

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: P195467

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195467
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24975 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

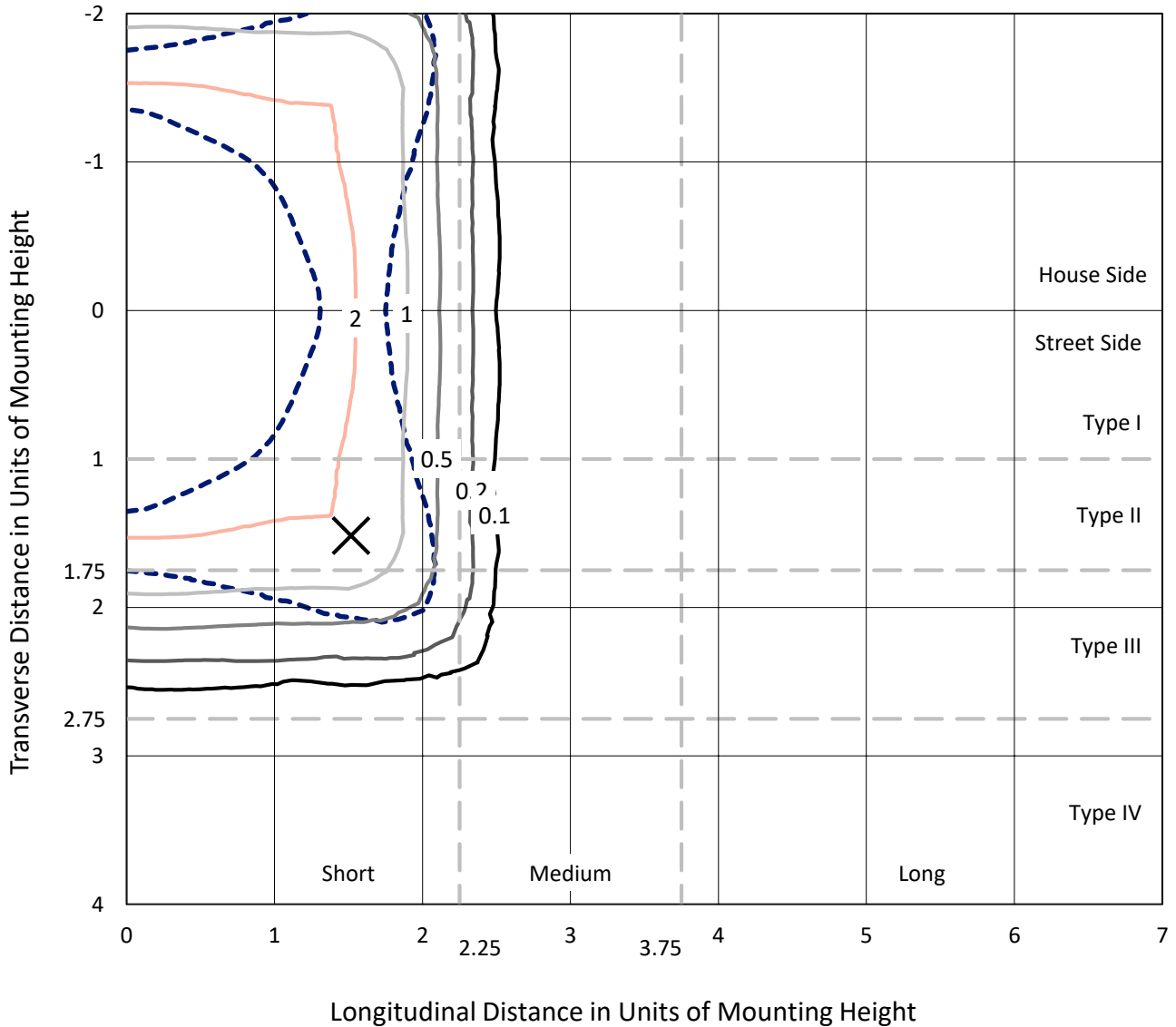
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

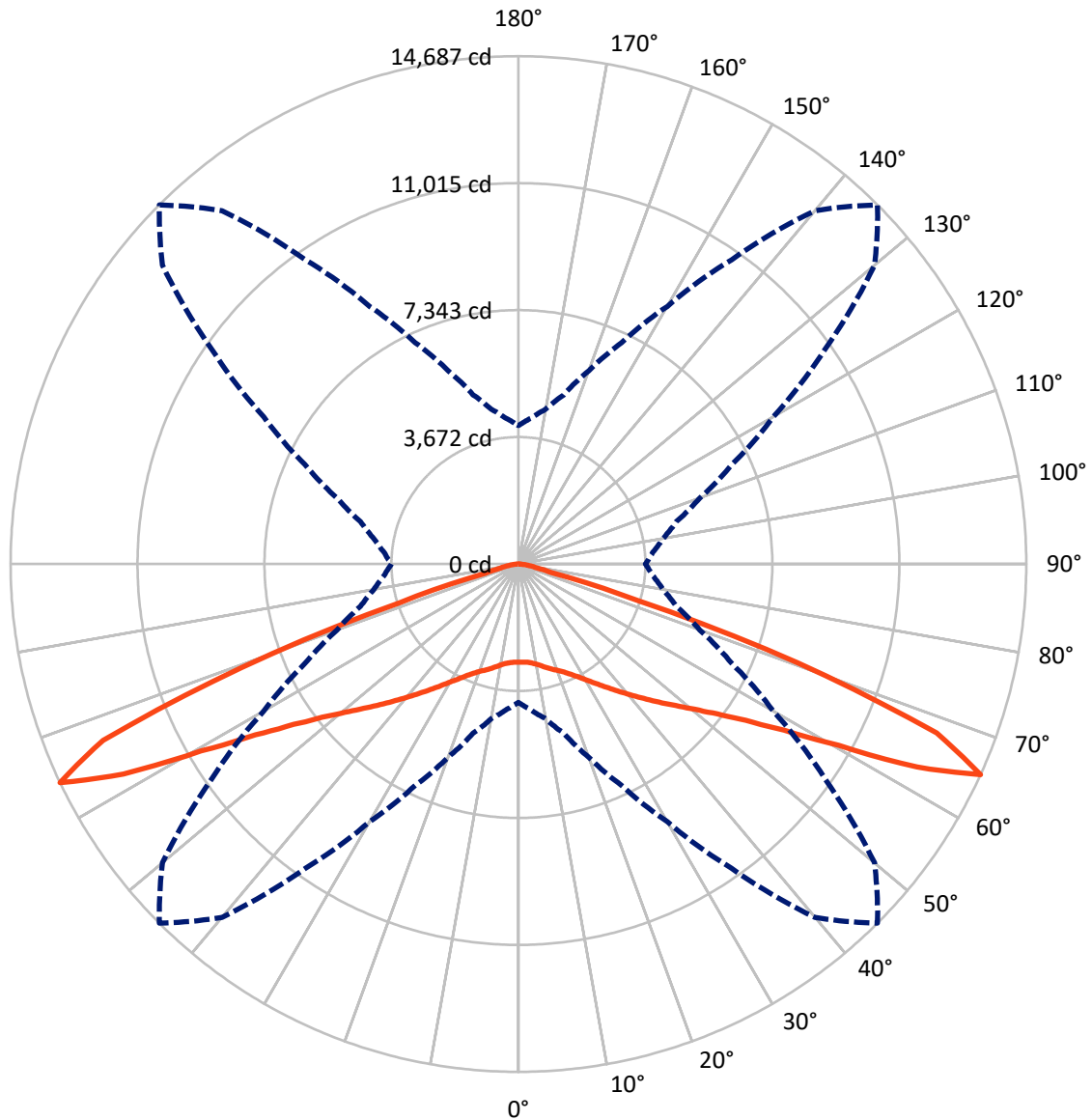
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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	12487.5	0.0	12487.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12487.5	0.0	12487.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	24975.0	0.0	24975.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.6	1.1
10°-20°	886.7	3.6
20°-30°	1654.0	6.6
30°-40°	2789.0	11.2
40°-50°	4530.1	18.1
50°-60°	7097.9	28.4
60°-70°	6700.1	26.8
70°-80°	903.0	3.6
80°-90°	137.5	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°	24975.0	100.0
0°-180°	24975.0	100.0



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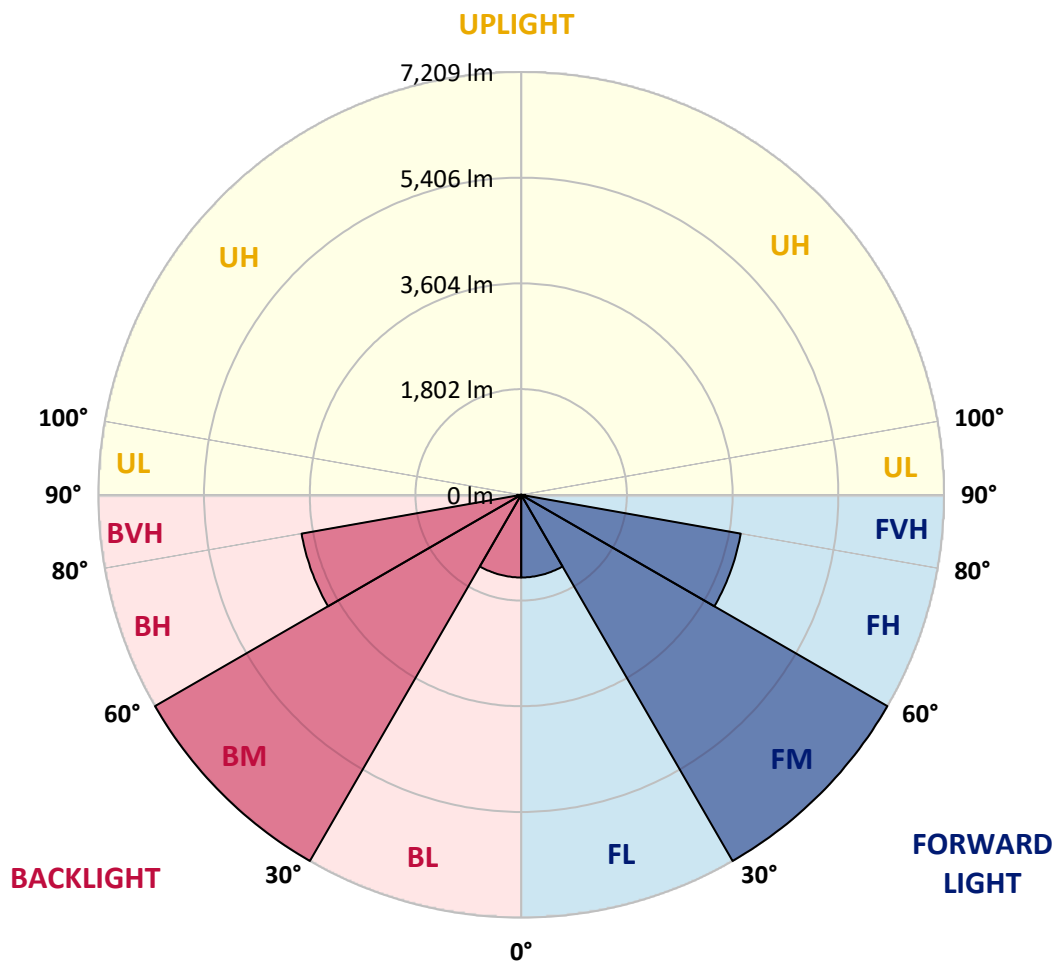
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1408.7	5.6			
FM	(30°-60°)	7208.5	28.9			
FH	(60°-80°)	3801.5	15.2			G2/5000
FVH	(80°-90°)	68.8	0.3			G1/100
BL	(0°-30°)	1408.7	5.6	B3/2500		
BM	(30°-60°)	7208.5	28.9	B4/8500		
