

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: P195984

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195984
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42054.5 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 382
Input Voltage (V): NR
Input Current (A_{in}): 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

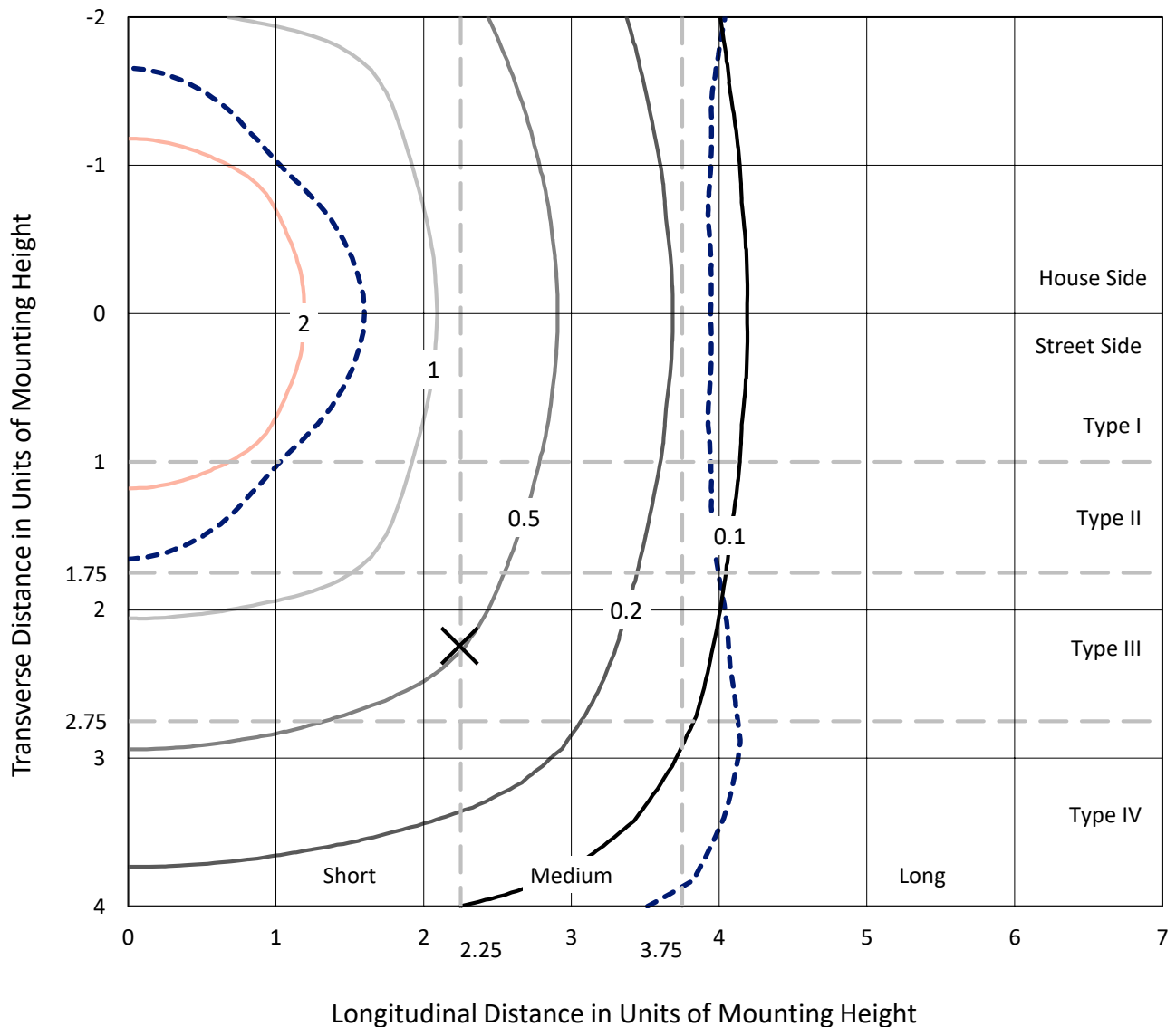


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

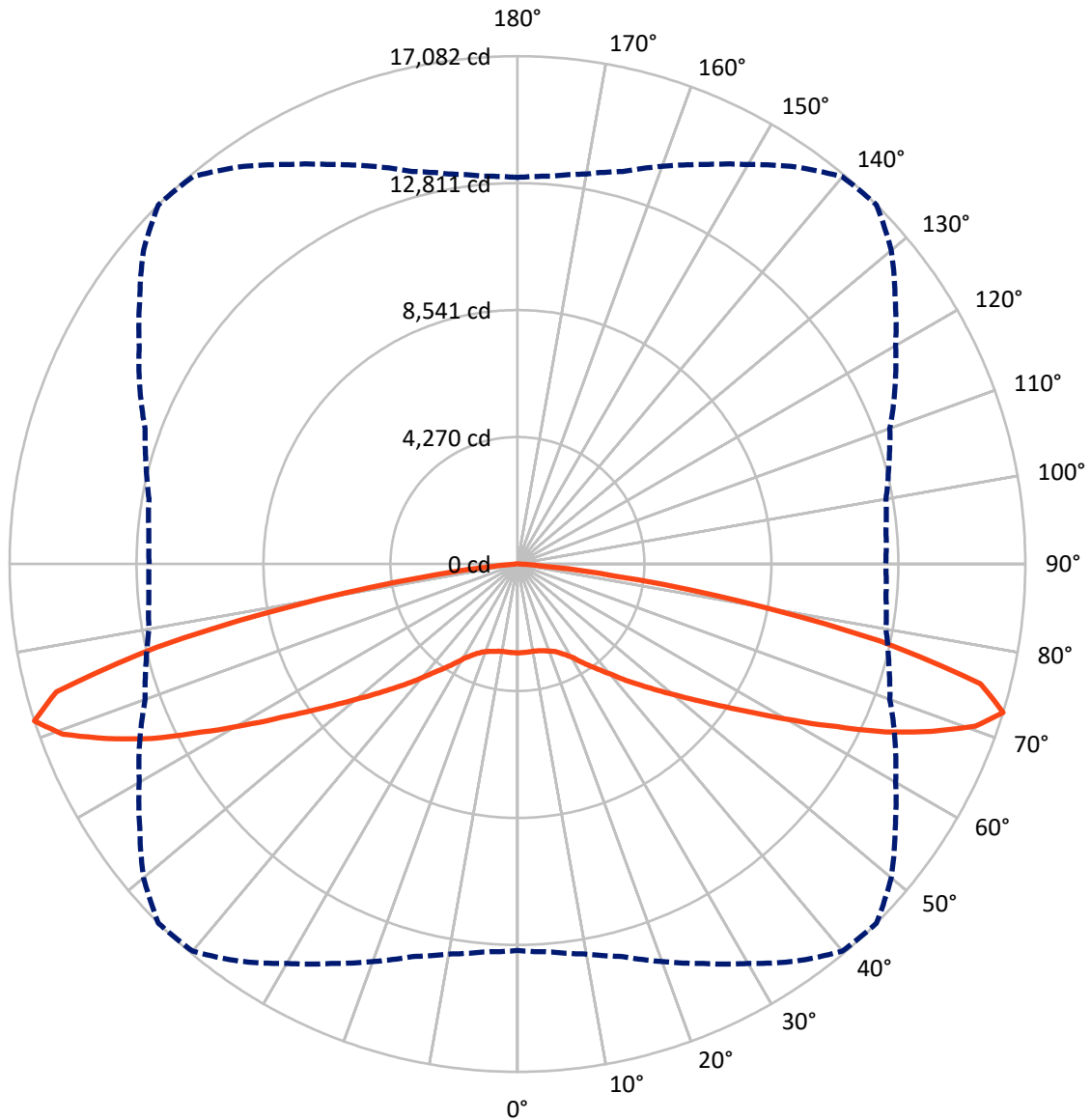


Based on 30 foot mounting height. Maximum calculated value = 3.3 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	21027.3	0.0	21027.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	21027.3	0.0	21027.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	42054.5	0.0	42054.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.4	0.7
10°-20°	863.6	2.1
20°-30°	1559.1	3.7
30°-40°	2659.4	6.3
40°-50°	4527.7	10.8
50°-60°	7286.7	17.3
60°-70°	12118.0	28.8
70°-80°	11722.7	27.9
80°-90°	1031.8	2.5
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°	42054.5	100.0
0°-180°	42054.5	100.0



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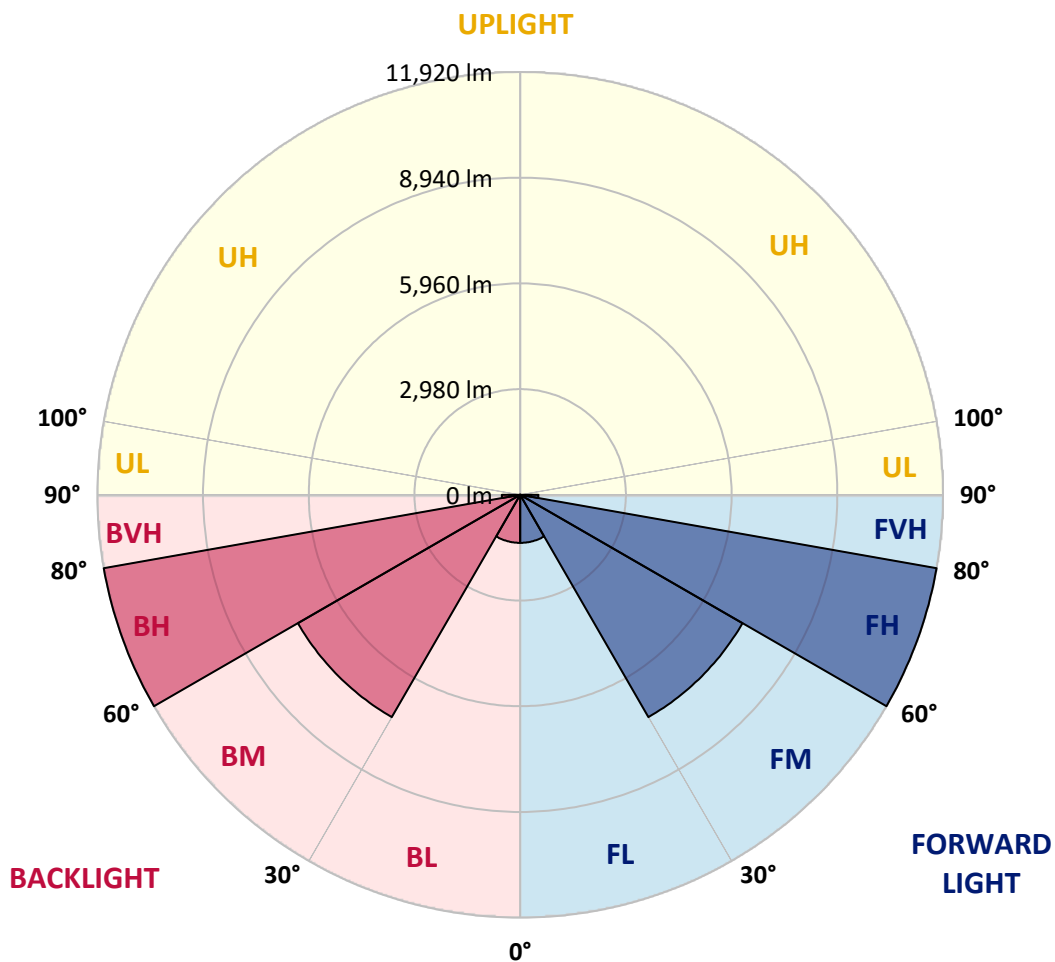
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1354.1	3.2			
FM	(30°-60°)	7237.0	17.2			
FH	(60°-80°)	11920.4	28.3			G4/12000
FVH	(80°-90°)	515.9	1.2			G4/750
BL	(0°-30°)	1354.1	3.2	B3/2500		
