

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: P270568

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270568
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-05-D-UNV-5NQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 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: 29461.1 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G2

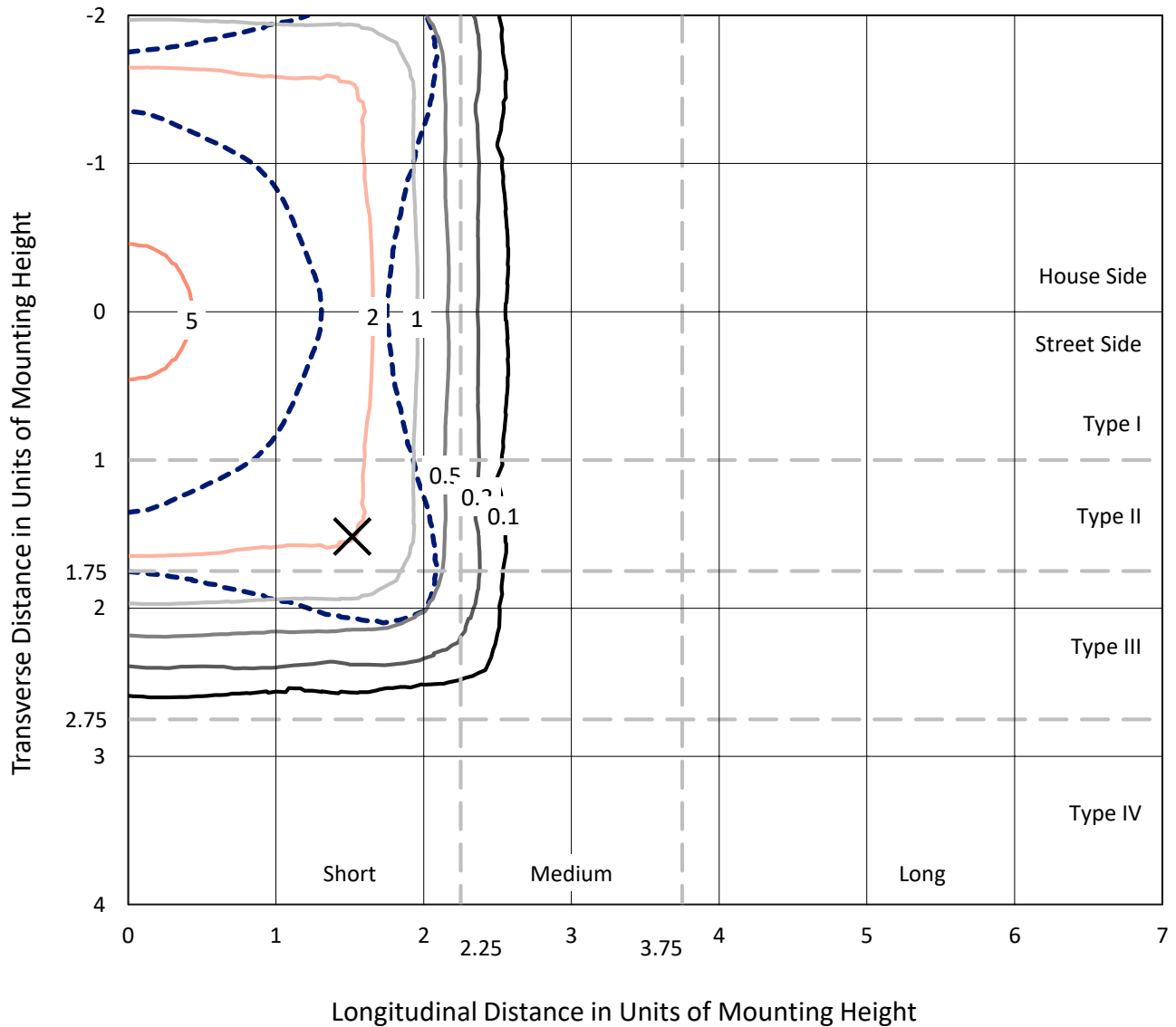
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

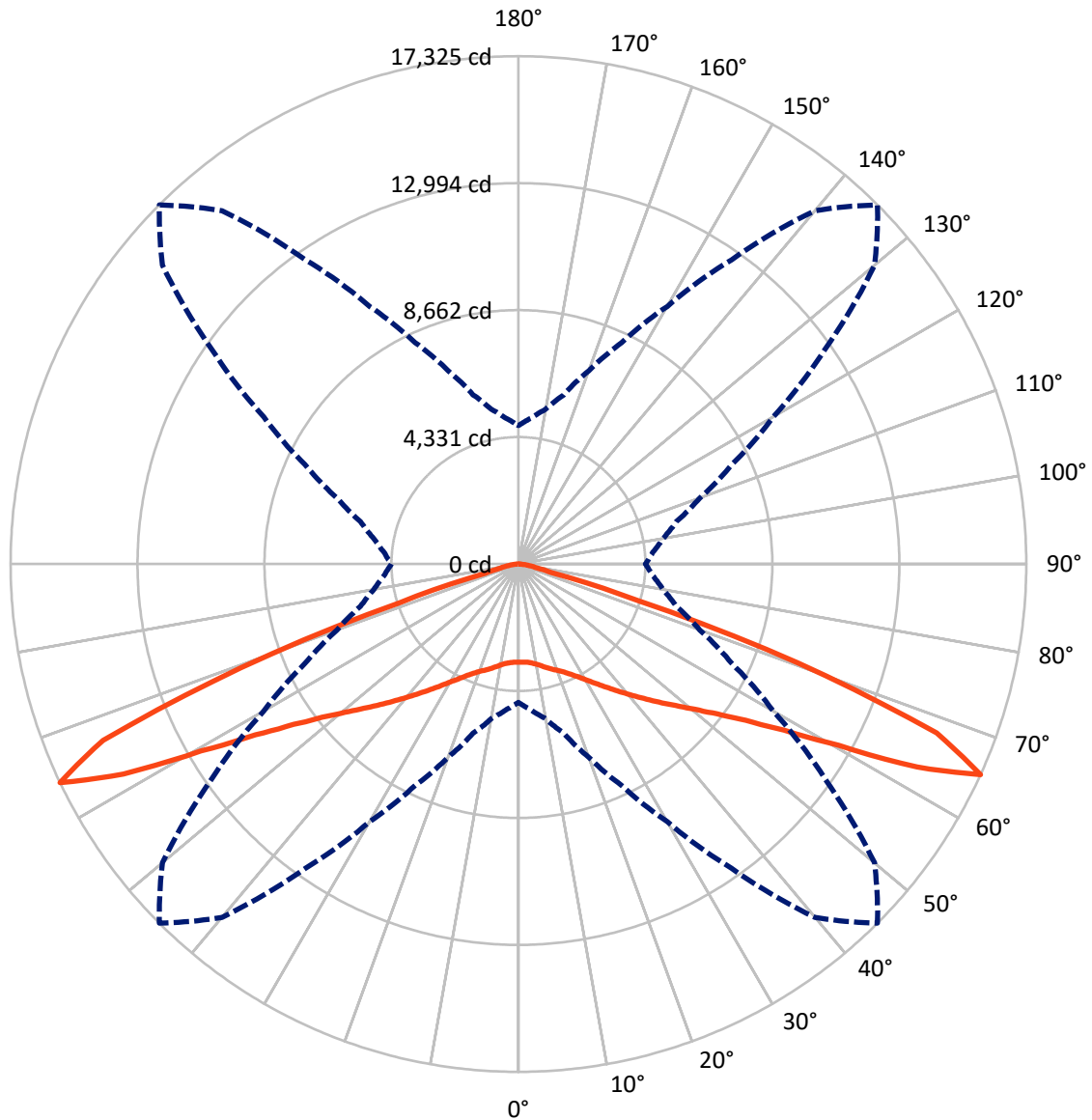
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	14730.6	0.0	14730.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14730.6	0.0	14730.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	29461.1	0.0	29461.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.3	1.1
10°-20°	1045.9	3.6
20°-30°	1951.2	6.6
30°-40°	3290.0	11.2
40°-50°	5343.8	18.1
50°-60°	8372.9	28.4
60°-70°	7903.6	26.8
70°-80°	1065.2	3.6
80°-90°	162.3	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°	29461.1	100.0
0°-180°	29461.1	100.0



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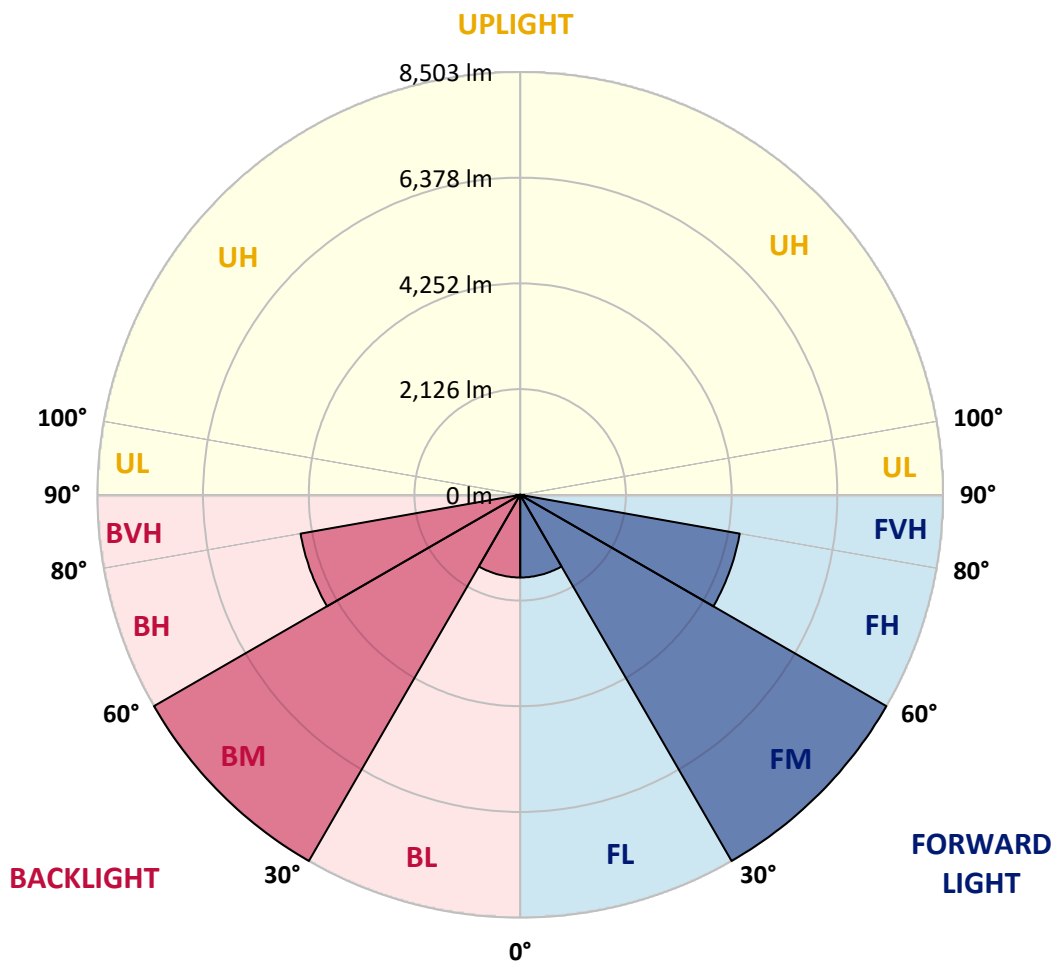
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1661.7	5.6			
FM (30°-60°)	8503.3	28.9			
FH (60°-80°)	4484.4	15.2			G2/5000
FVH (80°-90°)	81.1	0.3			G1/100