BH	(60°-80°)	3801.5	15.2	B4/5000		G2/5000
BVH	(80°-90°)	68.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9
2.5°	2864.2	2864.2	2868.9	2867.3	2861.1	2856.4	2851.8	2845.5	2842.4	2839.3	2837.8
5°	2879.8	2879.8	2884.4	2882.9	2878.2	2872.0	2868.9	2864.2	2859.5	2856.4	2858.0
7.5°	2918.7	2920.2	2921.8	2920.2	2915.6	2910.9	2904.7	2903.1	2896.9	2892.2	2895.3
10°	2977.8	2977.8	2979.3	2980.9	2977.8	2966.9	2966.9	2963.8	2957.6	2951.3	2952.9
12.5°	3043.1	3043.1	3044.7	3044.7	3044.7	3038.5	3040.0	3038.5	3030.7	3027.6	3030.7
15°	3106.9	3108.5	3108.5	3111.6	3111.6	3113.1	3119.4	3119.4	3116.3	3114.7	3114.7
17.5°	3181.6	3184.7	3186.3	3190.9	3192.5	3195.6	3201.8	3203.4	3204.9	3200.3	3201.8
20°	3281.2	3282.7	3287.4	3288.9	3295.2	3295.2	3298.3	3296.7	3293.6	3287.4	3287.4
22.5°	3393.2	3396.3	3405.6	3405.6	3413.4	3408.7	3410.3	3405.6	3397.9	3394.7	3391.6
25°	3539.4	3544.1	3551.9	3548.8	3551.9	3544.1	3544.1	3544.1	3539.4	3534.8	3533.2
27.5°	3724.6	3716.8	3724.6	3718.3	3716.8	3710.6	3712.1	3709.0	3704.3	3702.8	3696.6
30°	3917.5	3908.1	3912.8	3914.4	3911.3	3909.7	3903.5	3898.8	3891.0	3892.6	3887.9
32.5°	4138.4	4129.1	4133.7	4135.3	4132.2	4135.3	4133.7	4122.8	4113.5	4119.7	4119.7
35°	4401.3	4395.1	4407.6	4412.2	4402.9	4398.2	4392.0	4379.6	4365.6	4374.9	4376.4
