

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: P195089

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195089
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30727 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B5 - U0 - G5

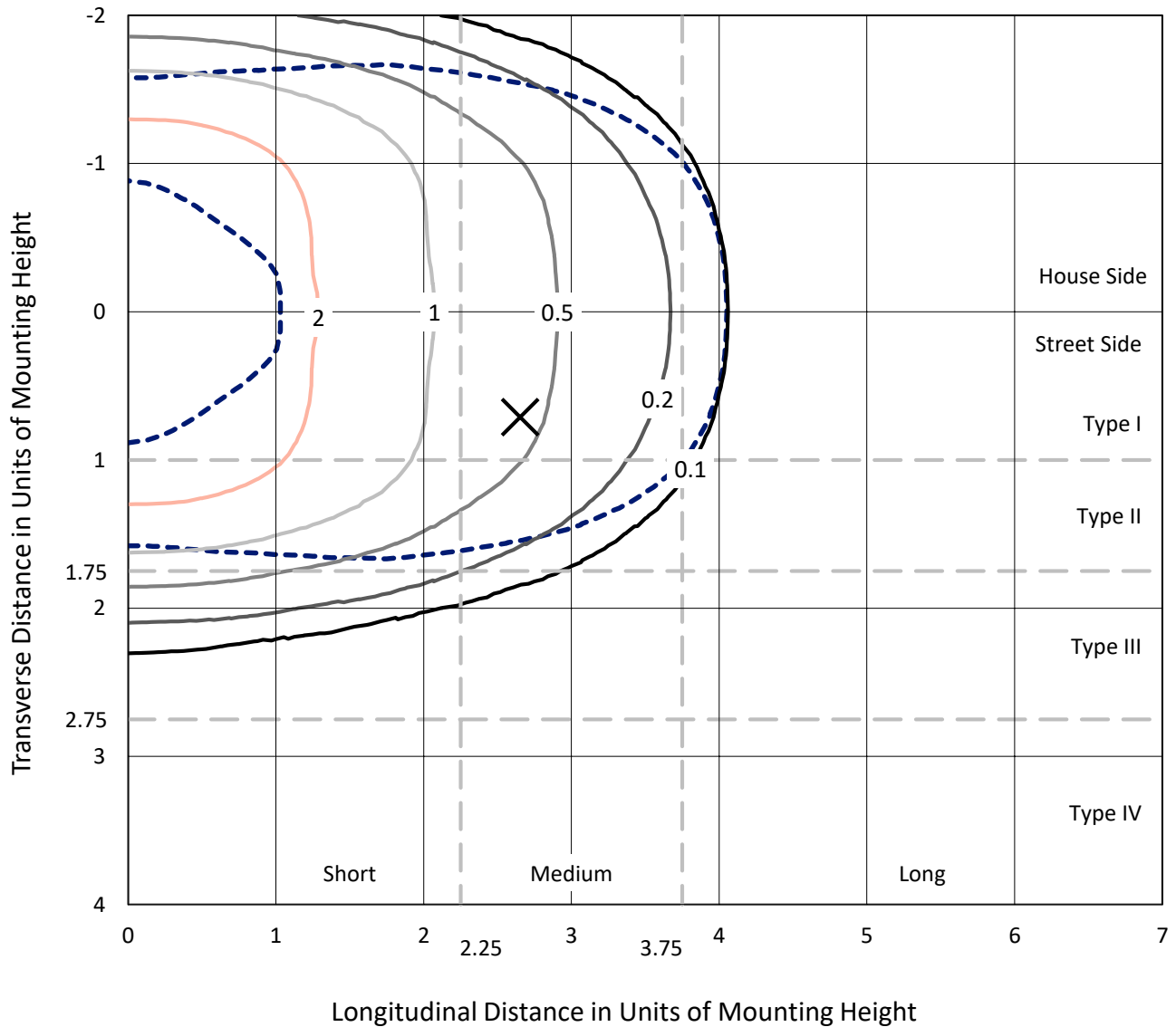
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

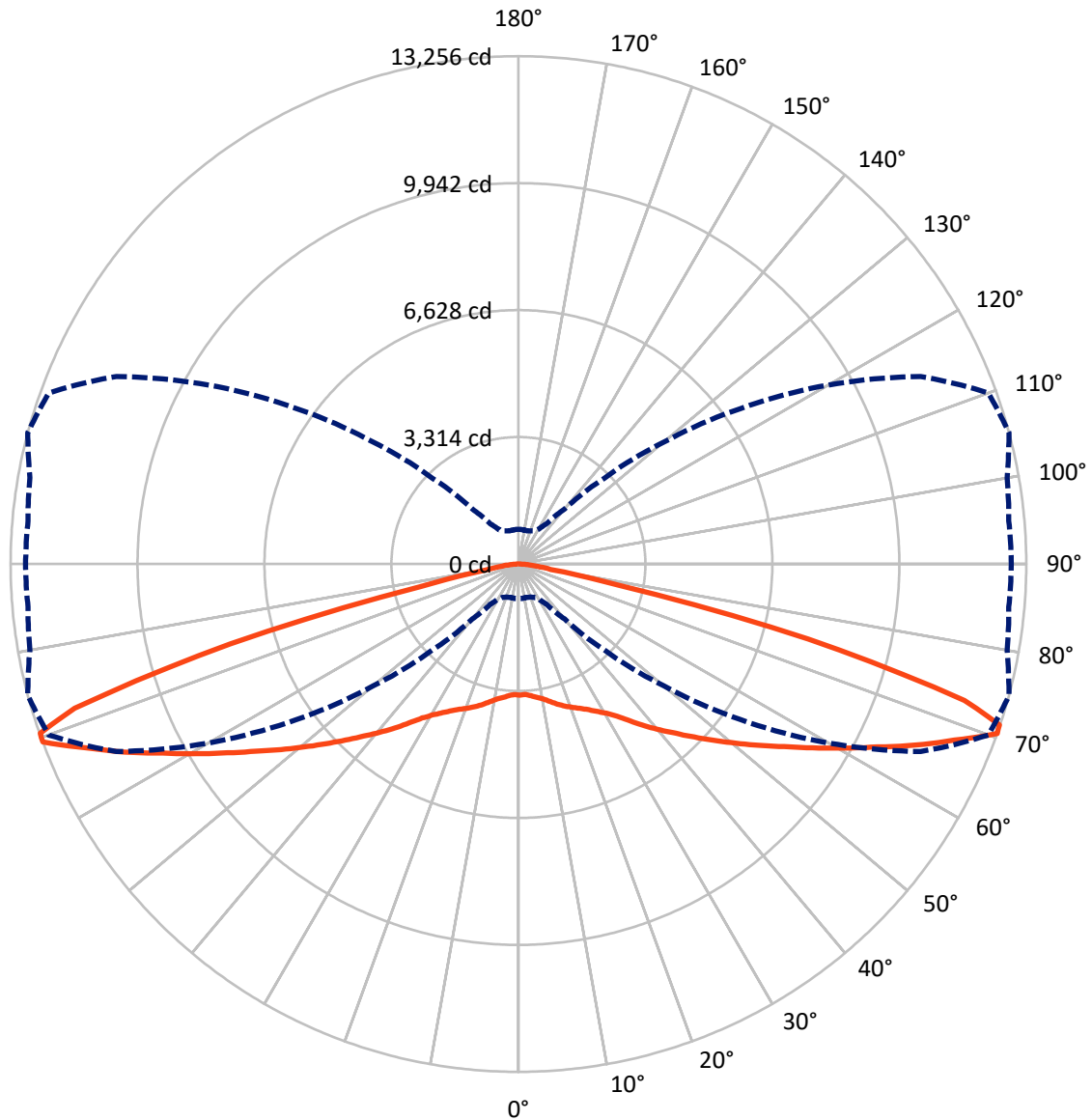
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.8 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15363.5	0.0	15363.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15363.5	0.0	15363.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	30727.0	0.0	30727.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.2	1.1
10°-20°	1017.9	3.3
20°-30°	1911.8	6.2
30°-40°	3367.6	11.0
40°-50°	5581.2	18.2
50°-60°	7764.3	25.3
60°-70°	7329.6	23.9
70°-80°	3130.6	10.2
80°-90°	295.8	1.0
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°	30727.0	100.0
0°-180°	30727.0	100.0

Coefficient of Utilization



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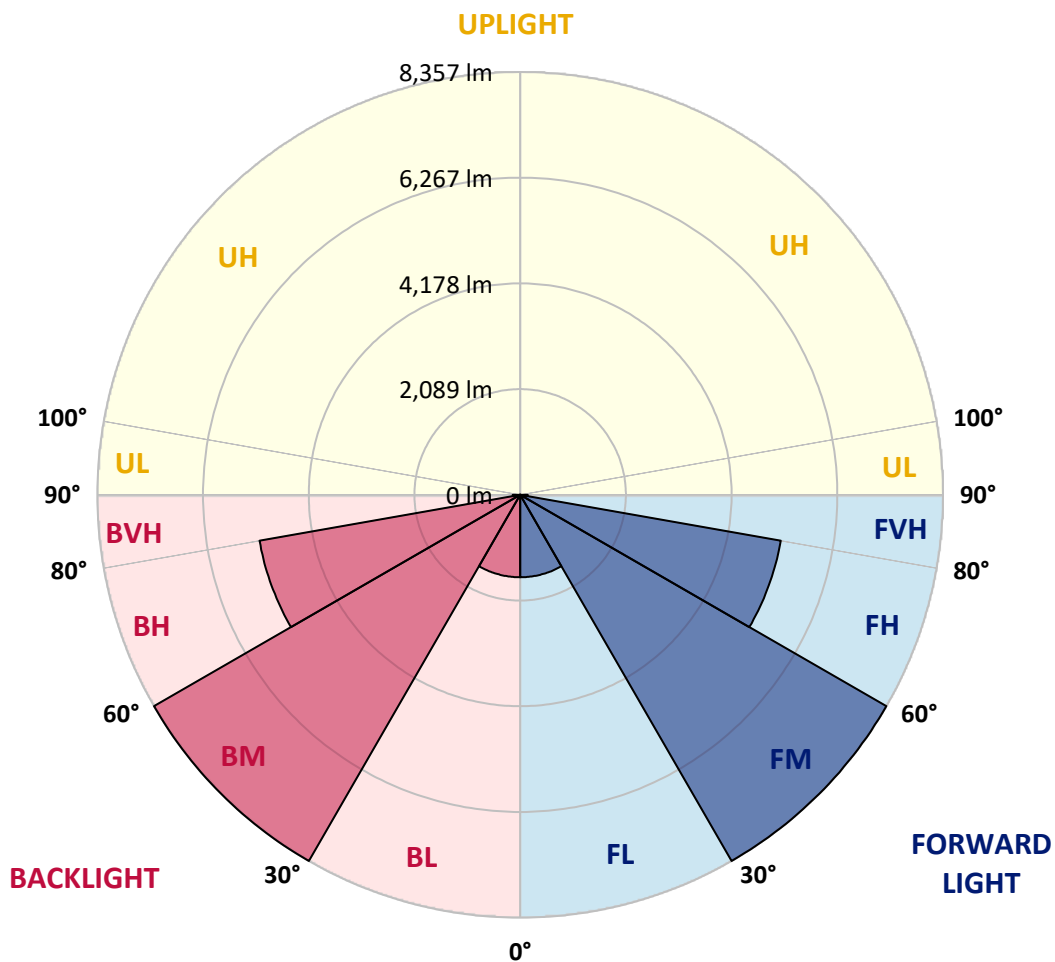
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1628.9	5.3			
FM	(30°-60°)	8356.6	27.2			
FH	(60°-80°)	5230.1	17.0			G3/7500
FVH	(80°-90°)	147.9	0.5			G2/225
BL	(0°-30°)	1628.9	5.3	B3/2500		
BM	(30°-60°)	8356.6	27.2	B4/8500		