BL (0°-30°)	1661.7	5.6	B3/2500		
BM (30°-60°)	8503.3	28.9	B5		
BH (60°-80°)	4484.4	15.2	B4/5000		G2/5000
BVH (80°-90°)	81.1	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1
2.5°	3378.6	3378.6	3384.3	3382.4	3375.0	3369.5	3364.1	3356.6	3353.1	3349.3	3347.5
5°	3397.0	3397.0	3402.6	3400.8	3395.2	3387.9	3384.3	3378.6	3373.1	3369.5	3371.3
7.5°	3442.9	3444.8	3446.5	3444.8	3439.3	3433.7	3426.4	3424.6	3417.2	3411.8	3415.4
10°	3512.6	3512.6	3514.4	3516.3	3512.6	3499.8	3499.8	3496.2	3488.7	3481.6	3483.3
12.5°	3589.7	3589.7	3591.7	3591.7	3591.7	3584.2	3586.0	3584.2	3575.1	3571.4	3575.1
15°	3664.9	3666.8	3666.8	3670.6	3670.6	3672.4	3679.6	3679.6	3676.0	3674.2	3674.2
17.5°	3753.1	3756.7	3758.6	3764.1	3766.0	3769.6	3777.0	3778.8	3780.5	3775.0	3777.0
20°	3870.5	3872.4	3878.0	3879.7	3887.1	3887.1	3890.6	3888.9	3885.2	3878.0	3878.0
22.5°	4002.7	4006.4	4017.4	4017.4	4026.6	4021.1	4022.9	4017.4	4008.1	4004.6	4000.8
25°	4175.2	4180.7	4189.9	4186.2	4189.9	4180.7	4180.7	4180.7	4175.2	4169.8	4167.9
27.5°	4393.6	4384.4	4393.6	4386.2	4384.4	4377.1	4378.9	4375.3	4369.7	4367.9	4360.6
30°	4621.2	4610.1	4615.6	4617.5	4613.9	4612.0	4604.6	4599.1	4590.0	4591.7	4586.2
32.5°	4881.7	4870.8	4876.3	4878.1	4874.5	4878.1	4876.3	4863.5	4852.5	4859.7	4859.7
35°	5191.9	5184.6	5199.3	5204.8	5193.8	5188.3	5181.0	5166.2	5149.8	5160.8	5162.6
