

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: P194975

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P194975
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35129 lumens
Efficiency: N/A
Efficacy: 109.8 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 - G4

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

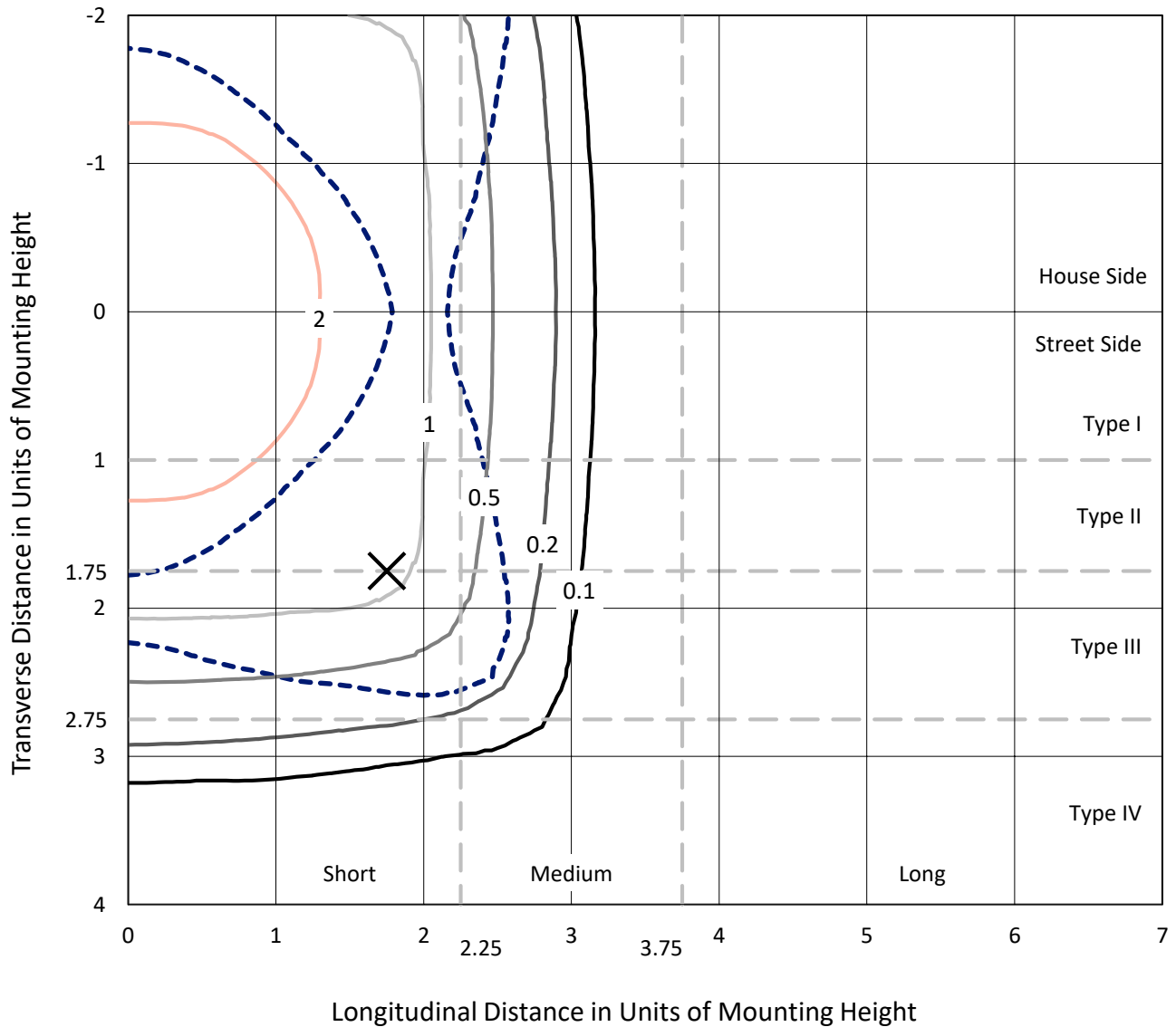


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Iso-Footcandle Lines of Horizontal Illumination

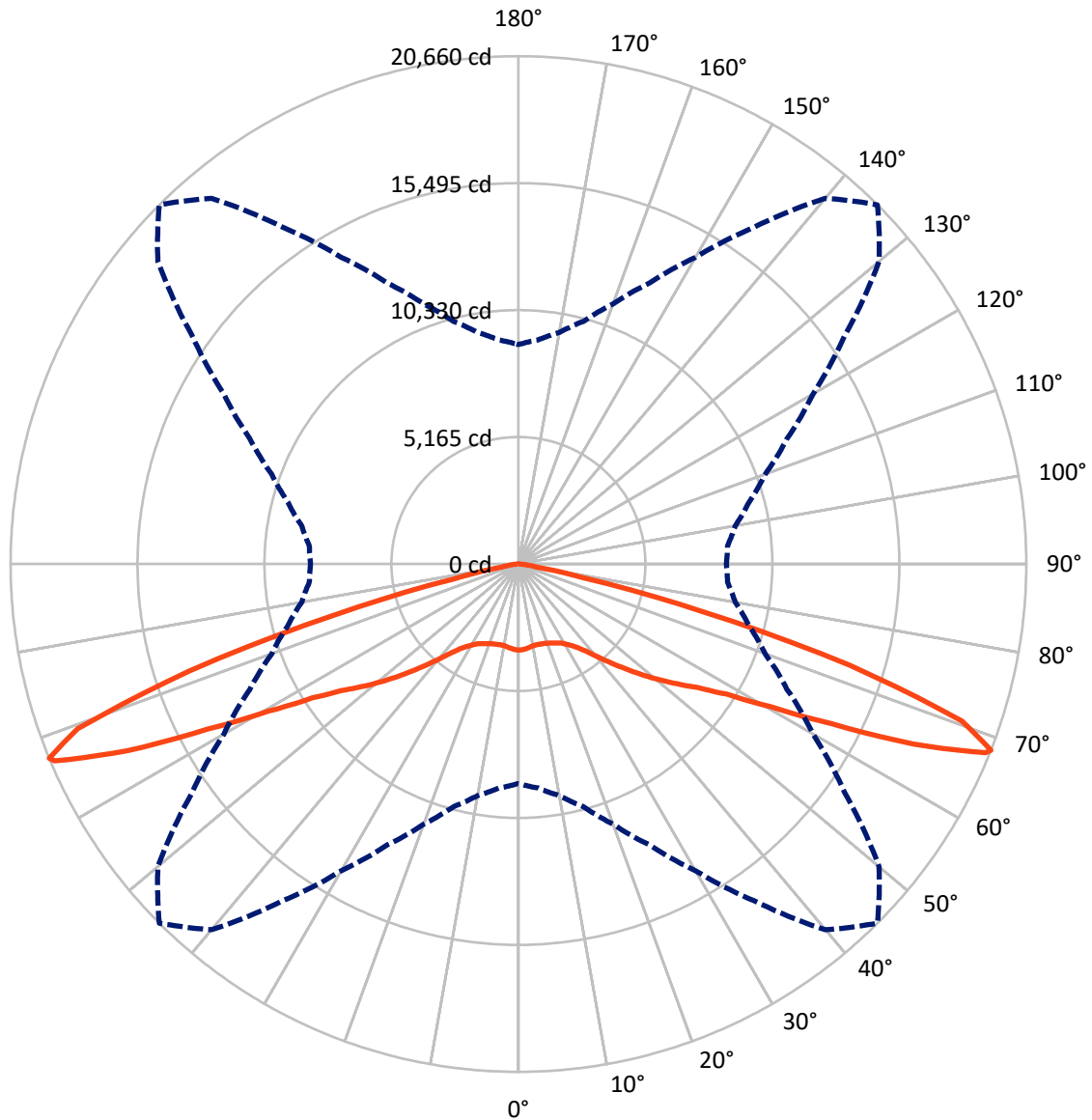
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.9 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17564.5	0.0	17564.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	17564.5	0.0	17564.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	35129.0	0.0	35129.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.9	0.9
10°-20°	951.0	2.7
20°-30°	1616.7	4.6
30°-40°	2645.8	7.5
40°-50°	4728.3	13.5
50°-60°	7985.4	22.7
60°-70°	12382.5	35.2
70°-80°	4257.4	12.1
80°-90°	234.0	0.7
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°	35129.0	100.0
0°-180°	35129.0	100.0



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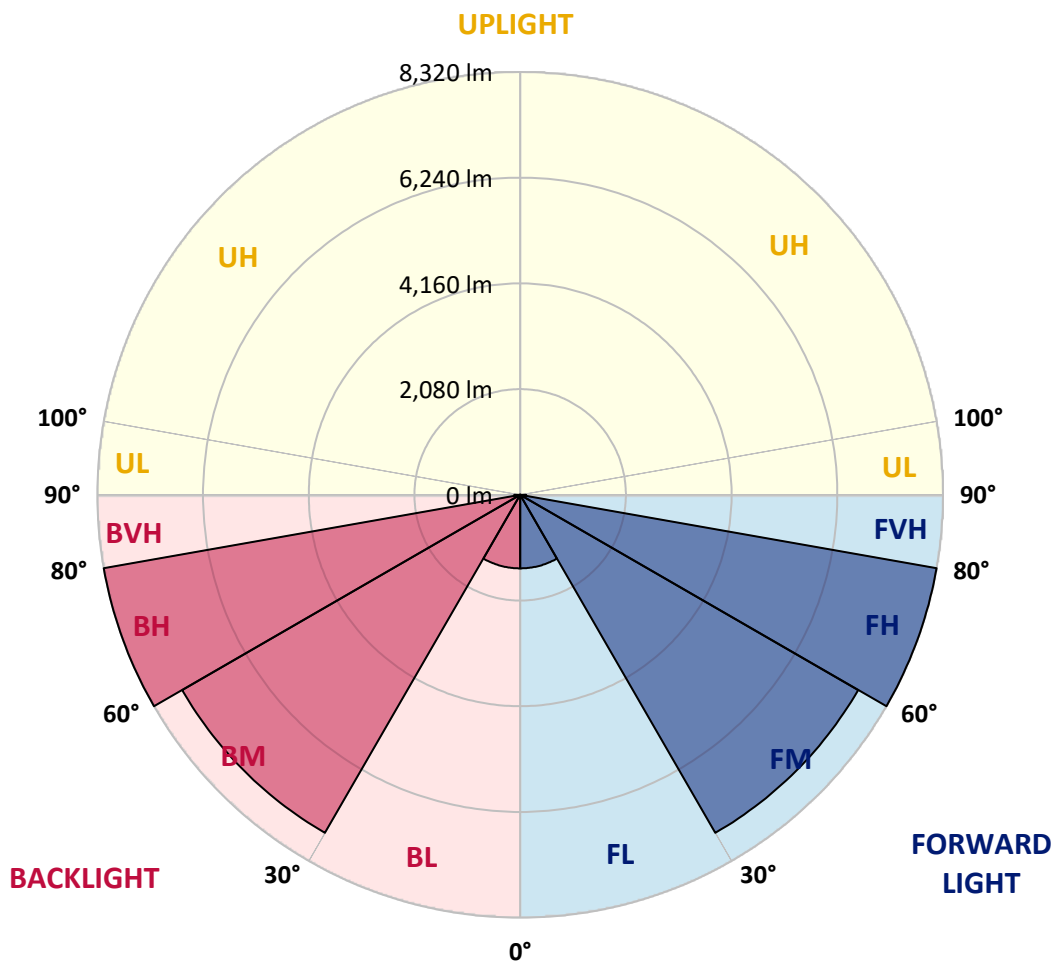
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1447.8	4.1			
FM	(30°-60°)	7679.8	21.9			
FH	(60°-80°)	8319.9	23.7			G4/12000
FVH	(80°-90°)	117.0	0.3			G2/225