BH	(60°-80°)	5230.1	17.0	B5		G5
BVH	(80°-90°)	147.9	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8
2.5°	3442.9	3441.0	3442.9	3437.2	3439.1	3437.2	3437.2	3429.5	3429.5	3425.6	3419.8
5°	3404.4	3408.3	3408.3	3408.3	3414.0	3414.0	3421.8	3423.7	3429.5	3435.2	3439.1
7.5°	3340.9	3342.8	3348.6	3352.4	3364.0	3379.4	3394.8	3412.1	3427.5	3446.8	3468.0
10°	3287.0	3290.8	3300.4	3310.1	3331.2	3350.5	3377.5	3404.4	3431.4	3464.1	3496.8
12.5°	3258.1	3263.9	3279.3	3294.7	3327.4	3352.4	3389.0	3431.4	3468.0	3498.8	3535.4
15°	3261.9	3263.9	3285.0	3306.2	3352.4	3387.1	3439.1	3489.1	3533.4	3568.1	3610.5
17.5°	3317.8	3321.6	3342.8	3373.6	3417.9	3462.2	3518.0	3570.0	3629.7	3670.2	3720.2
20°	3427.5	3433.3	3456.4	3489.1	3537.3	3583.5	3641.3	3695.2	3756.8	3804.9	3855.0
22.5°	3570.0	3579.6	3604.7	3645.1	3693.3	3749.1	3808.8	3864.6	3922.4	3970.5	4012.9
25°	3760.7	3772.2	3799.2	3839.6	3887.7	3947.4	4009.1	4066.8	4126.5	4163.1	4197.8
27.5°	4016.8	4036.0	4064.9	4097.6	4140.0	4203.5	4261.3	4309.4	4367.2	4407.6	4430.8
30°	4361.4	4388.4	4411.5	4446.2	4477.0	4544.4	4590.6	4629.1	4673.4	4696.5	4702.3
32.5°	4783.1	4808.2	4831.3	4856.3	4898.7	4960.3	5004.6	5025.8	5048.9	5045.0	5023.8
35°	5258.8	5278.0	5291.5	5335.8	5405.1	5445.5	5478.3	5486.0	5489.8	5449.4	5408.9
37.5°	5759.4	5782.5	5794.1	5863.4	5928.9	5975.1	5990.5	6007.8	5996.2	5928.9	5855.7
