6
25°	4750.7	4761.5	4622.9	4336.3	3944.5	3451.5	3002.3	2823.8	3057.0	3178.3	3692.7
27.5°	5202.5	5182.5	5022.7	4749.3	4313.8	3755.4	3254.2	2978.4	3166.3	3286.2	3839.3
30°	5724.9	5715.6	5499.8	5218.6	4720.1	4095.2	3503.4	3145.0	3308.8	3434.1	4023.1
32.5°	6359.2	6357.9	6126.0	5780.9	5177.2	4478.9	3797.9	3372.9	3516.8	3643.3	4266.9
35°	7077.4	7076.2	6836.3	6380.5	5703.6	4903.9	4144.4	3650.1	3774.0	3907.2	4557.6
37.5°	7575.9	7568.0	7442.6	7000.2	6285.9	5398.5	4577.6	4023.1	4065.8	4215.0	4908.0
40°	7671.9	7719.9	7827.8	7566.6	6921.6	5947.5	5012.0	4424.3	4464.2	4656.2	5349.0
42.5°	7568.0	7630.6	7988.9	8062.3	7557.3	6612.5	5555.7	4979.9	5030.6	5269.2	5867.5
45°	7477.3	7531.8	7981.0	8336.8	8184.8	7337.4	6234.0	5658.2	5754.3	6050.1	6459.2
47.5°	7322.8	7373.4	7823.8	8386.1	8543.4	8035.7	7050.8	6473.8	6639.1	6997.5	7133.5
50°	7314.7	7337.4	7609.3	8220.8	8667.2	8566.1	7955.7	7427.9	7681.1	8094.3	7879.8
52.5°	7112.2	7270.7	7517.2	7957.0	8670.0	8875.3	8847.1	8474.2	8864.6	9321.6	8698.0
55°	5872.8	6055.4	7210.8	7827.8	8654.0	9140.4	9661.5	9586.8	10197.2	10678.2	9614.7
57.5°	5483.8	5561.0	6326.0	7866.4	8787.2	9578.8	10475.7	10782.1	11721.7	12246.8	10714.3
60°	5377.1	5458.5	6148.7	7885.1	9148.3	10377.0	11580.4	12132.1	13514.0	14071.1	11962.9
62.5°	5258.5	5363.8	6162.1	7902.4	9782.7	11557.8	13046.3	13596.7	15354.4	15851.4	13133.0
65°	4912.0	5052.0	5915.5	7793.2	10477.0	13039.5	14983.9	15123.9	16874.9	17190.8	13839.2
67°	4255.0	4408.3	5238.5	7161.5	10413.1	14037.8	16533.8	16079.3	17521.3	17559.9	13610.0
67.5°	4047.1	4205.8	5009.3	6899.0	10230.4	14168.3	16808.2	16211.3	17516.0	17473.2	13396.8
70°	2725.2	2903.9	3547.3	5065.3	8206.2	13186.2	16741.6	15804.8	16367.2	15878.1	11509.8
72.5°	1352.6	1358.0	1769.8	2774.4	4971.9	9457.5	13965.8	13520.7	13267.4	12344.0	8446.1
75°	651.6	663.7	835.6	1225.9	2096.3	4882.6	9524.2	9123.0	7767.9	6725.7	4227.1
77.5°	497.0	509.1	648.9	798.2	874.2	1592.4	4717.4	3812.5	2250.9	1797.7	1191.3
80°	383.8	406.5	547.6	613.1	578.4	638.3	1483.2	1167.3	875.5	803.5	590.4
82.5°	299.9	313.1	465.1	465.1	399.7	427.8	690.3	674.3	543.7	490.5	317.1
85°	211.9	238.5	374.5	346.4	262.6	265.2	413.1	395.9	279.8	225.2	124.0
87.5°	94.6	121.4	266.5	226.6	140.0	107.9	169.2	145.3	110.6	85.2	57.3
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°	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0	3173.0
2.5°	3151.7	3173.0	3206.3	3226.3	3252.9	3263.5	3274.2	3292.8	3307.6	3303.5	3296.9
5°	3181.0	3216.9	3258.2	3271.5	3271.5	3258.2	3250.2	3251.5	3247.6	3244.9	3237.0
7.5°	3223.6	3272.9	3302.2	3288.9	3247.6	3195.6	3146.4	3116.9	3089.0	3071.7	3077.1