37.5°	4717.2	4709.4	4718.7	4731.2	4714.1	4704.7	4679.8	4661.2	4651.8	4656.5	4662.7
40°	5045.4	5047.0	5073.4	5076.5	5057.9	5047.0	5022.1	4994.1	4967.6	4967.6	4975.4
42.5°	5390.8	5395.5	5426.6	5437.5	5431.3	5411.0	5376.8	5342.6	5308.4	5314.6	5323.9
45°	5781.3	5775.1	5807.8	5834.2	5829.6	5823.3	5790.7	5728.4	5697.3	5695.8	5711.3
47.5°	6192.1	6204.5	6238.7	6283.8	6282.3	6266.7	6224.7	6167.2	6109.6	6114.3	6132.9
50°	6671.2	6688.4	6745.9	6791.0	6797.3	6792.6	6742.8	6675.9	6595.0	6599.7	6624.6
52.5°	7100.6	7125.5	7192.4	7285.8	7343.3	7369.8	7337.1	7274.9	7192.4	7197.1	7223.5
55°	7489.6	7528.5	7628.0	7755.6	7870.8	7978.1	8026.3	8024.8	7964.1	7978.1	8012.3
57.5°	7733.8	7788.3	7939.2	8144.6	8373.3	8589.5	8776.2	8952.0	8990.9	9064.0	9064.0
60°	7405.6	7533.1	7733.8	8085.5	8535.1	9020.5	9546.3	10058.2	10388.0	10647.8	10507.8
62.5°	6184.3	6372.5	6654.1	7117.7	7817.9	8684.4	9740.8	10931.0	12172.5	12931.7	12374.8
65°	4001.5	4238.0	4544.5	5065.7	5947.8	7063.3	8602.0	10741.2	13339.4	14686.7	13442.0
67.5°	1585.4	1745.6	1932.3	2302.6	3068.0	4163.3	5890.2	8528.9	11778.9	13050.0	11654.4
70°	757.7	784.1	819.9	899.2	1090.6	1471.8	2366.4	4202.2	7223.5	8563.1	7050.8
72.5°	547.6	552.3	569.4	595.9	651.9	729.7	886.8	1285.1	2490.8	3621.9	2493.9
75°	415.4	421.6	431.0	445.0	474.5	511.9	571.0	684.5	852.6	983.3	851.0