40°	6300.5	6325.5	6360.2	6419.9	6496.9	6541.2	6560.4	6558.5	6548.9	6469.9	6350.6
42.5°	6831.9	6862.8	6891.6	6995.6	7059.2	7134.3	7143.9	7142.0	7120.8	7030.3	6891.6
45°	7282.5	7319.1	7378.8	7494.3	7596.4	7686.9	7723.5	7737.0	7715.8	7619.5	7461.6
47.5°	7654.2	7679.2	7754.3	7894.9	8025.8	8158.7	8231.8	8283.8	8281.9	8212.6	8045.1
50°	7908.3	7937.2	8029.7	8187.6	8351.2	8507.2	8651.6	8769.1	8824.9	8774.9	8618.9
52.5°	7981.5	8018.1	8139.4	8328.1	8518.8	8728.6	8944.3	9152.3	9277.4	9308.2	9186.9
55°	7673.4	7713.9	7891.0	8152.9	8466.8	8776.8	9104.1	9400.7	9658.7	9778.1	9729.9
57.5°	6776.1	6805.0	7030.3	7369.2	7817.8	8362.8	8913.5	9456.5	9899.4	10209.4	10263.3
60°	5358.9	5395.5	5641.9	6000.1	6510.4	7199.7	7970.0	8859.6	9728.0	10438.6	10790.9
62.5°	3616.2	3641.3	3878.1	4205.5	4763.9	5428.2	6287.0	7413.5	8651.6	9920.6	10914.2
65°	1898.6	1898.6	2058.4	2287.6	2732.4	3327.4	4207.4	5362.7	6835.8	8420.6	10082.3
67.5°	1101.4	1099.5	1136.1	1188.1	1328.6	1569.3	2054.6	2903.8	4297.9	6142.6	8033.5
70°	908.9	903.1	897.3	897.3	918.5	955.1	1047.5	1280.5	1873.6	3167.6	4943.0
71°	868.4	864.6	849.2	843.4	853.0	872.3	912.7	1020.6	1330.6	2160.5	3691.3
72.5°	820.3	810.7	787.6	777.9	779.9	787.6	799.1	841.5	935.8	1228.5	2104.7
75°	747.1	724.0	695.1	681.7	675.9	674.0	674.0	685.5	706.7	741.3	862.7
77.5°	662.4	629.7	598.9	585.4	575.7	570.0	566.1	558.4	554.6	570.0	614.3