BM	(30°-60°)	7237.0	17.2	B4/8500		
BH	(60°-80°)	11920.4	28.3	B5		G4/12000
BVH	(80°-90°)	515.9	1.2			G4/750
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°	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8
2.5°	3013.1	3013.1	3015.7	3013.1	3007.9	3005.3	2997.6	2992.3	2987.2	2984.6	2979.4
5°	3015.7	3015.7	3018.2	3015.7	3010.4	3005.3	3000.1	2992.3	2987.2	2982.0	2979.4
7.5°	3026.0	3028.5	3031.2	3028.5	3018.2	3013.1	3005.3	2997.6	2987.2	2982.0	2976.8
10°	3046.8	3046.8	3046.8	3044.1	3036.3	3026.0	3015.7	3007.9	2994.9	2982.0	2974.2
12.5°	3062.2	3064.9	3064.9	3059.6	3049.3	3036.3	3026.0	3018.2	3007.9	2997.6	2989.8
15°	3085.5	3085.5	3083.0	3072.6	3057.1	3046.8	3041.5	3039.0	3036.3	3031.2	3023.4
17.5°	3132.2	3129.5	3121.7	3106.3	3088.1	3080.3	3075.2	3075.2	3075.2	3072.6	3067.4
20°	3199.5	3199.5	3189.0	3163.2	3147.6	3139.9	3132.2	3132.2	3132.2	3124.4	3116.6
22.5°	3308.1	3310.8	3295.2	3264.1	3243.5	3227.9	3217.6	3209.8	3202.0	3196.8	3183.9
25°	3455.7	3453.1	3435.0	3396.2	3380.6	3365.1	3344.4	3331.4	3321.1	3313.3	3297.8
27.5°	3611.0	3608.5	3587.7	3554.0	3543.7	3520.4	3504.8	3486.7	3473.8	3460.8	3445.3
30°	3810.3	3797.4	3781.8	3756.0	3750.8	3732.6	3712.0	3686.1	3665.3	3644.7	3626.6
32.5°	3988.9	3988.9	3965.7	3952.7	3963.0	3955.2	3957.9	3942.4	3929.4	3921.6	3903.5
35°	4237.5	4237.5	4227.0	4211.6	4214.1	4196.0	4193.4	4196.0	4206.4	4206.4	4185.7