77.5°	315.8	322.0	329.8	343.8	359.4	385.8	407.6	452.7	524.3	552.3	549.2
80°	230.3	241.1	253.6	266.0	276.9	289.4	290.9	312.7	353.2	379.6	371.8
82.5°	146.2	155.6	188.3	202.3	203.8	206.9	205.4	206.9	228.7	247.4	241.1
85°	93.3	99.6	116.7	132.2	129.1	135.4	135.4	132.2	122.9	105.8	126.0
87.5°	46.7	48.2	56.0	70.0	66.9	59.1	57.6	57.6	42.0	35.8	38.9
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°	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9	2840.9
2.5°	2833.1	2836.2	2831.5	2831.5	2830.0	2833.1	2828.4	2828.4
5°	2854.9	2859.5	2858.0	2858.0	2861.1	2864.2	2862.7	2861.1
7.5°	2893.8	2896.9	2900.0	2901.6	2904.7	2903.1	2906.2	2904.7
10°	2952.9	2949.8	2954.4	2949.8	2951.3	2948.2	2949.8	2949.8
12.5°	3027.6	3022.9	3019.8	3016.7	3016.7	3010.5	3010.5	3012.0
15°	3113.1	3105.4	3099.1	3096.0	3092.9	3092.9	3088.2	3091.4
17.5°	3197.2	3189.4	3178.5	3178.5	3173.8	3170.7	3167.6	3175.4
20°	3285.8	3278.1	3271.8	3270.3	3260.9	3257.8	3259.4	3268.7
22.5°	3388.5	3383.8	3383.8	3380.7	3374.5	3369.8	3369.8	3380.7
25°	3527.0	3517.6	3519.2	3520.8	3517.6	3517.6	3514.5	3522.3
27.5°	3696.6	3688.8	3693.5	3696.6	3693.5	3698.1	3693.5	3699.7
30°	3895.7	3891.0	3895.7	3900.4	3892.6	3892.6	3889.5	3894.1
32.5°	4133.7	4127.5	4130.6	4130.6	4119.7	4110.4	4098.0	4107.3
35°	4395.1	4387.3	4393.6	4398.2	4385.8	4376.4	4357.8	4365.6
