

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: P270644

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270644
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-06-D-UNV-5MQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 36562.1 lumens
Efficiency: N/A
Efficacy: 95.7 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): 382
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

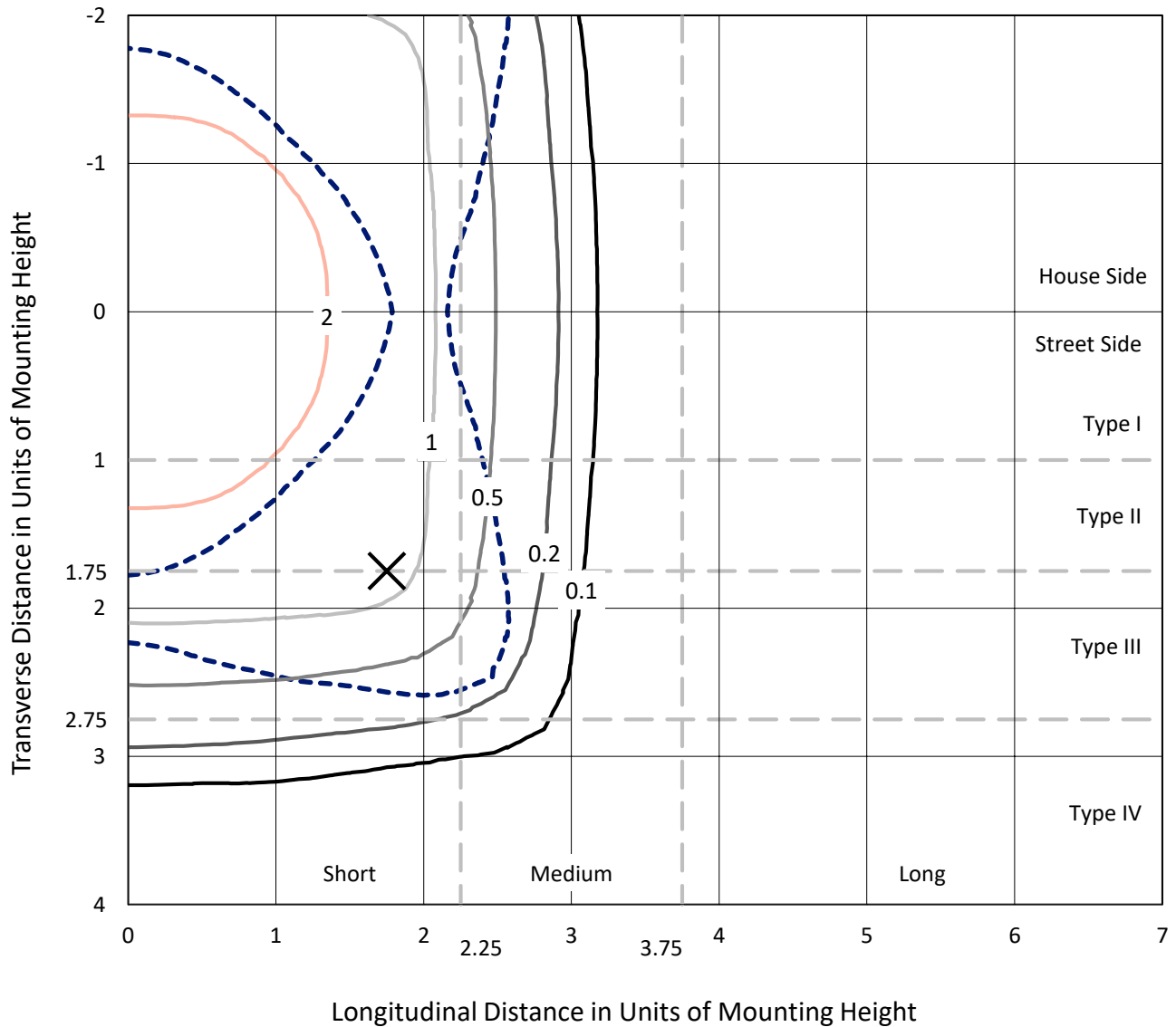


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Iso-Footcandle Lines of Horizontal Illumination

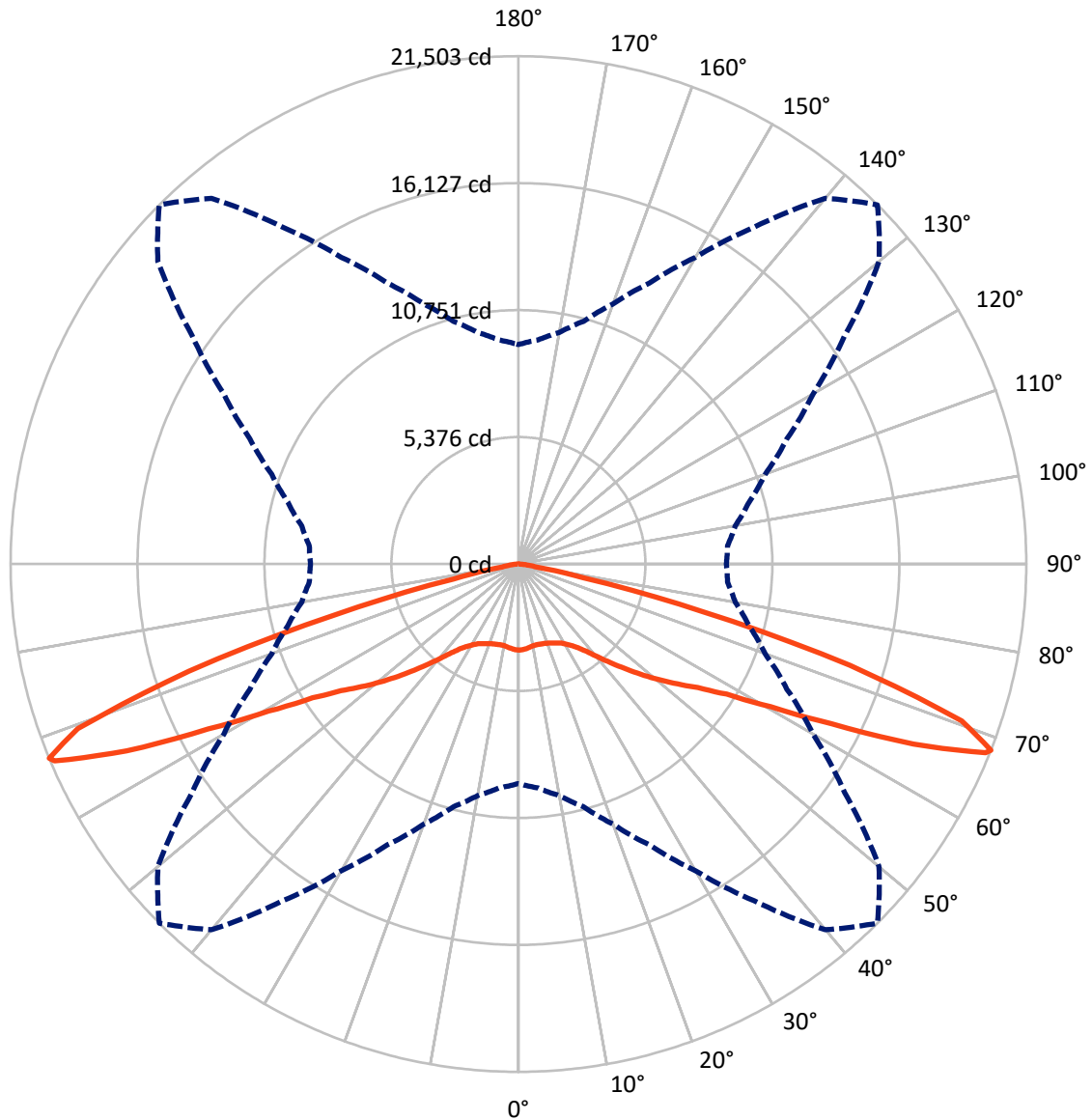
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.1 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	18281.1	0.0	18281.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	18281.1	0.0	18281.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	36562.1	0.0	36562.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.3	0.9
10°-20°	989.8	2.7
20°-30°	1682.7	4.6
30°-40°	2753.7	7.5
40°-50°	4921.2	13.5
50°-60°	8311.2	22.7
60°-70°	12887.6	35.2
70°-80°	4431.1	12.1
80°-90°	243.5	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°	36562.1	100.0
0°-180°	36562.1	100.0



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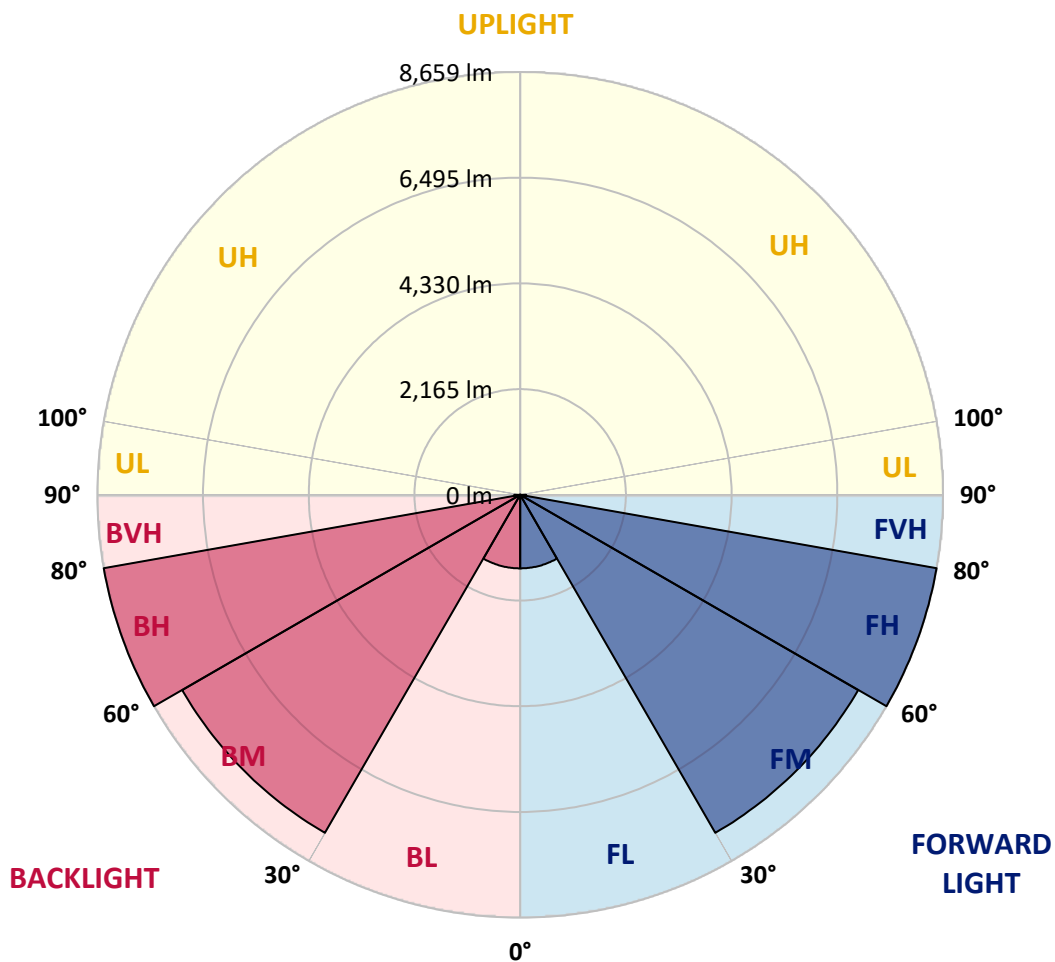
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1506.9	4.1			
FM	(30°-60°)	7993.1	21.9			
FH	(60°-80°)	8659.3	23.7			G4/12000