37.5°	4568.8	4573.9	4540.3	4535.2	4522.2	4496.3	4483.4	4488.5	4511.8	4524.7	4496.3
40°	4980.3	4990.7	4980.3	4946.7	4931.1	4887.1	4861.3	4861.3	4879.4	4892.4	4882.0
42.5°	5386.8	5404.9	5386.8	5360.9	5347.9	5314.2	5301.3	5311.7	5335.0	5350.5	5335.0
45°	5839.7	5852.7	5829.4	5798.3	5782.8	5764.6	5756.9	5764.6	5790.5	5806.1	5800.9
47.5°	6285.0	6303.1	6274.6	6261.7	6261.7	6243.6	6264.2	6285.0	6308.2	6344.5	6329.0
50°	6719.9	6743.2	6725.0	6727.6	6748.3	6782.0	6820.8	6862.3	6903.6	6942.5	6947.7
52.5°	7108.1	7144.4	7146.9	7193.6	7258.2	7310.0	7418.7	7509.4	7607.7	7641.3	7625.8
55°	7517.2	7566.3	7631.0	7703.5	7807.1	7913.1	8097.0	8260.0	8389.4	8469.7	8456.7
57.5°	8102.1	8151.3	8218.6	8337.7	8492.9	8638.0	8889.0	9142.7	9339.4	9461.1	9401.5
60°	8860.6	8912.4	9000.3	9127.2	9329.1	9525.8	9870.1	10235.0	10540.5	10680.3	10571.6
62.5°	9864.9	9914.1	9971.0	10139.3	10364.5	10618.2	11050.4	11519.0	11907.2	12041.9	11889.1
65°	11296.3	11355.9	11374.0	11511.3	11731.3	11966.8	12432.7	12960.8	13403.4	13623.5	13318.0
67.5°	12909.0	12932.3	13004.8	13165.3	13390.5	13602.8	13970.3	14469.9	14894.5	15016.1	14690.0
70°	13853.8	13900.5	14027.3	14249.9	14519.2	14853.0	15254.2	15792.6	16274.1	16331.1	15916.9
72.5°	12999.7	13095.4	13320.7	13667.4	14231.8	14824.6	15515.7	16310.3	17001.5	17081.7	16416.5
75°	10426.6	10535.4	10804.5	11185.0	11852.9	12733.0	13732.2	14925.5	15960.9	16093.0	15212.8