37.5°	4682.9	4686.0	4693.8	4714.1	4710.9	4695.4	4681.4	4687.6
40°	5005.0	5020.5	5054.8	5068.8	5065.7	5050.1	5031.4	5034.5
42.5°	5369.0	5389.3	5425.0	5448.4	5437.5	5415.7	5392.4	5401.7
45°	5765.8	5796.9	5843.6	5866.9	5852.9	5829.6	5796.9	5814.0
47.5°	6185.8	6248.1	6310.3	6341.4	6336.7	6304.1	6262.1	6266.7
50°	6688.4	6770.8	6850.2	6881.3	6857.9	6808.1	6749.0	6747.5
52.5°	7313.8	7402.5	7467.8	7460.0	7402.5	7324.7	7257.8	7254.7
55°	8094.8	8124.3	8115.0	8048.1	7947.0	7825.6	7740.1	7726.1
57.5°	9039.2	8939.6	8793.3	8591.1	8363.9	8133.7	7978.1	7920.5
60°	10193.6	9743.9	9221.2	8670.4	8167.9	7791.4	7553.4	7408.7
62.5°	11147.3	9845.1	8676.7	7719.8	6937.3	6472.1	6146.9	5946.2
65°	10820.5	8505.5	6812.8	5579.1	4724.9	4244.2	3900.4	3671.7
67.5°	8359.3	5683.3	3954.8	2741.3	2078.5	1759.6	1537.1	1392.4
70°	4214.6	2179.7	1320.9	931.9	796.6	740.6	703.2	681.4
72.5°	1236.9	826.1	686.1	606.8	558.5	524.3	502.5	491.6
75°	684.5	558.5	493.2	448.1	417.0	393.6	379.6	370.3
77.5°	471.4	406.1	373.4	343.8	318.9	301.8	290.9	281.6
80°	329.8	297.2	283.2	267.6	248.9	234.9	219.4	213.1
82.5°	219.4	205.4	202.3	189.8	178.9	163.4	135.4	126.0
85°	129.1	127.6	127.6	122.9	115.1	101.1	80.9	80.9
87.5°	45.1	46.7	48.2	51.3	49.8	42.0	34.2	32.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)