

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: P196438

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196438
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26610.1 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

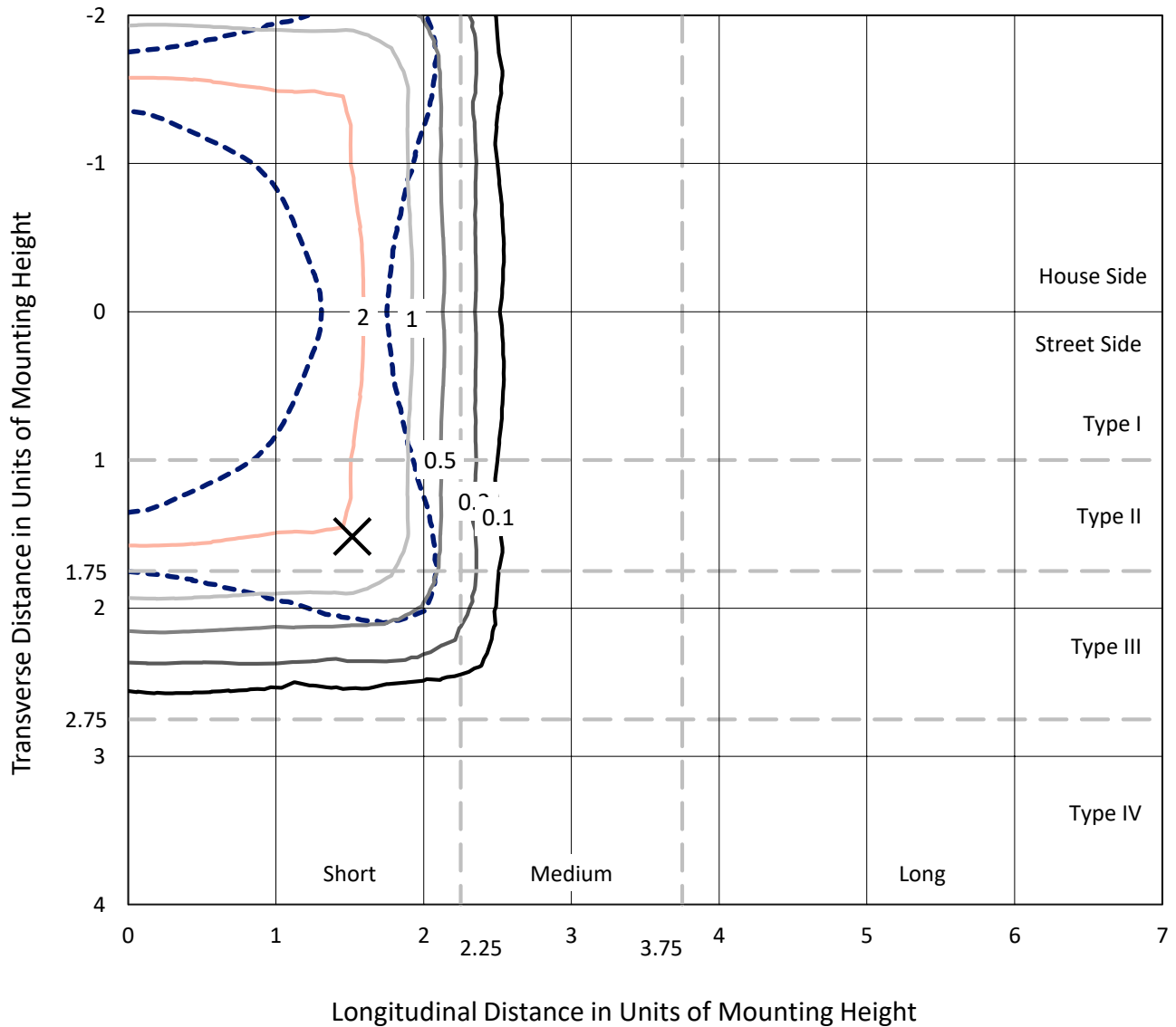
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196438
 CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

