

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: P196618

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196618  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-SL3-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19038.4 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

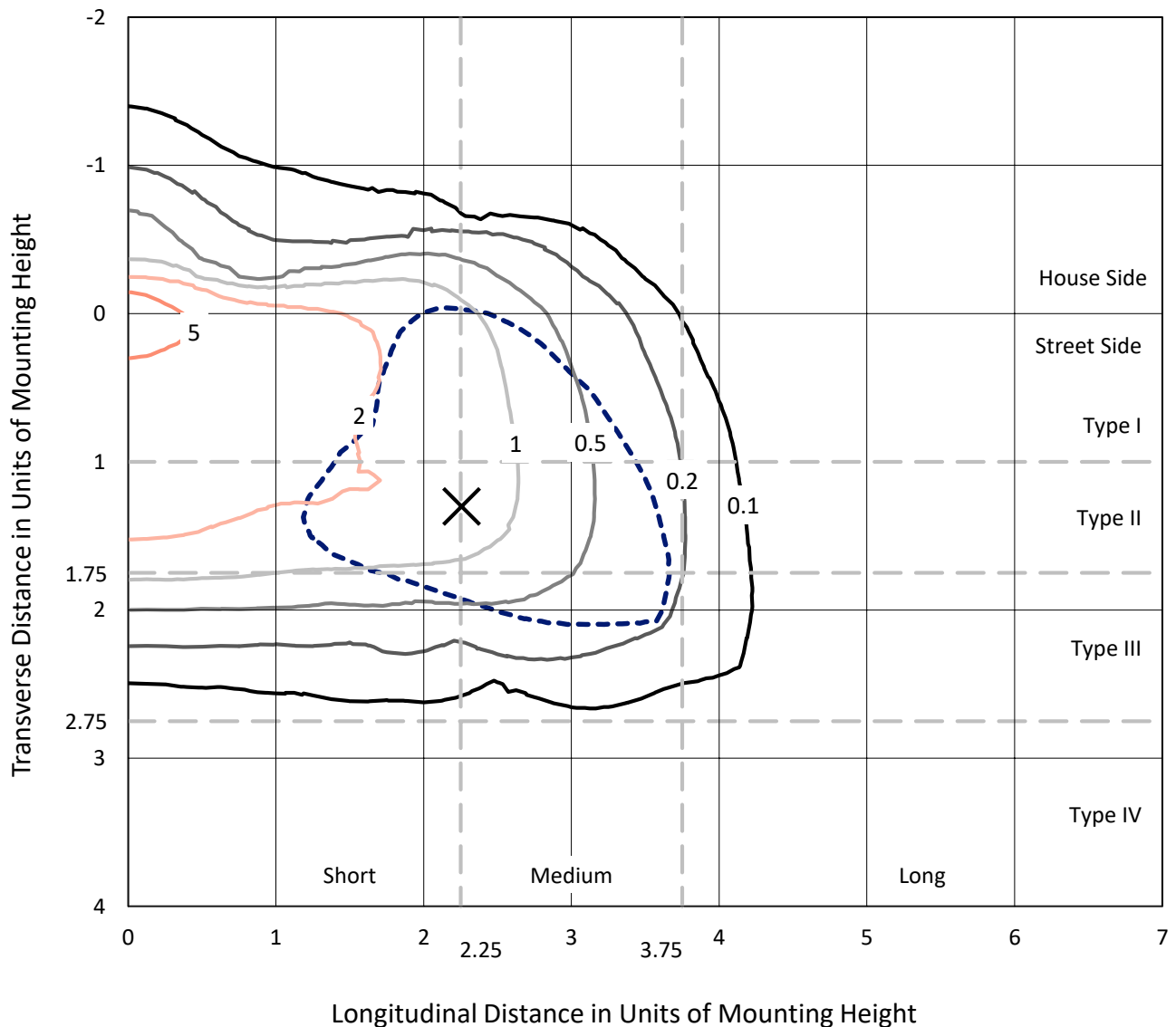
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