FVH	(80°-90°)	121.8	0.3			G2/225
BL	(0°-30°)	1506.9	4.1	B3/2500		
BM	(30°-60°)	7993.1	21.9	B4/8500		
BH	(60°-80°)	8659.3	23.7	B5		G4/12000
BVH	(80°-90°)	121.8	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°	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2
2.5°	3662.8	3662.8	3667.3	3665.1	3658.3	3651.7	3645.0	3638.2	3633.7	3629.2	3624.8
5°	3624.8	3624.8	3631.5	3627.0	3622.5	3615.9	3611.4	3604.7	3600.1	3595.6	3597.9
7.5°	3575.6	3580.0	3584.4	3582.3	3573.3	3571.0	3564.4	3562.0	3557.6	3550.9	3553.2
10°	3533.0	3535.2	3539.7	3537.4	3535.2	3528.5	3526.2	3524.1	3521.9	3512.8	3510.5
12.5°	3490.5	3494.9	3499.3	3501.7	3499.3	3501.7	3503.8	3506.2	3503.8	3499.3	3499.3
15°	3456.9	3461.3	3468.0	3474.7	3477.0	3490.5	3499.3	3508.4	3515.1	3517.4	3510.5
17.5°	3439.0	3445.7	3454.6	3468.0	3479.2	3494.9	3510.5	3524.1	3535.2	3537.4	3530.8
20°	3436.7	3443.5	3456.9	3472.6	3492.7	3512.8	3537.4	3557.6	3568.8	3575.6	3568.8
22.5°	3452.4	3461.3	3479.2	3499.3	3524.1	3550.9	3582.3	3604.7	3627.0	3636.0	3629.2
25°	3497.2	3506.2	3526.2	3550.9	3577.8	3611.4	3642.6	3671.8	3694.2	3705.4	3696.4
27.5°	3591.2	3593.5	3615.9	3642.6	3674.1	3703.2	3743.4	3756.9	3774.8	3785.9	3774.8
30°	3723.4	3727.7	3747.9	3790.5	3819.6	3857.6	3880.0	3893.4	3913.6	3924.9	3911.4
32.5°	3924.9	3929.2	3947.2	3987.4	4014.3	4043.5	4070.3	4079.4	4099.4	4112.9	4097.2
35°	4209.2	4218.1	4233.8	4260.7	4282.9	4305.4	4325.6	4318.8	4332.3	4350.2	4334.5