BL	(0°-30°)	1447.8	4.1	B3/2500		
BM	(30°-60°)	7679.8	21.9	B4/8500		
BH	(60°-80°)	8319.9	23.7	B5		G4/12000
BVH	(80°-90°)	117.0	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2
2.5°	3519.3	3519.3	3523.6	3521.4	3515.0	3508.5	3502.1	3495.6	3491.3	3487.0	3482.7
5°	3482.7	3482.7	3489.2	3484.9	3480.6	3474.1	3469.8	3463.4	3459.0	3454.7	3456.9
7.5°	3435.4	3439.7	3444.0	3441.8	3433.2	3431.1	3424.6	3422.5	3418.2	3411.7	3413.9
10°	3394.5	3396.7	3401.0	3398.8	3396.7	3390.2	3388.1	3385.9	3383.8	3375.2	3373.0
12.5°	3353.6	3357.9	3362.2	3364.4	3362.2	3364.4	3366.5	3368.7	3366.5	3362.2	3362.2
15°	3321.4	3325.7	3332.1	3338.6	3340.7	3353.6	3362.2	3370.9	3377.3	3379.5	3373.0
17.5°	3304.2	3310.6	3319.2	3332.1	3342.9	3357.9	3373.0	3385.9	3396.7	3398.8	3392.4
20°	3302.0	3308.5	3321.4	3336.4	3355.8	3375.2	3398.8	3418.2	3428.9	3435.4	3428.9
22.5°	3317.1	3325.7	3342.9	3362.2	3385.9	3411.7	3441.8	3463.4	3484.9	3493.5	3487.0
25°	3360.1	3368.7	3388.1	3411.7	3437.5	3469.8	3499.9	3527.9	3549.4	3560.2	3551.5
27.5°	3450.4	3452.6	3474.1	3499.9	3530.0	3558.0	3596.7	3609.6	3626.8	3637.6	3626.8
30°	3577.4	3581.7	3601.0	3641.9	3669.9	3706.4	3727.9	3740.8	3760.2	3771.0	3758.1
32.5°	3771.0	3775.3	3792.5	3831.2	3857.0	3885.0	3910.8	3919.4	3938.8	3951.7	3936.6
35°	4044.2	4052.8	4067.8	4093.6	4115.1	4136.7	4156.0	4149.6	4162.5	4179.7	4164.6
37.5°	4418.5	4416.3	4420.6	4440.0	4461.5	4474.4	4504.5	4489.4	4502.4	4517.4	4508.8
