

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: P195930

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195930
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39242.4 lumens
Efficiency: N/A
Efficacy: 117.8 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): 333
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

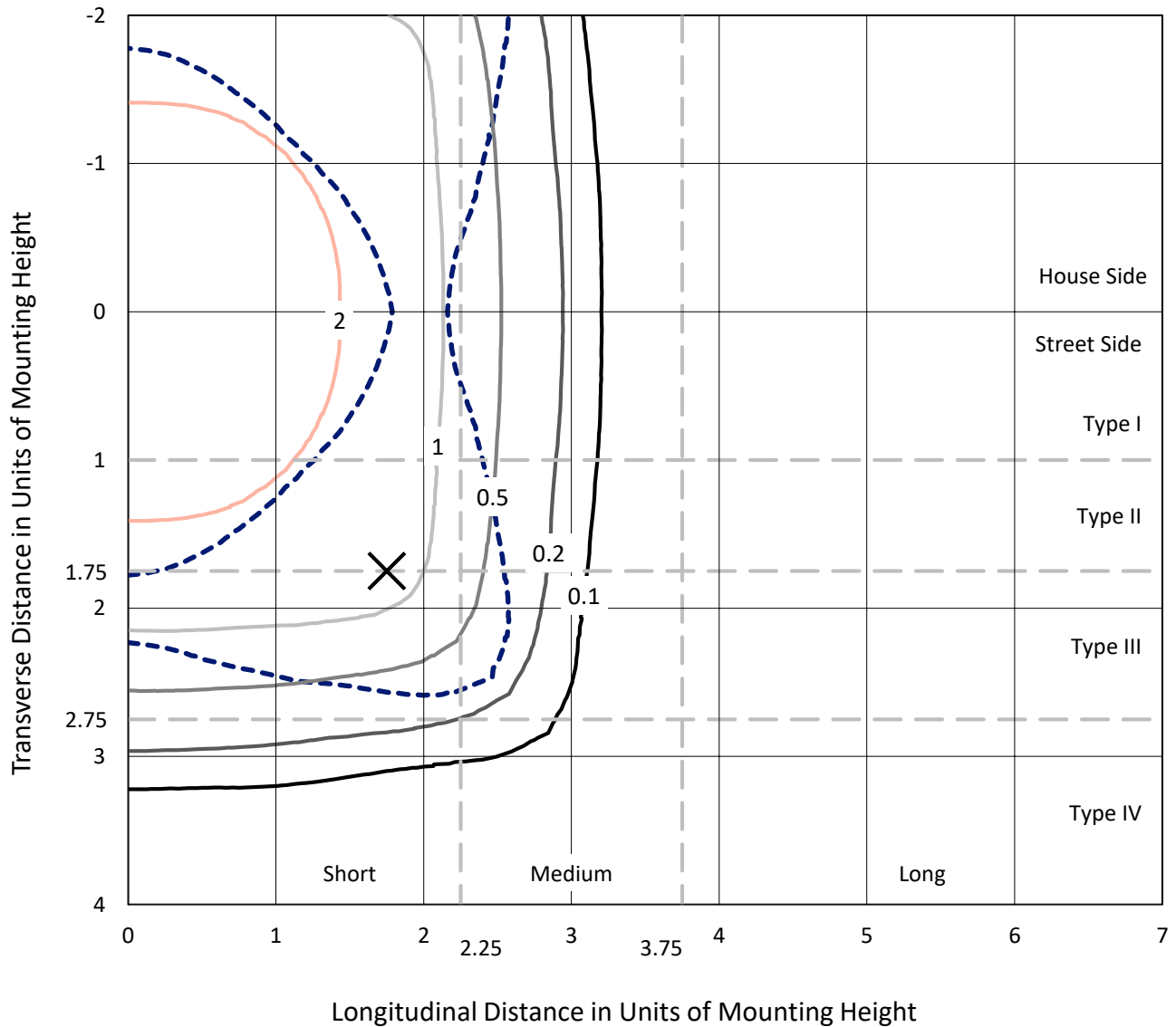


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

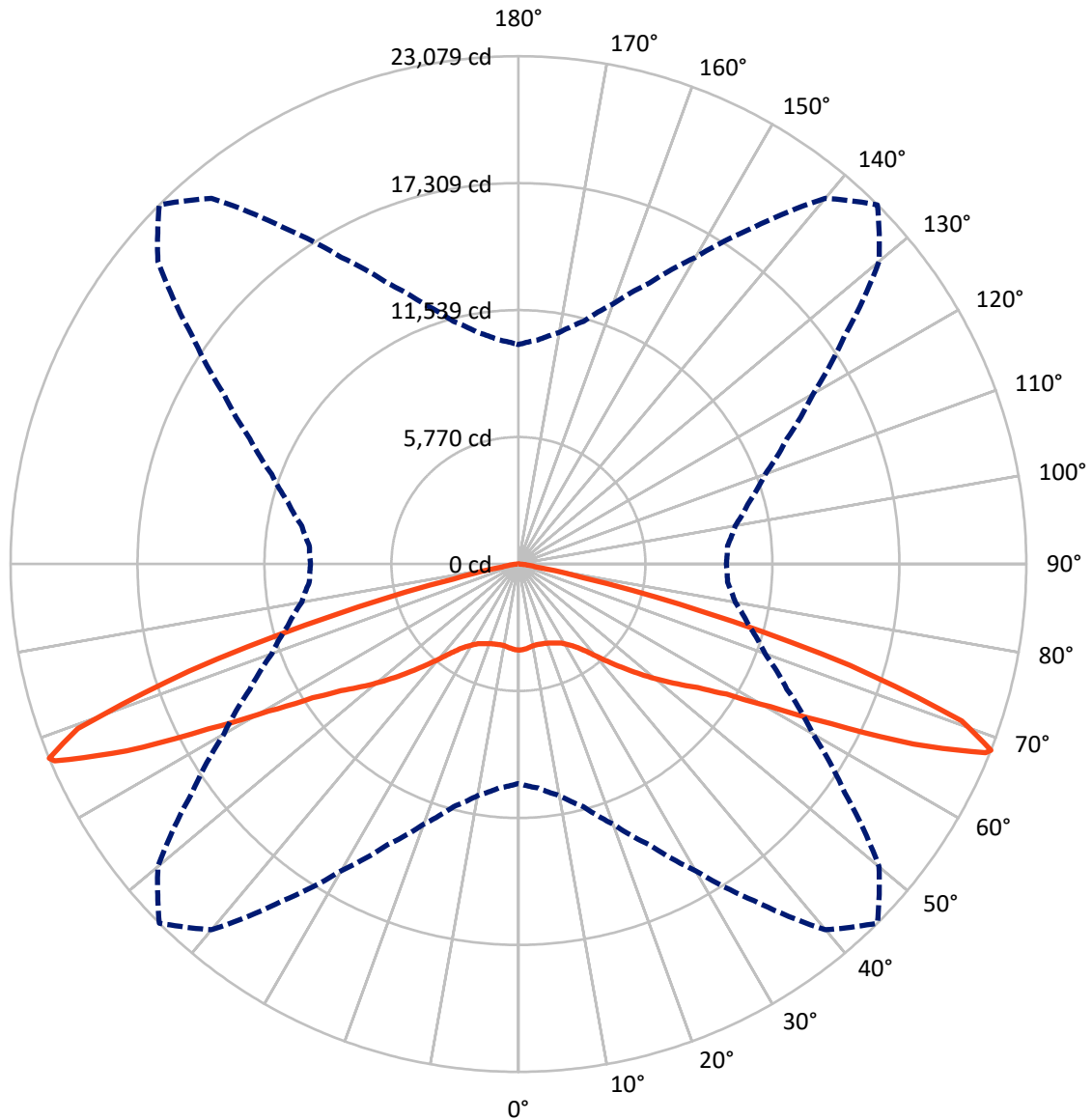


Based on 30 foot mounting height. Maximum calculated value = 4.3 fc
 Type V - Short - Full Cutoff

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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	19621.2	0.0	19621.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	19621.2	0.0	19621.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	39242.4	0.0	39242.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.3	0.9
10°-20°	1062.3	2.7
20°-30°	1806.1	4.6
30°-40°	2955.6	7.5
40°-50°	5282.0	13.5
50°-60°	8920.5	22.7
60°-70°	13832.4	35.2
70°-80°	4755.9	12.1
80°-90°	261.4	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°	39242.4	100.0
0°-180°	39242.4	100.0



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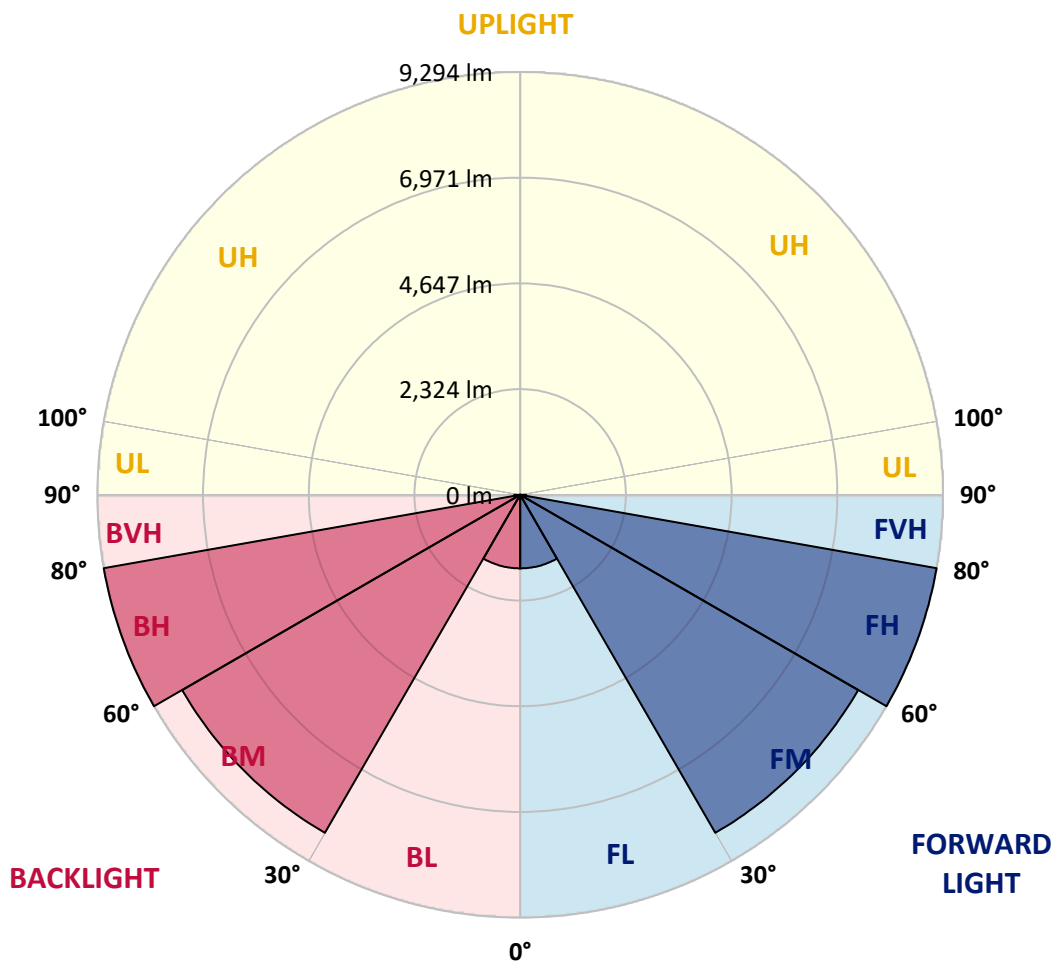
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1617.3	4.1			
FM	(30°-60°)	8579.0	21.9			
FH	(60°-80°)	9294.1	23.7			G4/12000