37.5°	4598.8	4596.4	4600.9	4621.2	4643.5	4657.0	4688.3	4672.7	4686.1	4701.6	4692.7
40°	5053.2	5053.2	5051.0	5086.8	5095.7	5109.2	5142.7	5122.7	5140.6	5158.4	5142.7
42.5°	5570.4	5579.4	5590.5	5619.6	5644.3	5648.7	5664.4	5655.5	5677.8	5693.5	5677.8
45°	6166.0	6179.4	6192.8	6260.0	6271.2	6280.1	6291.3	6262.3	6286.9	6300.4	6295.9
47.5°	6783.9	6808.6	6837.5	6907.1	6951.9	6971.9	6980.9	6947.3	6949.6	6969.7	6971.9
50°	7482.4	7509.3	7538.3	7616.8	7659.3	7695.2	7706.3	7668.2	7672.8	7688.5	7692.8
52.5°	8127.2	8158.5	8221.3	8326.5	8386.9	8449.6	8454.0	8407.1	8427.3	8438.5	8429.4
55°	8734.0	8774.3	8857.1	8998.2	9107.8	9231.1	9286.9	9235.6	9235.6	9226.5	9222.1
57.5°	9441.5	9486.2	9571.4	9734.8	9887.0	10063.9	10216.2	10267.6	10361.7	10393.0	10343.8
60°	10507.3	10554.2	10641.5	10856.5	11049.1	11306.4	11557.2	11761.0	12092.4	12271.4	12110.3
62.5°	11481.1	11552.7	11758.8	12134.8	12551.3	13028.2	13581.2	13975.3	14577.5	14877.5	14472.4
65°	11259.4	11405.1	11808.0	12399.0	13258.9	14293.2	15419.3	16500.7	17745.6	18383.6	17559.8
67.5°	9835.5	9958.7	10393.0	11080.4	12152.8	13579.0	15329.8	17568.7	20136.8	21332.3	19874.8
68°	9291.4	9522.0	9954.2	10637.1	11718.5	13120.0	14989.5	17407.5	20210.6	21502.5	19928.4
70°	7124.2	7207.0	7621.2	8234.8	9401.2	10775.9	12663.2	15419.3	18587.4	19917.3	18298.7
72.5°	3385.3	3434.5	3703.2	4307.6	5048.7	6168.2	7833.9	10433.4	13287.9	14671.6	13057.4