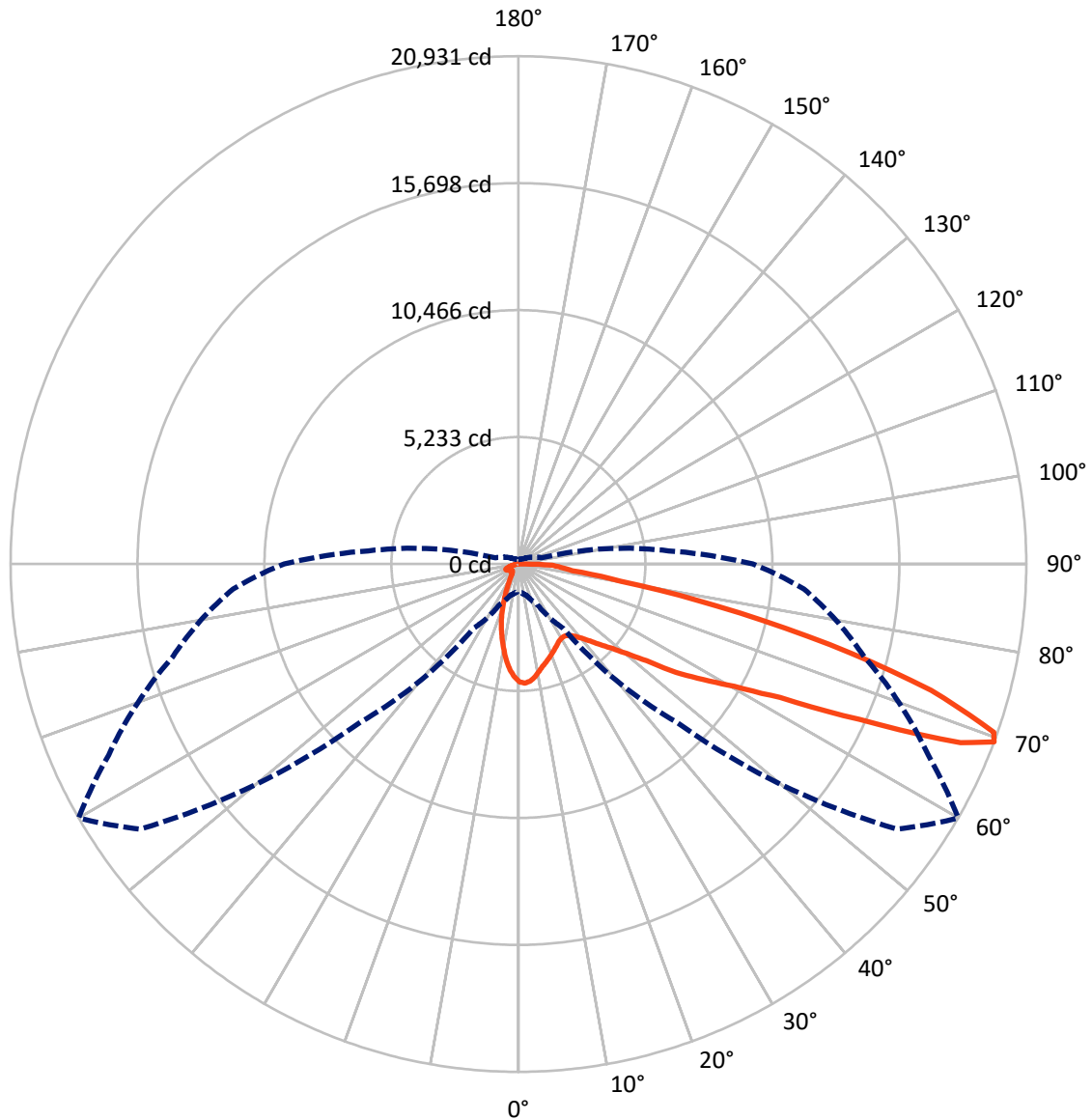
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196618  
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2715.5	0.0	2715.5
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	16322.9	0.0	16322.9
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	19038.4	0.0	19038.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	412.1	2.2
10°-20°	882.4	4.6
20°-30°	1125.6	5.9
30°-40°	1548.9	8.1
40°-50°	2509.0	13.2
50°-60°	3937.7	20.7
60°-70°	5249.7	27.6
70°-80°	2920.1	15.3
80°-90°	452.9	2.4
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°	19038.4	100.0
0°-180°	19038.4	100.0