FVH	(80°-90°)	130.7	0.3			G2/225
BL	(0°-30°)	1617.3	4.1	B3/2500		
BM	(30°-60°)	8579.0	21.9	B5		
BH	(60°-80°)	9294.1	23.7	B5		G4/12000
BVH	(80°-90°)	130.7	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°	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5
2.5°	3931.4	3931.4	3936.2	3933.8	3926.6	3919.3	3912.2	3904.9	3900.1	3895.3	3890.5
5°	3890.5	3890.5	3897.7	3892.9	3888.1	3880.9	3876.1	3868.9	3864.1	3859.3	3861.6
7.5°	3837.7	3842.4	3847.2	3844.9	3835.2	3832.9	3825.6	3823.3	3818.5	3811.2	3813.7
10°	3792.0	3794.4	3799.2	3796.8	3794.4	3787.2	3784.8	3782.4	3780.0	3770.4	3767.9
12.5°	3746.4	3751.2	3756.0	3758.3	3756.0	3758.3	3760.8	3763.1	3760.8	3756.0	3756.0
15°	3710.2	3715.1	3722.3	3729.5	3731.9	3746.4	3756.0	3765.6	3772.7	3775.2	3767.9
17.5°	3691.1	3698.3	3707.9	3722.3	3734.3	3751.2	3767.9	3782.4	3794.4	3796.8	3789.6
20°	3688.7	3695.9	3710.2	3727.1	3748.7	3770.4	3796.8	3818.5	3830.4	3837.7	3830.4
22.5°	3705.4	3715.1	3734.3	3756.0	3782.4	3811.2	3844.9	3868.9	3892.9	3902.6	3895.3
25°	3753.5	3763.1	3784.8	3811.2	3840.1	3876.1	3909.7	3941.0	3965.1	3977.0	3967.4
27.5°	3854.5	3856.8	3880.9	3909.7	3943.4	3974.7	4017.8	4032.3	4051.5	4063.6	4051.5
30°	3996.3	4001.1	4022.7	4068.4	4099.6	4140.4	4164.4	4178.9	4200.5	4212.5	4198.1
32.5°	4212.5	4217.3	4236.6	4279.8	4308.7	4339.9	4368.7	4378.3	4399.9	4414.3	4397.6
35°	4517.8	4527.4	4544.2	4573.0	4597.0	4621.1	4642.7	4635.5	4649.9	4669.1	4652.3