75°	1240.4	1251.6	1314.2	1457.5	1735.2	2156.1	2955.3	4571.8	6768.2	8071.4	6795.0
77.5°	669.4	671.7	696.2	732.1	781.3	837.4	958.2	1285.1	2073.2	2821.0	2189.7
80°	420.9	418.7	443.4	472.4	505.9	532.9	544.1	582.1	656.0	768.0	705.3
82.5°	215.0	235.0	291.1	322.4	371.7	380.6	369.5	367.1	389.5	420.9	434.3
85°	118.7	105.2	154.5	206.0	223.9	230.7	232.8	219.5	215.0	210.5	221.6
87.5°	60.5	56.0	67.2	102.9	109.8	89.6	91.7	78.3	53.7	53.7	56.0
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°	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2	3647.2
2.5°	3620.3	3622.5	3618.1	3618.1	3618.1	3620.3	3618.1	3615.9
5°	3591.2	3595.6	3595.6	3597.9	3600.1	3600.1	3600.1	3600.1
7.5°	3548.7	3550.9	3555.4	3555.4	3555.4	3555.4	3555.4	3555.4
10°	3508.4	3503.8	3501.7	3497.2	3497.2	3490.5	3492.7	3494.9
12.5°	3488.2	3479.2	3474.7	3468.0	3463.5	3456.9	3456.9	3459.2
15°	3497.2	3483.7	3470.3	3465.8	3461.3	3456.9	3452.4	3454.6
17.5°	3515.1	3499.3	3483.7	3474.7	3465.8	3459.2	3456.9	3459.2
20°	3553.2	3530.8	3506.2	3490.5	3472.6	3468.0	3461.3	3468.0
22.5°	3604.7	3577.8	3546.4	3517.4	3497.2	3488.2	3479.2	3486.1
25°	3667.3	3638.2	3606.9	3573.3	3550.9	3544.3	3533.0	3533.0
27.5°	3754.6	3730.0	3703.2	3671.8	3649.5	3642.6	3624.8	3624.8
30°	3893.4	3868.8	3844.1	3817.3	3795.0	3788.2	3765.9	3765.9
32.5°	4077.0	4050.2	4034.5	4012.1	3994.3	3983.1	3956.1	3953.9
35°	4323.4	4298.7	4296.5	4280.9	4262.8	4265.2	4238.3	4233.8