40°	4855.1	4855.1	4853.0	4887.4	4896.0	4908.9	4941.2	4921.8	4939.0	4956.2	4941.2
42.5°	5352.1	5360.7	5371.4	5399.4	5423.0	5427.3	5442.4	5433.8	5455.3	5470.4	5455.3
45°	5924.3	5937.2	5950.1	6014.6	6025.4	6034.0	6044.7	6016.8	6040.4	6053.3	6049.0
47.5°	6518.0	6541.6	6569.6	6636.3	6679.3	6698.7	6707.3	6675.0	6677.2	6696.5	6698.7
50°	7189.1	7215.0	7242.9	7318.2	7359.1	7393.5	7404.3	7367.7	7372.0	7387.0	7391.3
52.5°	7808.7	7838.8	7899.0	8000.1	8058.2	8118.4	8122.7	8077.6	8096.9	8107.7	8099.1
55°	8391.6	8430.4	8509.9	8645.5	8750.9	8869.2	8923.0	8873.5	8873.5	8864.9	8860.6
57.5°	9071.4	9114.4	9196.2	9353.2	9499.5	9669.4	9815.7	9865.2	9955.5	9985.6	9938.3
60°	10095.3	10140.5	10224.4	10430.9	10615.9	10863.3	11104.2	11300.0	11618.4	11790.4	11635.6
62.5°	11031.1	11099.9	11297.8	11659.2	12059.3	12517.5	13048.9	13427.5	14006.1	14294.4	13905.0
65°	10818.1	10958.0	11345.2	11913.1	12739.1	13732.9	14815.0	15854.0	17050.0	17663.1	16871.5
67.5°	9450.0	9568.3	9985.6	10646.0	11676.4	13046.7	14728.9	16880.1	19347.4	20496.2	19095.8
68°	8927.3	9148.8	9564.0	10220.1	11259.1	12605.7	14401.9	16725.2	19418.4	20659.6	19147.4
70°	6845.0	6924.5	7322.5	7911.9	9032.7	10353.5	12166.9	14815.0	17858.8	19136.6	17581.3
72.5°	3252.5	3299.9	3558.0	4138.8	4850.8	5926.4	7526.9	10024.4	12767.1	14096.5	12545.5
75°	1191.7	1202.5	1262.7	1400.4	1667.1	2071.6	2839.5	4392.6	6502.9	7754.9	6528.7