37.5°	4935.8	4933.5	4938.3	4959.9	4983.9	4998.3	5032.0	5015.1	5029.5	5046.4	5036.8
40°	5423.7	5423.7	5421.2	5459.7	5469.3	5483.7	5519.7	5498.2	5517.4	5536.6	5519.7
42.5°	5978.7	5988.4	6000.4	6031.6	6058.0	6062.8	6079.7	6070.1	6094.1	6110.9	6094.1
45°	6618.0	6632.4	6646.8	6718.9	6730.9	6740.5	6752.5	6721.3	6747.7	6762.1	6757.3
47.5°	7281.2	7307.7	7338.9	7413.3	7461.4	7483.1	7492.7	7456.6	7459.1	7480.6	7483.1
50°	8031.0	8059.8	8091.0	8175.1	8220.8	8259.2	8271.3	8230.5	8235.2	8252.0	8256.8
52.5°	8723.0	8756.7	8824.0	8936.9	9001.8	9069.1	9073.9	9023.4	9045.0	9057.0	9047.5
55°	9374.2	9417.5	9506.4	9657.8	9775.5	9907.7	9967.8	9912.5	9912.5	9902.9	9898.1
57.5°	10133.7	10181.6	10273.0	10448.4	10611.8	10801.6	10965.1	11020.4	11121.2	11154.9	11102.1
60°	11277.4	11328.0	11421.7	11652.3	11859.0	12135.4	12404.5	12623.2	12978.8	13171.1	12998.0
62.5°	12322.8	12399.7	12620.8	13024.5	13471.4	13983.3	14576.8	14999.7	15646.1	15968.2	15533.2
65°	12084.8	12241.0	12673.6	13308.1	14230.8	15341.0	16549.7	17710.3	19046.5	19731.4	18847.1
67.5°	10556.5	10688.7	11154.9	11892.6	13043.6	14574.4	16453.7	18856.7	21612.9	22896.2	21331.8
68°	9972.6	10220.1	10683.9	11416.8	12577.5	14081.8	16088.4	18683.6	21692.2	23078.8	21389.5
70°	7646.5	7735.3	8179.9	8838.4	10090.4	11565.8	13591.5	16549.7	19950.0	21377.4	19640.0
72.5°	3633.4	3686.3	3974.7	4623.4	5418.9	6620.3	8408.2	11198.1	14262.1	15747.1	14014.5