37.5°	5564.6	5555.3	5566.3	5581.0	5560.8	5549.8	5520.4	5498.4	5487.3	5492.9	5500.2
40°	5951.7	5953.5	5984.8	5988.5	5966.5	5953.5	5924.2	5891.2	5860.0	5860.0	5869.2
42.5°	6359.1	6364.6	6401.3	6414.2	6406.8	6382.9	6342.7	6302.2	6261.8	6269.2	6280.2
45°	6819.8	6812.4	6851.1	6882.2	6876.6	6869.3	6830.8	6757.4	6720.7	6718.9	6737.2
47.5°	7304.3	7319.0	7359.4	7412.5	7410.7	7392.4	7342.8	7275.0	7207.0	7212.5	7234.6
50°	7869.5	7889.8	7957.6	8010.8	8018.2	8012.7	7954.0	7875.0	7779.6	7785.2	7814.4
52.5°	8376.1	8405.4	8484.3	8594.4	8662.4	8693.5	8655.0	8581.7	8484.3	8489.9	8521.1
55°	8834.9	8880.7	8998.2	9148.7	9284.5	9411.2	9468.0	9466.2	9394.7	9411.2	9451.5
57.5°	9123.0	9187.2	9365.3	9607.6	9877.4	10132.4	10352.6	10560.0	10605.8	10692.2	10692.2
60°	8735.7	8886.4	9123.0	9537.8	10068.3	10640.9	11261.2	11865.0	12254.0	12560.5	12395.4
62.5°	7295.1	7517.1	7849.4	8396.3	9222.1	10244.5	11490.5	12894.5	14359.0	15254.6	14597.5
65°	4720.2	4999.2	5360.7	5975.5	7016.1	8332.0	10147.2	12670.6	15735.4	17324.8	15856.5
67.5°	1870.1	2059.2	2279.4	2716.1	3619.1	4911.2	6948.3	10060.8	13894.7	15394.1	13747.9
70°	893.8	925.0	967.1	1060.8	1286.6	1736.2	2791.5	4956.9	8521.1	10101.3	8317.3
72.5°	646.1	651.5	671.8	703.0	768.9	860.8	1046.0	1515.9	2938.3	4272.5	2941.9