37.5°	4677.0	4657.0	4663.6	4650.3	4634.5	4648.0	4632.3	4632.3
40°	5129.3	5122.7	5129.3	5120.3	5122.7	5124.9	5111.4	5115.8
42.5°	5675.6	5657.7	5697.9	5693.5	5686.8	5704.7	5673.3	5651.0
45°	6304.8	6298.0	6338.4	6345.1	6331.7	6342.8	6286.9	6284.6
47.5°	6987.6	6987.6	7023.5	7018.9	7005.5	7007.8	6940.7	6898.1
50°	7699.6	7695.2	7731.0	7722.0	7704.0	7701.9	7632.4	7589.9
52.5°	8440.7	8440.7	8492.1	8467.6	8425.1	8404.8	8319.8	8263.8
55°	9260.1	9248.9	9264.6	9184.0	9101.2	9040.7	8935.5	8893.0
57.5°	10296.7	10166.8	10055.0	9952.0	9835.5	9763.9	9640.7	9596.0
60°	11767.6	11420.7	11270.7	11064.8	10872.1	10775.9	10612.4	10525.1
62.5°	13805.2	13229.7	12822.2	12367.8	11929.0	11619.9	11371.5	11261.7
65°	16160.5	14906.7	13870.0	12896.1	12069.9	11414.0	11049.1	10934.9
67.5°	17055.9	14754.4	12965.5	11568.5	10565.4	9784.0	9347.5	9255.6
68°	16865.7	14405.1	12546.8	11116.2	10108.6	9320.5	8886.3	8803.4
70°	14877.5	12152.8	10191.5	8767.5	7827.2	7077.1	6770.4	6638.4
72.5°	10142.3	7804.8	5986.8	4789.0	4086.0	3611.4	3329.3	3233.0
75°	4668.1	3154.6	2106.9	1574.0	1336.6	1222.5	1135.1	1112.7
77.5°	1361.2	989.7	850.8	788.2	741.1	700.8	671.7	669.4
80°	647.0	606.7	588.7	548.5	505.9	467.9	441.1	445.5
82.5°	434.3	423.1	423.1	382.9	315.7	270.8	223.9	201.5
85°	230.7	239.6	253.1	239.6	208.1	154.5	100.8	109.8
87.5°	78.3	89.6	94.1	91.7	82.9	62.7	47.0	47.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)