80°	560.3	525.7	500.7	492.9	487.2	475.6	460.2	444.8	435.2	442.9	469.8
82.5°	433.3	398.6	402.4	404.4	394.7	375.5	360.1	342.8	325.4	321.6	335.1
85°	344.7	327.3	315.8	340.8	319.6	296.5	275.4	246.5	206.0	169.5	184.9
87.5°	148.3	150.2	215.7	325.4	285.0	229.1	190.6	154.0	98.2	73.2	75.1
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°	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8	3421.8
2.5°	3417.9	3417.9	3412.1	3408.3	3408.3	3408.3	3404.4	3406.3
5°	3441.0	3444.9	3448.7	3446.8	3452.6	3458.3	3456.4	3454.5
7.5°	3479.5	3491.1	3502.6	3508.4	3516.1	3523.8	3525.7	3520.0
10°	3518.0	3541.1	3558.5	3573.9	3583.5	3591.2	3597.0	3595.1
12.5°	3566.2	3598.9	3629.7	3660.5	3681.7	3693.3	3704.8	3701.0
15°	3645.1	3681.7	3720.2	3760.7	3793.4	3810.7	3828.0	3824.2
17.5°	3753.0	3785.7	3816.5	3856.9	3897.4	3916.6	3935.9	3934.0
20°	3887.7	3912.8	3930.1	3953.2	3991.7	4012.9	4030.2	4024.5
22.5°	4041.8	4049.5	4051.4	4059.1	4089.9	4115.0	4138.1	4143.8
25°	4209.3	4203.5	4192.0	4186.2	4207.4	4234.3	4263.2	4270.9
27.5°	4417.3	4398.0	4369.1	4346.0	4351.8	4386.5	4419.2	4426.9
30°	4679.2	4634.9	4573.2	4529.0	4521.3	4557.8	4592.5	4604.1
32.5°	4977.6	4917.9	4833.2	4765.8	4736.9	4769.7	4800.5	4817.8
35°	5331.9	5266.5	5164.4	5077.7	5031.5	5052.7	5106.6	5125.9
37.5°	5751.7	5661.2	5547.6	5437.8	5360.8	5364.7	5422.4	5445.5