75°	1331.3	1343.3	1410.5	1564.4	1862.4	2314.1	3172.0	4907.0	7264.4	8663.0	7293.2
77.5°	718.5	720.9	747.4	785.8	838.6	898.8	1028.5	1379.3	2225.2	3027.8	2350.1
80°	451.7	449.4	475.8	507.1	543.1	571.9	583.9	624.8	704.1	824.2	757.0
82.5°	230.7	252.4	312.4	346.1	399.0	408.6	396.5	394.1	418.1	451.7	466.2
85°	127.4	112.9	165.8	221.1	240.3	247.6	249.9	235.5	230.7	225.9	237.9
87.5°	64.9	60.0	72.1	110.6	117.7	96.2	98.5	84.1	57.7	57.7	60.0
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°	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5	3914.5
2.5°	3885.7	3888.1	3883.3	3883.3	3883.3	3885.7	3883.3	3880.9
5°	3854.5	3859.3	3859.3	3861.6	3864.1	3864.1	3864.1	3864.1
7.5°	3808.9	3811.2	3816.0	3816.0	3816.0	3816.0	3816.0	3816.0
10°	3765.6	3760.8	3758.3	3753.5	3753.5	3746.4	3748.7	3751.2
12.5°	3743.9	3734.3	3729.5	3722.3	3717.5	3710.2	3710.2	3712.7
15°	3753.5	3739.1	3724.7	3719.9	3715.1	3710.2	3705.4	3707.9
17.5°	3772.7	3756.0	3739.1	3729.5	3719.9	3712.7	3710.2	3712.7
20°	3813.7	3789.6	3763.1	3746.4	3727.1	3722.3	3715.1	3722.3
22.5°	3868.9	3840.1	3806.4	3775.2	3753.5	3743.9	3734.3	3741.5
25°	3936.2	3904.9	3871.3	3835.2	3811.2	3804.0	3792.0	3792.0
27.5°	4029.9	4003.4	3974.7	3941.0	3917.0	3909.7	3890.5	3890.5
30°	4178.9	4152.5	4126.0	4097.2	4073.2	4065.9	4041.9	4041.9
32.5°	4376.0	4347.1	4330.3	4306.2	4287.0	4275.0	4246.2	4243.8
35°	4640.3	4613.8	4611.5	4594.6	4575.4	4577.8	4549.0	4544.2