77.5°	643.2	645.3	669.0	703.4	750.8	804.5	920.7	1234.8	1992.0	2710.4	2103.8
80°	404.4	402.3	425.9	453.9	486.2	512.0	522.7	559.3	630.3	737.8	677.6
82.5°	206.5	225.9	279.6	309.8	357.1	365.7	354.9	352.8	374.3	404.4	417.3
85°	114.0	101.1	148.4	197.9	215.1	221.6	223.7	210.8	206.5	202.2	213.0
87.5°	58.1	53.8	64.5	99.0	105.4	86.0	88.2	75.3	51.6	51.6	53.8
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°	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2	3504.2
2.5°	3478.4	3480.6	3476.3	3476.3	3476.3	3478.4	3476.3	3474.1
5°	3450.4	3454.7	3454.7	3456.9	3459.0	3459.0	3459.0	3459.0
7.5°	3409.6	3411.7	3416.0	3416.0	3416.0	3416.0	3416.0	3416.0
10°	3370.9	3366.5	3364.4	3360.1	3360.1	3353.6	3355.8	3357.9
12.5°	3351.5	3342.9	3338.6	3332.1	3327.8	3321.4	3321.4	3323.5
15°	3360.1	3347.2	3334.3	3330.0	3325.7	3321.4	3317.1	3319.2
17.5°	3377.3	3362.2	3347.2	3338.6	3330.0	3323.5	3321.4	3323.5
20°	3413.9	3392.4	3368.7	3353.6	3336.4	3332.1	3325.7	3332.1
22.5°	3463.4	3437.5	3407.4	3379.5	3360.1	3351.5	3342.9	3349.3
25°	3523.6	3495.6	3465.5	3433.2	3411.7	3405.3	3394.5	3394.5
27.5°	3607.5	3583.8	3558.0	3527.9	3506.4	3499.9	3482.7	3482.7
30°	3740.8	3717.2	3693.5	3667.7	3646.2	3639.7	3618.2	3618.2
32.5°	3917.2	3891.4	3876.4	3854.9	3837.7	3826.9	3801.1	3798.9
35°	4153.9	4130.2	4128.1	4113.0	4095.8	4097.9	4072.1	4067.8