40°	6215.8	6084.8	5940.4	5803.7	5692.0	5684.3	5736.3	5753.6
42.5°	6699.1	6531.6	6362.1	6183.0	6044.4	6019.4	6086.8	6088.7
45°	7219.0	7003.3	6793.4	6585.5	6441.1	6396.8	6462.2	6469.9
47.5°	7773.6	7504.0	7255.6	7030.3	6874.3	6805.0	6868.5	6880.1
50°	8351.2	8072.0	7783.2	7532.9	7349.9	7265.2	7340.3	7348.0
52.5°	8923.1	8659.3	8372.4	8085.5	7864.1	7767.8	7856.4	7883.3
55°	9498.9	9244.7	8975.1	8688.2	8409.0	8324.3	8420.6	8449.4
57.5°	10097.7	9853.2	9608.6	9319.8	9048.3	8919.3	9023.3	9063.7
60°	10758.2	10542.5	10311.5	10020.7	9753.0	9602.9	9691.4	9737.6
62.5°	11407.1	11362.8	11152.9	10850.6	10511.7	10361.5	10436.6	10469.4
65°	11461.0	12179.3	12169.6	11869.3	11395.6	11143.3	11164.5	11179.9
67.5°	10003.4	11651.7	12705.0	12799.3	12271.7	11877.0	11830.7	11840.4
70°	7082.3	9344.8	11580.4	13047.7	13255.7	12949.5	12849.4	12864.8
71°	5674.7	8018.1	10479.0	12452.7	13240.3	13151.7	13095.9	13136.3
72.5°	3622.0	5907.7	8303.1	10663.8	12175.4	12608.7	12672.2	12697.3
75°	1315.2	2541.8	4301.7	6163.8	7812.1	8946.2	9570.1	9620.2
77.5°	706.7	910.8	1407.6	2102.7	2641.9	2930.7	2965.4	2978.9
80°	519.9	602.7	689.4	787.6	849.2	860.7	839.6	795.3
82.5°	367.8	415.9	450.6	485.2	510.3	489.1	406.3	310.0
85°	213.7	234.9	254.2	271.5	275.4	260.0	171.4	140.6
87.5°	84.7	92.4	90.5	102.1	98.2	90.5	67.4	57.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)