

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: P195958

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195958  
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-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 4000K, 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: 28144.4 lumens  
Efficiency: N/A  
Efficacy: 109.1 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

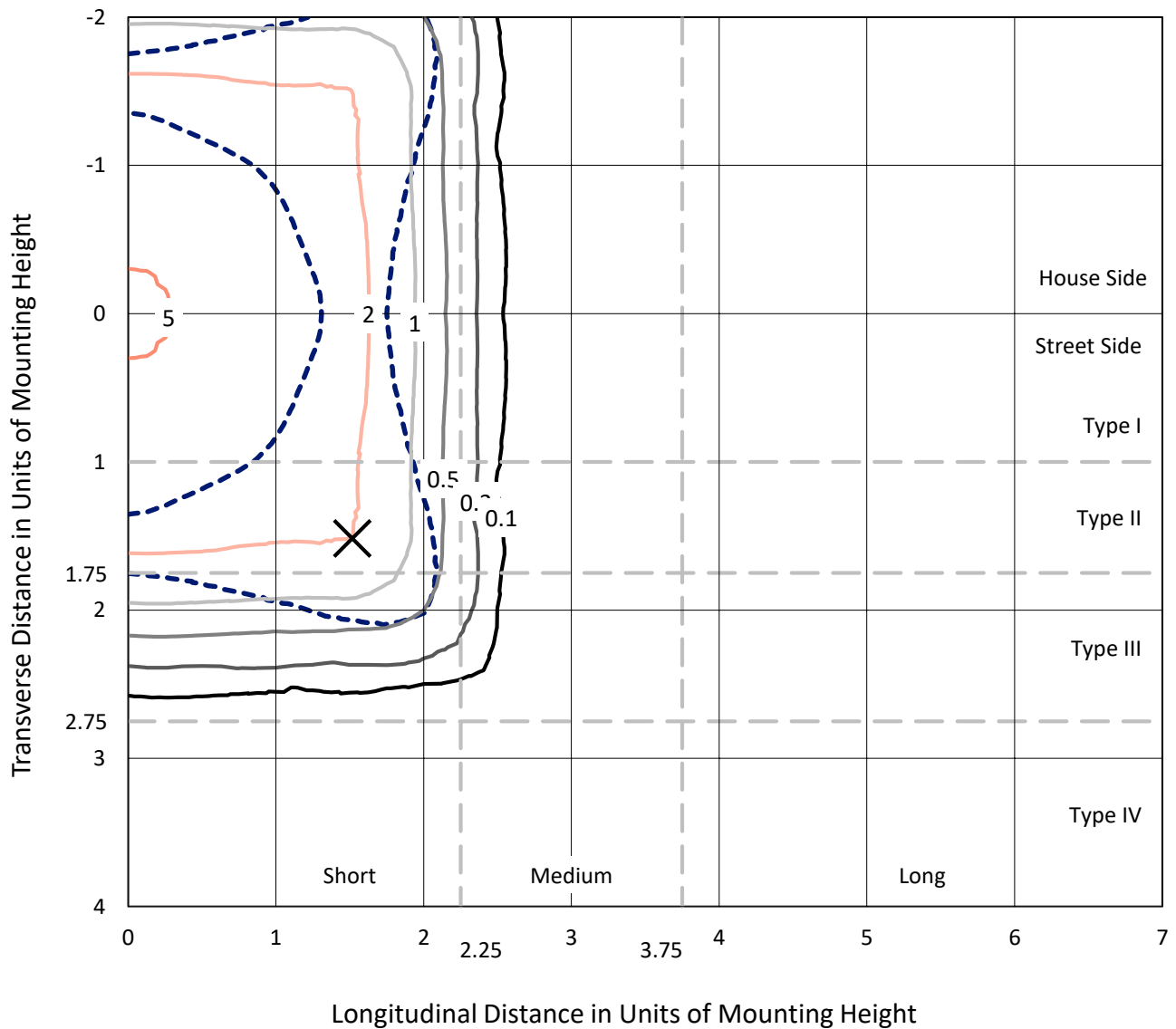
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P195958  
 CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-1200