37.5°	4493.8	4474.4	4480.8	4467.9	4452.9	4465.8	4450.7	4450.7
40°	4928.3	4921.8	4928.3	4919.7	4921.8	4924.0	4911.1	4915.4
42.5°	5453.2	5436.0	5474.7	5470.4	5463.9	5481.1	5451.0	5429.5
45°	6057.6	6051.2	6089.9	6096.4	6083.5	6094.2	6040.4	6038.3
47.5°	6713.7	6713.7	6748.2	6743.9	6730.9	6733.1	6668.6	6627.7
50°	7397.8	7393.5	7427.9	7419.3	7402.1	7400.0	7333.3	7292.4
52.5°	8109.8	8109.8	8159.3	8135.6	8094.8	8075.4	7993.7	7939.9
55°	8897.2	8886.4	8901.5	8824.0	8744.4	8686.3	8585.2	8544.4
57.5°	9893.1	9768.4	9660.8	9561.9	9450.0	9381.2	9262.8	9219.8
60°	11306.4	10973.0	10828.9	10631.0	10446.0	10353.5	10196.4	10112.6
62.5°	13264.0	12711.1	12319.6	11882.9	11461.3	11164.5	10925.7	10820.3
65°	15527.0	14322.4	13326.4	12390.6	11596.8	10966.6	10615.9	10506.2
67.5°	16387.5	14176.1	12457.3	11115.0	10151.3	9400.5	8981.0	8892.9
68°	16204.6	13840.5	12055.0	10680.5	9712.4	8955.2	8537.9	8458.3
70°	14294.4	11676.4	9792.0	8423.9	7520.4	6799.8	6505.1	6378.2
72.5°	9744.7	7498.9	5752.2	4601.3	3925.8	3469.8	3198.8	3106.3
75°	4485.1	3031.0	2024.2	1512.3	1284.2	1174.5	1090.6	1069.1
77.5°	1307.9	950.8	817.4	757.2	712.0	673.3	645.3	643.2
80°	621.7	583.0	565.8	527.0	486.2	449.6	423.8	428.1
82.5°	417.3	406.6	406.6	367.8	303.3	260.3	215.1	193.6
85°	221.6	230.2	243.1	230.2	200.1	148.4	96.8	105.4
87.5°	75.3	86.0	90.3	88.2	79.6	60.2	45.2	45.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)