37.5°	5019.9	4998.3	5005.5	4991.1	4974.3	4988.7	4971.8	4971.8
40°	5505.3	5498.2	5505.3	5495.7	5498.2	5500.5	5486.2	5490.9
42.5°	6091.7	6072.4	6115.7	6110.9	6103.7	6123.0	6089.3	6065.3
45°	6766.9	6759.8	6803.0	6810.2	6795.8	6807.8	6747.7	6745.3
47.5°	7499.9	7499.9	7538.3	7533.5	7519.1	7521.6	7449.4	7403.8
50°	8264.0	8259.2	8297.7	8288.0	8268.8	8266.5	8192.0	8146.3
52.5°	9059.5	9059.5	9114.7	9088.3	9042.7	9021.0	8929.6	8869.6
55°	9939.0	9926.9	9943.8	9857.3	9768.4	9703.5	9590.6	9544.8
57.5°	11051.6	10912.2	10792.0	10681.6	10556.5	10479.6	10347.5	10299.4
60°	12630.4	12257.9	12096.9	11875.8	11669.1	11565.8	11390.4	11296.7
62.5°	14817.1	14199.6	13762.2	13274.4	12803.4	12471.8	12205.0	12087.3
65°	17345.2	15999.5	14886.8	13841.5	12954.8	12250.7	11859.0	11736.4
67.5°	18306.3	15836.0	13916.0	12416.5	11339.9	10501.3	10032.7	9934.2
68°	18102.1	15461.2	13466.6	11931.1	10849.7	10003.8	9537.7	9448.8
70°	15968.2	13043.6	10938.6	9410.3	8401.0	7596.0	7266.8	7125.1
72.5°	10885.7	8376.9	6425.8	5140.1	4385.6	3876.1	3573.3	3470.0
75°	5010.3	3385.9	2261.2	1689.3	1434.6	1312.0	1218.3	1194.3
77.5°	1461.1	1062.1	913.2	845.9	795.4	752.2	720.9	718.5
80°	694.5	651.2	632.0	588.7	543.1	502.3	473.4	478.2
82.5°	466.2	454.2	454.2	410.9	338.8	290.7	240.3	216.3
85°	247.6	257.2	271.6	257.2	223.5	165.8	108.1	117.7
87.5°	84.1	96.2	101.0	98.5	88.9	67.3	50.4	50.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)