77.5°	5557.6	5692.2	6083.1	6595.6	7548.1	8713.0	9916.7	11278.2	12158.4	12456.1	11821.8
80°	1400.4	1472.8	1661.9	1962.1	2606.7	3546.3	4584.3	6049.4	7141.7	7605.1	7141.7
82.5°	543.6	597.9	649.7	686.0	748.1	877.5	1211.5	1975.0	2661.0	3277.1	2837.1
85°	209.7	222.6	321.0	365.0	365.0	401.2	460.7	543.6	673.0	735.2	616.0
87.5°	82.9	90.6	111.3	170.8	176.0	155.3	165.6	186.4	142.4	119.1	134.6
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°	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8	2989.8
2.5°	2976.8	2974.2	2969.0	2971.7	2969.0	2969.0	2969.0	2969.0
5°	2974.2	2974.2	2969.0	2969.0	2969.0	2971.7	2969.0	2969.0
7.5°	2971.7	2969.0	2963.9	2961.2	2961.2	2958.7	2958.7	2958.7
10°	2966.5	2961.2	2956.1	2953.6	2953.6	2948.3	2948.3	2948.3
12.5°	2979.4	2971.7	2966.5	2963.9	2963.9	2963.9	2966.5	2966.5
15°	3015.7	3000.1	2992.3	2989.8	2992.3	2997.6	3000.1	3002.7
17.5°	3054.4	3039.0	3026.0	3020.8	3023.4	3031.2	3039.0	3044.1
20°	3103.6	3090.7	3075.2	3070.0	3070.0	3080.3	3085.5	3093.3
22.5°	3173.5	3163.2	3150.3	3142.5	3137.3	3150.3	3158.1	3163.2
25°	3284.9	3274.5	3264.1	3256.4	3253.8	3266.7	3271.9	3274.5
27.5°	3432.4	3422.1	3416.9	3414.3	3406.5	3411.6	3419.4	3416.9
30°	3623.9	3631.7	3623.9	3623.9	3611.0	3616.2	3611.0	3605.8
32.5°	3880.3	3872.5	3849.2	3833.6	3815.5	3815.5	3807.7	3800.0
35°	4136.5	4110.6	4097.6	4105.4	4097.6	4102.9	4089.9	4077.0