75°	490.0	497.3	508.4	524.9	559.7	603.8	673.5	807.4	1005.7	1159.9	1003.9
77.5°	372.5	380.0	389.1	405.6	423.9	455.1	480.9	534.0	618.5	651.5	647.9
80°	271.6	284.5	299.1	313.8	326.7	341.4	343.2	368.8	416.6	447.9	438.6
82.5°	172.6	183.6	222.2	238.6	240.4	244.1	242.3	244.1	269.9	291.8	284.5
85°	110.1	117.5	137.6	155.9	152.4	159.7	159.7	155.9	144.9	124.9	148.7
87.5°	55.1	57.0	66.0	82.6	79.0	69.8	67.9	67.9	49.5	42.2	45.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1	3351.1
2.5°	3342.0	3345.6	3340.2	3340.2	3338.3	3342.0	3336.5	3336.5
5°	3367.7	3373.1	3371.3	3371.3	3375.0	3378.6	3376.9	3375.0
7.5°	3413.6	3417.2	3420.9	3422.7	3426.4	3424.6	3428.2	3426.4
10°	3483.3	3479.7	3485.2	3479.7	3481.6	3477.8	3479.7	3479.7
12.5°	3571.4	3565.9	3562.1	3558.5	3558.5	3551.2	3551.2	3553.1
15°	3672.4	3663.2	3655.8	3652.1	3648.5	3648.5	3642.9	3646.6
17.5°	3771.4	3762.3	3749.4	3749.4	3744.0	3740.3	3736.6	3745.8
20°	3876.0	3866.8	3859.6	3857.7	3846.7	3842.9	3844.8	3855.9
22.5°	3997.2	3991.7	3991.7	3987.9	3980.7	3975.2	3975.2	3987.9
25°	4160.5	4149.5	4151.3	4153.1	4149.5	4149.5	4145.9	4155.0
27.5°	4360.6	4351.4	4356.9	4360.6	4356.9	4362.3	4356.9	4364.2
30°	4595.5	4590.0	4595.5	4600.9	4591.7	4591.7	4588.2	4593.7
32.5°	4876.3	4869.0	4872.5	4872.5	4859.7	4848.7	4834.0	4845.1
35°	5184.6	5175.4	5182.7	5188.3	5173.6	5162.6	5140.6	5149.8