### Iso-Footcandle Lines of Horizontal Illumination

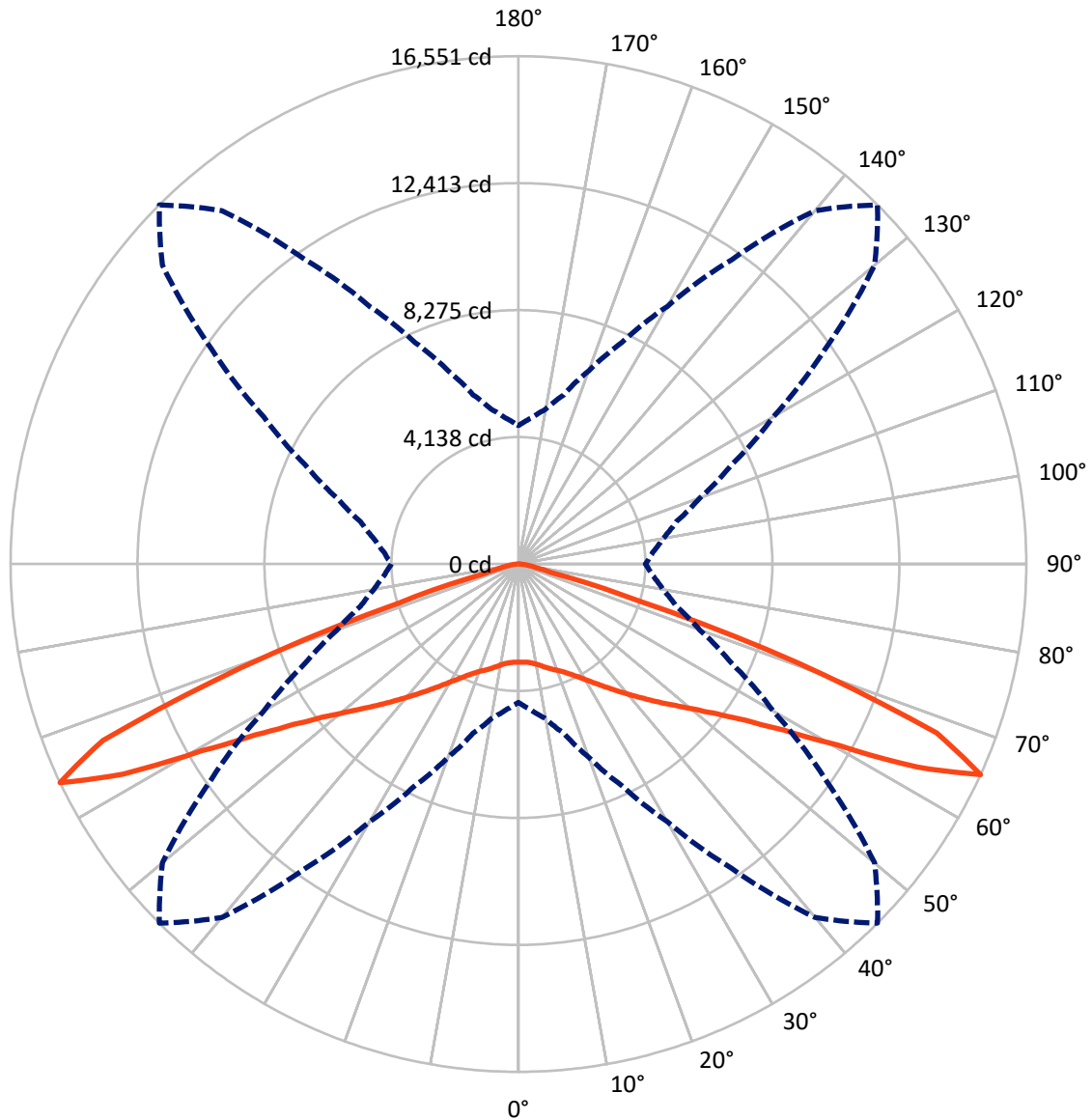
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc  
 Type V - Short - Full Cutoff

REPORT NUMBER: P195958  
CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-1200

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P195958

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

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	14072.2	0.0	14072.2
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	14072.2	0.0	14072.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	28144.4	0.0	28144.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	311.8	1.1
10°-20°	999.2	3.6
20°-30°	1864.0	6.6
30°-40°	3142.9	11.2
40°-50°	5105.0	18.1
50°-60°	7998.7	28.4
60°-70°	7550.4	26.8
70°-80°	1017.6	3.6
80°-90°	155.0	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°	28144.4	100.0
0°-180°	28144.4	100.0