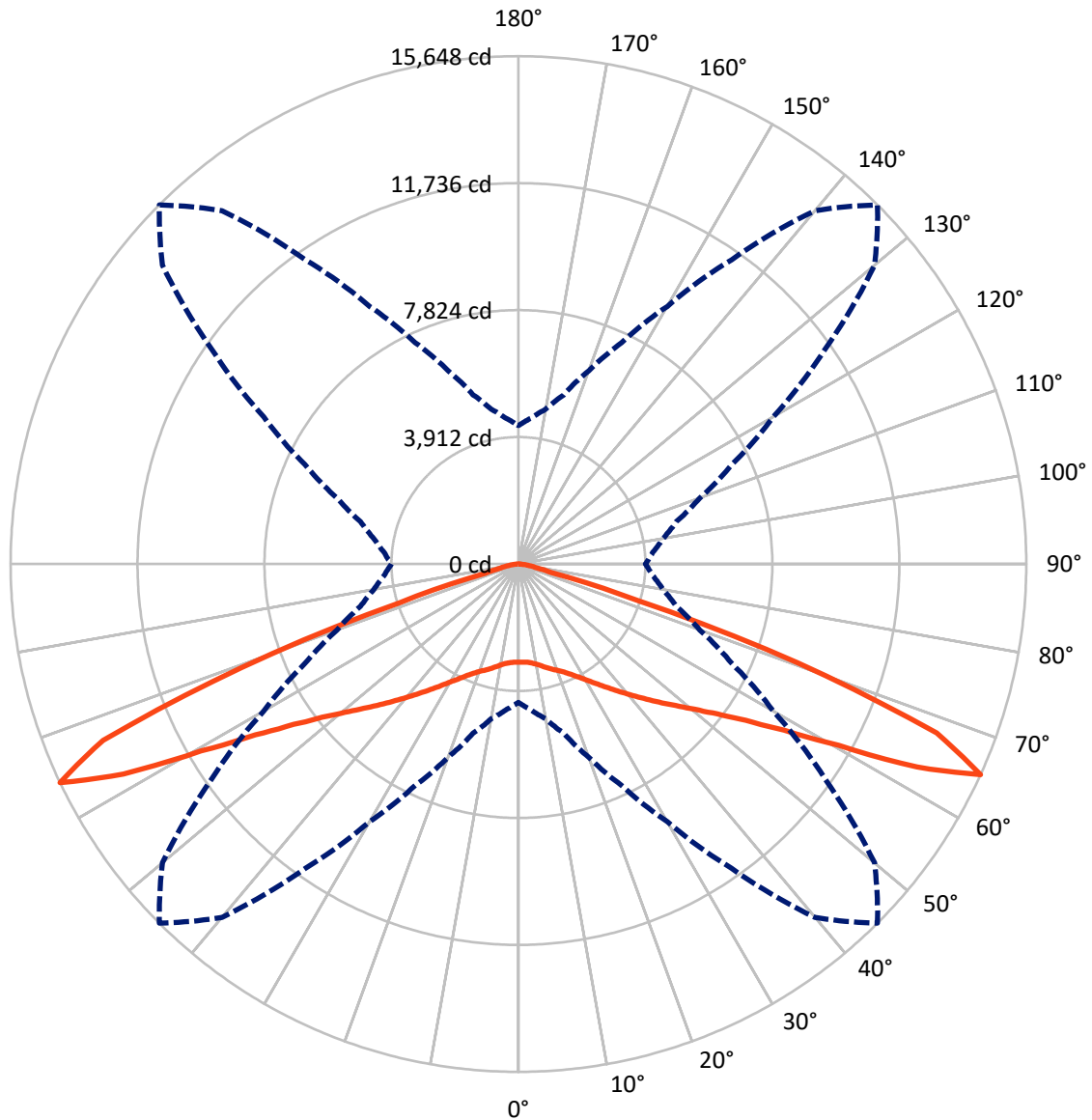
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196438
CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-7030-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P196438

CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	13305.0	0.0	13305.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13305.0	0.0	13305.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	26610.1	0.0	26610.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.8	1.1
10°-20°	944.7	3.6
20°-30°	1762.3	6.6
30°-40°	2971.6	11.2
40°-50°	4826.7	18.1
50°-60°	7562.6	28.4
60°-70°	7138.7	26.8
70°-80°	962.1	3.6
80°-90°	146.5	0.6
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°	26610.1	100.0
0°-180°	26610.1	100.0