**Coefficient of Utilization**



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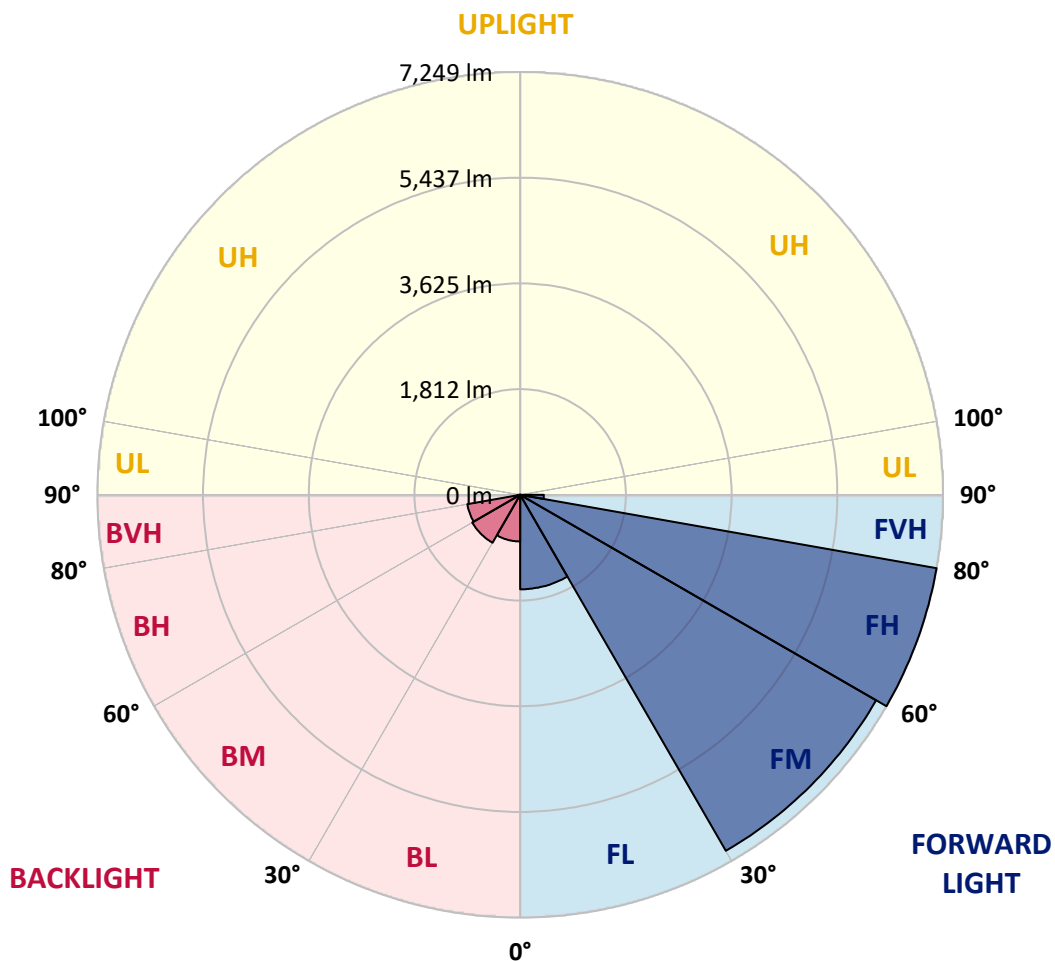
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1619.8	8.5			
FM	(30°-60°)	7047.0	37.0			
FH	(60°-80°)	7249.1	38.1			G3/7500
FVH	(80°-90°)	407.0	2.1			G3/500
BL	(0°-30°)	800.3	4.2	B2/1000		
BM	(30°-60°)	948.6	5.0	B1/1000		
BH	(60°-80°)	920.7	4.8	B2/1000		G2/1000
BVH	(80°-90°)	45.9	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Medium