**Coefficient of Utilization**



REPORT NUMBER: P195958

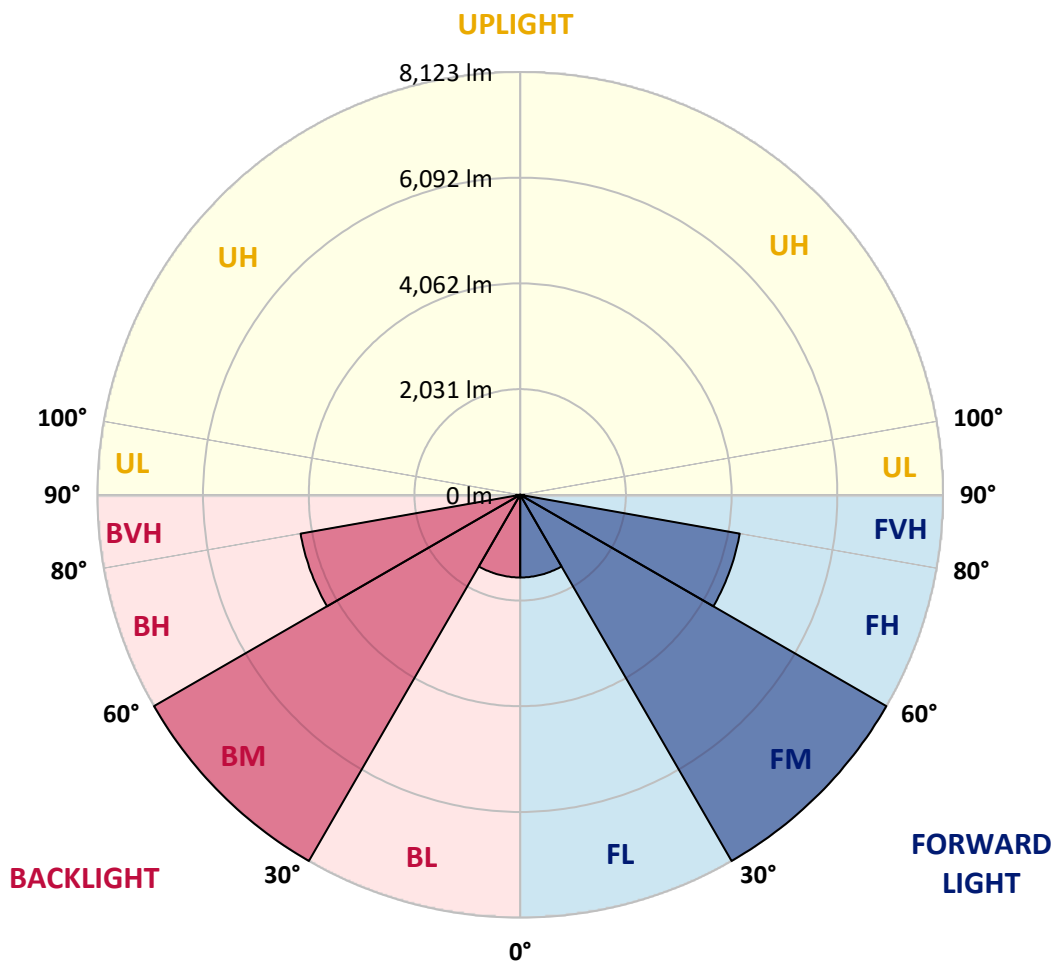
CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-1200