Coefficient of Utilization



REPORT NUMBER: P196438

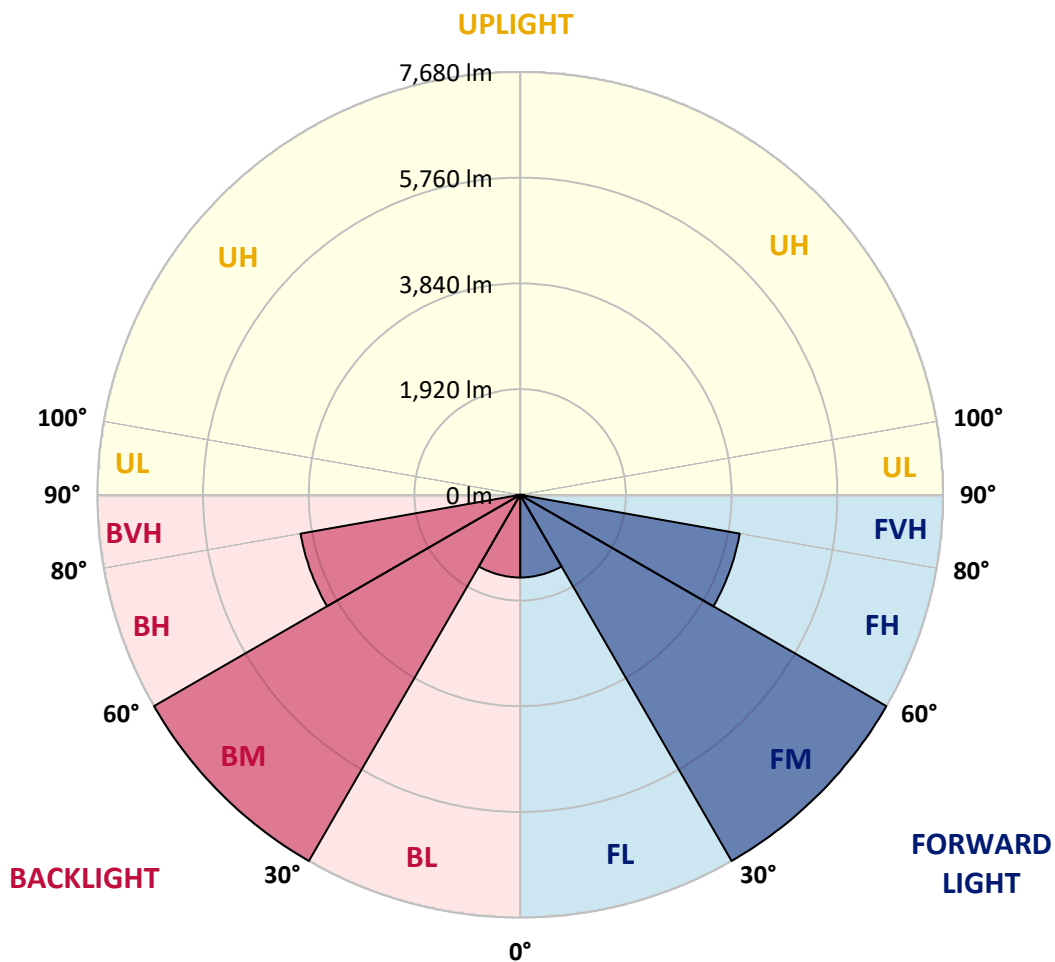
CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1500.9	5.6			
FM	(30°-60°)	7680.5	28.9			
FH	(60°-80°)	4050.4	15.2			G2/5000
FVH	(80°-90°)	73.3	0.3			G1/100
BL	(0°-30°)	1500.9	5.6	B3/2500		
BM	(30°-60°)	7680.5	28.9	B4/8500		
BH	(60°-80°)	4050.4	15.2	B4/5000		G2/5000
BVH	(80°-90°)	73.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