10°	3283.6	3338.2	3339.4	3280.9	3182.2	3069.0	2971.8	2909.2	2849.2	2822.5	2830.5
12.5°	3370.3	3424.8	3378.2	3251.5	3078.3	2901.0	2722.6	2593.2	2477.3	2449.4	2441.4
15°	3463.4	3506.2	3402.2	3189.0	2929.1	2637.2	2337.4	2144.2	2014.9	1992.3	1984.3
17.5°	3544.7	3568.7	3390.2	3077.1	2693.2	2233.5	1884.4	1753.8	1727.1	1740.3	1740.3
20°	3616.8	3608.8	3338.2	2903.9	2321.4	1785.7	1583.2	1581.8	1617.8	1651.2	1653.8
22.5°	3707.3	3644.8	3255.5	2646.5	1877.6	1489.8	1455.3	1489.8	1529.9	1567.2	1571.1
25°	3815.3	3684.7	3145.0	2280.1	1509.8	1352.6	1367.3	1396.5	1421.8	1451.2	1452.6
27.5°	3923.2	3715.3	2989.0	1849.7	1310.0	1264.6	1280.7	1292.7	1299.3	1318.0	1318.0
30°	4048.5	3739.4	2763.8	1481.8	1218.0	1187.4	1178.0	1172.6	1178.0	1203.4	1204.6
32.5°	4205.8	3782.0	2456.0	1271.3	1175.3	1132.8	1084.8	1058.2	1076.8	1122.1	1130.1
35°	4384.3	3832.6	2086.9	1187.4	1160.7	1106.1	1018.0	976.7	983.5	1024.7	1031.4
37.5°	4608.1	3897.8	1723.0	1167.3	1175.3	1103.4	987.4	928.8	899.6	900.8	899.6
40°	4894.7	3963.2	1435.2	1172.6	1207.3	1110.0	972.9	880.9	819.6	822.2	827.6
42.5°	5194.4	4005.8	1252.6	1188.6	1245.9	1119.4	967.5	834.3	780.8	826.3	867.6
45°	5545.0	3993.9	1158.0	1203.4	1275.4	1123.4	947.5	828.9	784.8	920.9	998.1
47.5°	5947.5	3941.9	1104.7	1209.9	1283.3	1122.1	932.8	846.3	818.3	1054.2	1142.0
50°	6384.6	3860.6	1062.1	1199.3	1279.2	1116.8	948.8	867.6	831.6	1083.4	1151.4
52.5°	6863.0	3785.9	1018.0	1175.3	1259.3	1100.8	968.8	858.2	794.2	998.1	1050.1
55°	7429.3	3768.6	968.8	1134.1	1225.9	1083.4	958.1	828.9	752.9	884.9	916.8
57.5°	8077.0	3876.5	904.9	1083.4	1180.7	1048.9	932.8	812.8	738.2	804.9	822.2
60°	8899.1	4115.1	837.0	1030.0	1124.7	996.8	910.2	816.9	742.3	792.9	796.8
62.5°	9541.4	4329.7	775.5	964.8	1050.1	934.1	886.2	821.0	754.2	809.0	802.2
65°	9774.6	4224.4	699.6	867.6	944.7	864.9	852.9	823.6	754.2	818.3	803.5
67°	9296.3	3721.9	627.6	770.2	844.9	803.5	821.0	812.8	740.9	816.9	791.5
67.5°	9068.4	3544.7	609.1	754.2	818.3	784.8	812.8	807.5	736.9	814.3	784.8
70°	7478.6	2542.7	514.4	632.9	685.0	691.6	763.6	772.9	705.0	764.9	711.5
72.5°	5321.1	1591.2	443.8	490.5	553.0	591.7	696.9	726.3	662.3	664.9	621.0
75°	2633.2	854.2	395.9	378.5	430.5	493.1	607.7	662.3	599.7	554.3	539.7
77.5°	888.9	483.7	334.4	305.2	334.4	395.9	503.7	578.4	529.0	469.0	459.8
80°	459.8	351.7	261.1	245.1	263.8	306.5	394.4	481.1	451.8	454.5	374.5
82.5°	286.5	214.5	187.8	186.6	200.0	234.5	290.5	390.5	387.8	331.8	241.3
85°	133.3	124.0	120.0	124.0	127.9	133.3	189.3	278.6	294.6	178.6	158.6
87.5°	56.0	54.6	48.0	52.0	57.3	56.0	75.9	118.5	165.3	112.0	102.5
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)