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1587.4	5.6			
FM	(30°-60°)	8123.3	28.9			
FH	(60°-80°)	4284.0	15.2			G2/5000
FVH	(80°-90°)	77.5	0.3			G1/100
BL	(0°-30°)	1587.4	5.6	B3/2500		
BM	(30°-60°)	8123.3	28.9	B4/8500		
BH	(60°-80°)	4284.0	15.2	B4/5000		G2/5000
BVH	(80°-90°)	77.5	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: P195958  
 CATALOG NUMBER: NAV-AF-04-D-UNV-5NQ-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4
2.5°	3227.7	3227.7	3232.9	3231.2	3224.2	3218.9	3213.7	3206.6	3203.2	3199.7	3197.8
5°	3245.2	3245.2	3250.5	3248.7	3243.5	3236.4	3232.9	3227.7	3222.4	3218.9	3220.7
7.5°	3289.1	3290.8	3292.6	3290.8	3285.5	3280.3	3273.2	3271.5	3264.5	3259.2	3262.8
10°	3355.7	3355.7	3357.4	3359.2	3355.7	3343.4	3343.4	3339.9	3332.9	3325.9	3327.7
12.5°	3429.3	3429.3	3431.1	3431.1	3431.1	3424.0	3425.8	3424.0	3415.3	3411.7	3415.3
15°	3501.2	3503.0	3503.0	3506.5	3506.5	3508.2	3515.3	3515.3	3511.7	3509.9	3509.9
17.5°	3585.3	3588.8	3590.7	3595.9	3597.6	3601.1	3608.2	3609.9	3611.6	3606.4	3608.2
20°	3697.6	3699.3	3704.6	3706.4	3713.3	3713.3	3716.9	3715.1	3711.6	3704.6	3704.6
22.5°	3823.8	3827.3	3837.8	3837.8	3846.6	3841.3	3843.1	3837.8	3829.0	3825.5	3822.1
25°	3988.6	3993.9	4002.6	3999.1	4002.6	3993.9	3993.9	3993.9	3988.6	3983.4	3981.6
27.5°	4197.3	4188.5	4197.3	4190.2	4188.5	4181.4	4183.3	4179.7	4174.5	4172.7	4165.7
30°	4414.6	4404.1	4409.3	4411.2	4407.6	4405.8	4398.9	4393.6	4384.8	4386.6	4381.3
32.5°	4663.6	4653.1	4658.3	4660.1	4656.6	4660.1	4658.3	4646.0	4635.5	4642.6	4642.6
35°	4959.9	4952.9	4966.9	4972.2	4961.6	4956.4	4949.3	4935.3	4919.6	4930.1	4931.9
37.5°	5315.8	5307.1	5317.5	5331.6	5312.3	5301.7	5273.7	5252.6	5242.1	5247.4	5254.4
40°	5685.8	5687.5	5717.3	5720.8	5699.8	5687.5	5659.5	5627.9	5598.1	5598.1	5606.8
42.5°	6074.9	6080.2	6115.3	6127.6	6120.5	6097.7	6059.1	6020.6	5982.0	5989.1	5999.5
45°	6515.0	6508.0	6544.8	6574.6	6569.4	6562.3	6525.5	6455.4	6420.3	6418.6	6436.1
47.5°	6977.9	6991.9	7030.4	7081.3	7079.5	7062.0	7014.7	6949.8	6885.0	6890.2	6911.3
50°	7517.9	7537.1	7602.0	7652.8	7659.9	7654.6	7598.5	7523.1	7431.9	7437.2	7465.3
52.5°	8001.7	8029.8	8105.1	8210.4	8275.3	8305.0	8268.2	8198.1	8105.1	8110.5	8140.2
55°	8440.1	8483.8	8596.1	8739.9	8869.6	8990.5	9044.9	9043.2	8974.8	8990.5	9029.2
57.5°	8715.3	8776.7	8946.7	9178.1	9435.9	9679.6	9890.0	10088.0	10131.9	10214.3	10214.3
60°	8345.3	8489.2	8715.3	9111.5	9618.2	10165.3	10757.9	11334.6	11706.3	11999.1	11841.3
62.5°	6969.1	7181.2	7498.5	8021.1	8810.0	9786.6	10977.0	12318.2	13717.3	14572.9	13945.2
65°	4509.3	4775.7	5121.2	5708.5	6702.6	7959.7	9693.6	12104.3	15032.2	16550.5	15147.9
67.5°	1786.6	1967.1	2177.6	2594.8	3457.4	4691.7	6637.7	9611.2	13273.7	14706.0	13133.5
70°	853.9	883.6	923.9	1013.3	1229.0	1658.5	2666.6	4735.4	8140.2	9649.8	7945.7
72.5°	617.1	622.4	641.7	671.5	734.6	822.2	999.3	1448.2	2806.9	4081.5	2810.5
75°	468.1	475.2	485.6	501.5	534.7	576.8	643.4	771.4	960.8	1108.1	959.0
77.5°	355.9	362.9	371.6	387.5	405.0	434.8	459.3	510.1	590.9	622.4	618.9
80°	259.5	271.8	285.8	299.8	312.1	326.1	327.9	352.4	398.0	427.8	419.0
82.5°	164.8	175.3	212.2	227.9	229.7	233.1	231.4	233.1	257.7	278.8	271.8
85°	105.2	112.2	131.4	149.0	145.6	152.5	152.5	149.0	138.5	119.2	142.0
87.5°	52.6	54.3	63.1	78.9	75.4	66.6	64.9	64.9	47.4	40.3	43.8
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: P195958