REPORT NUMBER: P196438

CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9
2.5°	3051.7	3051.7	3056.7	3055.0	3048.5	3043.4	3038.5	3031.8	3028.5	3025.2	3023.5
5°	3068.3	3068.3	3073.3	3071.6	3066.7	3060.1	3056.7	3051.7	3046.8	3043.4	3045.0
7.5°	3109.7	3111.3	3113.1	3111.3	3106.5	3101.5	3094.9	3093.1	3086.6	3081.5	3084.9
10°	3172.8	3172.8	3174.4	3176.0	3172.8	3161.1	3161.1	3157.8	3151.1	3144.6	3146.2
12.5°	3242.4	3242.4	3244.0	3244.0	3244.0	3237.4	3239.0	3237.4	3229.0	3225.8	3229.0
15°	3310.3	3311.9	3311.9	3315.3	3315.3	3317.0	3323.5	3323.5	3320.3	3318.6	3318.6
17.5°	3389.9	3393.1	3394.9	3399.8	3401.5	3404.8	3411.4	3413.2	3414.8	3409.8	3411.4
20°	3496.0	3497.6	3502.7	3504.3	3510.9	3510.9	3514.3	3512.5	3509.2	3502.7	3502.7
22.5°	3615.3	3618.6	3628.6	3628.6	3636.9	3631.9	3633.5	3628.6	3620.3	3617.0	3613.6
25°	3771.2	3776.1	3784.4	3781.1	3784.4	3776.1	3776.1	3776.1	3771.2	3766.1	3764.5
27.5°	3968.4	3960.1	3968.4	3961.7	3960.1	3953.5	3955.1	3951.8	3946.9	3945.3	3938.6
30°	4173.9	4164.0	4169.0	4170.7	4167.3	4165.6	4159.1	4154.0	4145.8	4147.5	4142.4
32.5°	4409.3	4399.5	4404.3	4406.0	4402.7	4406.0	4404.3	4392.8	4382.8	4389.5	4389.5
35°	4689.5	4682.9	4696.1	4701.1	4691.1	4686.1	4679.6	4666.3	4651.3	4661.3	4662.9
37.5°	5026.0	5017.7	5027.7	5040.9	5022.6	5012.7	4986.1	4966.3	4956.3	4961.4	4968.0
40°	5375.8	5377.4	5405.6	5408.9	5389.0	5377.4	5350.9	5321.0	5292.8	5292.8	5301.2
42.5°	5743.8	5748.6	5781.9	5793.5	5786.8	5765.3	5728.8	5692.4	5656.0	5662.6	5672.5
45°	6159.8	6153.2	6188.0	6216.2	6211.2	6204.7	6169.8	6103.4	6070.3	6068.7	6085.2
47.5°	6597.4	6610.7	6647.3	6695.2	6693.6	6677.1	6632.2	6571.0	6509.5	6514.6	6534.5
50°	7108.0	7126.2	7187.5	7235.5	7242.2	7237.4	7184.3	7113.0	7026.8	7031.7	7058.2
52.5°	7565.5	7592.0	7663.3	7762.8	7824.0	7852.3	7817.5	7751.2	7663.3	7668.3	7696.4
55°	7980.0	8021.4	8127.5	8263.4	8386.0	8500.4	8551.8	8550.2	8485.5	8500.4	8536.9
57.5°	8240.3	8298.2	8459.0	8677.8	8921.4	9151.9	9350.9	9538.2	9579.6	9657.4	9657.4
60°	7890.3	8026.3	8240.3	8614.8	9093.8	9611.1	10171.4	10716.7	11068.1	11344.9	11195.8
62.5°	6589.2	6789.7	7089.8	7583.8	8329.7	9252.9	10378.5	11646.6	12969.4	13778.3	13185.0
65°	4263.6	4515.4	4842.1	5397.3	6337.1	7525.8	9165.1	11444.4	14212.7	15648.2	14322.0
67.5°	1689.1	1859.9	2058.8	2453.3	3268.9	4435.8	6275.9	9087.2	12550.1	13904.4	12417.5
70°	807.3	835.5	873.5	958.1	1162.0	1568.1	2521.2	4477.3	7696.4	9123.7	7512.4
72.5°	583.5	588.5	606.7	634.9	694.6	777.5	944.9	1369.2	2653.9	3859.0	2657.1
75°	442.6	449.3	459.2	474.0	505.6	545.3	608.3	729.5	908.4	1047.7	906.8
77.5°	336.5	343.2	351.4	366.3	383.0	411.2	434.3	482.4	558.7	588.5	585.2
80°	245.3	257.0	270.2	283.4	295.1	308.3	310.0	333.2	376.3	404.5	396.2
82.5°	155.8	165.7	200.6	215.5	217.1	220.4	218.8	220.4	243.6	263.6	257.0
85°	99.4	106.1	124.3	141.0	137.5	144.2	144.2	141.0	131.0	112.7	134.3
87.5°	49.7	51.4	59.6	74.7	71.2	63.1	61.3	61.3	44.8	38.1	41.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196438

CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-7030-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9	3026.9
2.5°	3018.7	3021.9	3016.8	3016.8	3015.2	3018.7	3013.6	3013.6
5°	3041.8	3046.8	3045.0	3045.0	3048.5	3051.7	3050.1	3048.5
7.5°	3083.2	3086.6	3089.9	3091.5	3094.9	3093.1	3096.5	3094.9
10°	3146.2	3143.0	3147.9	3143.0	3144.6	3141.2	3143.0	3143.0
12.5°	3225.8	3220.9	3217.4	3214.2	3214.2	3207.6	3207.6	3209.2
15°	3317.0	3308.7	3302.1	3298.7	3295.4	3295.4	3290.5	3293.7
17.5°	3406.4	3398.2	3386.6	3386.6	3381.6	3378.3	3375.0	3383.2
20°	3501.0	3492.7	3486.0	3484.4	3474.5	3471.1	3472.8	3482.7
22.5°	3610.4	3605.3	3605.3	3602.1	3595.4	3590.5	3590.5	3602.1
25°	3757.9	3747.9	3749.6	3751.3	3747.9	3747.9	3744.7	3752.9
27.5°	3938.6	3930.3	3935.3	3938.6	3935.3	3940.2	3935.3	3941.8
30°	4150.8	4145.8	4150.8	4155.6	4147.5	4147.5	4144.1	4149.1
32.5°	4404.3	4397.8	4401.1	4401.1	4389.5	4379.5	4366.2	4376.2
35°	4682.9	4674.5	4681.2	4686.1	4672.9	4662.9	4643.1	4651.3
37.5°	4989.6	4992.8	5001.2	5022.6	5019.4	5002.8	4987.9	4994.5
40°	5332.6	5349.3	5385.7	5400.5	5397.3	5380.7	5360.8	5364.2
42.5°	5720.6	5742.1	5780.3	5805.1	5793.5	5770.3	5745.4	5755.3
45°	6143.2	6176.4	6226.1	6250.9	6236.1	6211.2	6176.4	6194.7
47.5°	6590.8	6657.1	6723.4	6756.6	6751.5	6716.8	6672.0	6677.1
50°	7126.2	7214.1	7298.6	7331.8	7306.9	7253.8	7190.9	7189.3
52.5°	7792.6	7887.1	7956.7	7948.4	7887.1	7804.2	7733.0	7729.6
55°	8624.7	8656.3	8646.3	8575.0	8467.3	8338.0	8246.8	8231.9
57.5°	9630.9	9524.9	9369.0	9153.5	8911.5	8666.2	8500.4	8439.0
60°	10860.9	10381.9	9824.9	9238.1	8702.6	8301.5	8047.9	7893.8
62.5°	11877.0	10489.7	9244.8	8225.2	7391.5	6895.8	6549.3	6335.5
65°	11528.9	9062.4	7258.8	5944.4	5034.2	4522.0	4155.6	3912.0
67.5°	8906.6	6055.3	4213.7	2920.8	2214.5	1874.8	1637.8	1483.6
70°	4490.5	2322.5	1407.4	992.9	848.7	789.1	749.3	726.0
72.5°	1317.8	880.2	731.1	646.5	595.1	558.7	535.4	523.8
75°	729.5	595.1	525.4	477.4	444.2	419.3	404.5	394.5
77.5°	502.3	432.6	397.8	366.3	339.8	321.6	310.0	300.0
80°	351.4	316.7	301.7	285.1	265.2	250.3	233.7	227.2
82.5°	233.7	218.8	215.5	202.2	190.6	174.0	144.2	134.3
85°	137.5	135.9	135.9	131.0	122.7	107.7	86.2	86.2
87.5°	48.1	49.7	51.4	54.7	53.0	44.8	36.5	34.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)