37.5°	5524.0	5527.8	5537.0	5560.8	5557.2	5538.8	5522.3	5529.5
40°	5904.0	5922.3	5962.7	5979.3	5975.5	5957.2	5935.2	5938.9
42.5°	6333.5	6357.3	6399.5	6427.1	6414.2	6388.4	6361.0	6371.9
45°	6801.4	6838.2	6893.2	6920.7	6904.3	6876.6	6838.2	6858.3
47.5°	7296.9	7370.4	7443.7	7480.5	7474.9	7436.3	7386.9	7392.4
50°	7889.8	7987.0	8080.7	8117.4	8089.7	8031.0	7961.3	7959.5
52.5°	8627.5	8732.2	8809.1	8800.1	8732.2	8640.3	8561.4	8557.8
55°	9548.9	9583.7	9572.7	9493.7	9374.4	9231.3	9130.4	9113.8
57.5°	10662.8	10545.4	10372.9	10134.3	9866.4	9594.6	9411.2	9343.4
60°	12024.5	11494.2	10877.5	10227.8	9635.1	9191.0	8910.2	8739.5
62.5°	13149.6	11613.5	10235.2	9106.5	8183.4	7634.6	7251.1	7014.3
65°	12764.1	10033.3	8036.5	6581.3	5573.7	5006.6	4600.9	4331.2
67.5°	9860.9	6704.2	4665.2	3233.7	2452.0	2075.7	1813.1	1642.6
70°	4971.7	2571.2	1558.1	1099.3	939.6	873.6	829.6	803.9
72.5°	1459.0	974.5	809.4	715.8	658.8	618.5	592.8	579.9
75°	807.4	658.8	581.8	528.6	491.8	464.3	447.9	436.8
77.5°	556.1	478.9	440.4	405.6	376.2	356.1	343.2	332.2
80°	389.1	350.5	334.0	315.7	293.7	277.1	258.8	251.4
82.5°	258.8	242.3	238.6	223.9	211.0	192.6	159.7	148.7
85°	152.4	150.5	150.5	144.9	135.9	119.3	95.4	95.4
87.5°	53.2	55.1	57.0	60.5	58.7	49.5	40.3	38.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)