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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4	3201.4
2.5°	3192.6	3196.1	3190.9	3190.9	3189.2	3192.6	3187.4	3187.4
5°	3217.2	3222.4	3220.7	3220.7	3224.2	3227.7	3226.0	3224.2
7.5°	3261.0	3264.5	3268.0	3269.8	3273.2	3271.5	3275.1	3273.2
10°	3327.7	3324.1	3329.4	3324.1	3325.9	3322.3	3324.1	3324.1
12.5°	3411.7	3406.5	3403.1	3399.5	3399.5	3392.5	3392.5	3394.3
15°	3508.2	3499.4	3492.5	3488.9	3485.4	3485.4	3480.2	3483.7
17.5°	3602.9	3594.1	3581.9	3581.9	3576.5	3573.1	3569.6	3578.4
20°	3702.8	3694.1	3687.0	3685.3	3674.7	3671.3	3673.0	3683.5
22.5°	3818.6	3813.3	3813.3	3809.8	3802.7	3797.5	3797.5	3809.8
25°	3974.6	3964.0	3965.8	3967.5	3964.0	3964.0	3960.6	3969.4
27.5°	4165.7	4156.9	4162.2	4165.7	4162.2	4167.4	4162.2	4169.1
30°	4390.1	4384.8	4390.1	4395.3	4386.6	4386.6	4383.0	4388.4
32.5°	4658.3	4651.4	4654.8	4654.8	4642.6	4632.0	4618.0	4628.5
35°	4952.9	4944.1	4951.1	4956.4	4942.4	4931.9	4910.8	4919.6
37.5°	5277.2	5280.7	5289.5	5312.3	5308.8	5291.2	5275.5	5282.5
40°	5640.1	5657.6	5696.2	5712.1	5708.5	5691.0	5669.9	5673.5
42.5°	6050.3	6073.2	6113.5	6139.9	6127.6	6103.0	6076.7	6087.2
45°	6497.5	6532.6	6585.1	6611.4	6595.7	6569.4	6532.6	6551.8
47.5°	6970.8	7041.0	7111.1	7146.1	7140.9	7104.1	7056.7	7062.0
50°	7537.1	7630.1	7719.5	7754.6	7728.2	7672.1	7605.5	7603.8
52.5°	8241.9	8341.9	8415.5	8406.7	8341.9	8254.2	8178.8	8175.3
55°	9122.1	9155.4	9144.9	9069.5	8955.5	8818.8	8722.3	8706.5
57.5°	10186.2	10074.0	9909.2	9681.3	9425.4	9165.8	8990.5	8925.7
60°	11487.1	10980.5	10391.4	9770.7	9204.4	8780.2	8512.0	8348.9
62.5°	12561.9	11094.4	9777.8	8699.5	7817.7	7293.4	6927.0	6700.8
65°	12193.7	9584.9	7677.3	6287.1	5324.6	4782.8	4395.3	4137.6
67.5°	9420.1	6404.6	4456.7	3089.2	2342.4	1982.9	1732.2	1569.1
70°	4749.5	2456.3	1488.5	1050.2	897.6	834.5	792.5	767.9
72.5°	1393.8	931.0	773.1	683.7	629.4	590.9	566.3	554.0
75°	771.4	629.4	555.8	504.9	469.8	443.6	427.8	417.3
77.5°	531.2	457.6	420.7	387.5	359.4	340.1	327.9	317.3
80°	371.6	334.9	319.1	301.6	280.5	264.7	247.2	240.2
82.5°	247.2	231.4	227.9	213.9	201.6	184.1	152.5	142.0
85°	145.6	143.7	143.7	138.5	129.7	114.0	91.1	91.1
87.5°	50.8	52.6	54.3	57.9	56.1	47.4	38.6	36.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)