37.5°	4439.3	4423.9	4421.2	4444.5	4439.3	4444.5	4444.5	4426.4
40°	4840.6	4830.2	4848.4	4887.1	4902.7	4900.1	4905.3	4882.0
42.5°	5301.3	5283.2	5291.0	5324.7	5342.8	5347.9	5345.3	5324.7
45°	5762.1	5767.3	5767.3	5803.5	5821.6	5831.9	5813.8	5806.1
47.5°	6282.4	6290.1	6272.0	6295.3	6300.5	6318.7	6303.1	6290.1
50°	6882.9	6854.5	6813.1	6820.8	6820.8	6815.6	6797.5	6782.0
52.5°	7553.4	7488.6	7411.0	7385.1	7356.7	7328.1	7291.9	7263.5
55°	8317.0	8205.7	8065.9	8001.2	7946.8	7882.1	7799.3	7770.7
57.5°	9202.3	9010.7	8824.3	8707.9	8568.0	8482.6	8376.5	8371.3
60°	10253.2	9994.3	9665.6	9492.2	9352.4	9251.5	9171.2	9140.2
62.5°	11467.2	11022.0	10667.3	10480.9	10317.9	10255.8	10154.8	10167.8
65°	12712.3	12259.3	11915.0	11764.9	11612.2	11570.8	11477.6	11511.3
67.5°	14061.0	13688.2	13310.2	13170.5	13030.7	12989.3	12893.5	12922.0
70°	15269.8	14796.1	14366.4	14092.0	13853.8	13662.3	13540.6	13491.5
72.5°	15510.5	14690.0	14014.3	13328.3	12932.3	12585.5	12443.1	12388.8
75°	13936.7	12663.1	11700.2	10895.1	10450.0	9945.1	9890.8	9815.7
77.5°	10840.8	9391.2	8226.4	7190.9	6593.0	5976.9	5764.6	5604.2
80°	6466.2	4970.0	3851.7	2699.9	2202.8	1773.2	1667.0	1555.7
82.5°	2314.1	1483.3	999.2	779.2	696.3	642.0	600.6	546.2
85°	559.1	471.1	445.2	403.9	398.6	339.1	240.7	214.8
87.5°	178.6	163.1	165.6	157.9	165.6	124.3	101.0	90.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)