REPORT NUMBER: P196618

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6
2.5°	4987.1	5000.6	5000.6	4989.6	4983.5	4948.1	4927.3	4912.7	4887.0	4839.4	4796.7
5°	4808.8	4834.5	4845.5	4850.3	4882.1	4871.1	4872.4	4862.6	4840.6	4789.4	4719.8
7.5°	4481.7	4486.6	4506.1	4539.0	4615.9	4669.7	4713.7	4722.1	4717.3	4679.5	4581.8
10°	4159.4	4167.9	4191.1	4247.4	4320.5	4397.4	4492.6	4531.7	4561.0	4548.8	4425.5
12.5°	3892.1	3893.2	3918.9	3983.6	4065.4	4161.8	4291.2	4352.3	4421.8	4449.9	4312.0
15°	3634.4	3651.6	3675.9	3754.0	3855.4	3977.5	4126.4	4210.7	4302.2	4382.8	4224.1
17.5°	3439.2	3452.5	3467.3	3532.0	3649.0	3801.6	3986.0	4076.4	4197.2	4320.5	4133.8
20°	3331.7	3336.6	3325.6	3357.3	3456.2	3621.0	3834.7	3943.2	4087.4	4260.7	4041.0
22.5°	3309.7	3309.7	3269.4	3263.2	3307.3	3446.5	3678.4	3811.5	3987.3	4219.3	3957.9
25°	3412.2	3404.9	3329.2	3259.6	3243.8	3314.6	3529.4	3693.1	3901.7	4218.0	3895.7
27.5°	3606.3	3596.6	3502.7	3385.4	3284.0	3253.5	3414.7	3581.9	3834.7	4259.5	3864.0
30°	3848.1	3844.4	3749.2	3602.8	3435.4	3278.0	3369.5	3524.6	3789.4	4336.4	3862.8
32.5°	4112.9	4095.9	4037.3	3890.8	3673.6	3413.5	3396.4	3527.0	3777.3	4448.7	3890.8
35°	4395.1	4382.8	4368.1	4220.4	3976.3	3652.7	3514.8	3611.2	3837.0	4604.9	3970.2
37.5°	4754.0	4740.5	4764.9	4603.7	4336.4	3966.5	3715.1	3779.8	3959.2	4832.1	4117.9
40°	5392.5	5353.3	5285.0	5037.2	4756.4	4351.0	4004.4	4014.0	4167.9	5136.1	4354.7
42.5°	6441.2	6315.4	5977.2	5521.9	5199.5	4797.9	4381.7	4335.2	4456.0	5537.7	4699.0
45°	7492.2	7350.6	6779.3	6050.4	5658.5	5277.7	4848.0	4736.8	4814.9	6005.3	5142.2
47.5°	8171.1	8101.5	7456.8	6579.0	6139.6	5800.2	5381.4	5198.3	5254.5	6535.2	5689.1
50°	8370.1	8310.3	7803.7	6992.9	6593.8	6431.3	6041.9	5798.9	5808.8	7154.1	6344.6
52.5°	8221.1	8196.7	7860.9	7249.4	7011.2	7096.7	6956.3	6618.2	6537.6	7832.9	7055.2
55°	8022.2	8030.7	7901.3	7506.9	7436.0	7716.9	8152.7	7880.6	7538.7	8539.8	7795.1
57.5°	7395.9	7402.0	7741.3	7997.7	8246.8	8586.1	9084.3	8969.5	8571.5	9302.8	8624.1
60°	5955.2	6002.8	6758.6	7896.3	9173.4	10299.0	10421.0	10223.3	9670.2	10181.8	9702.0
62.5°	4254.7	4297.3	5172.7	6855.0	9064.7	12237.7	12889.7	12103.4	11161.0	11496.6	11218.3
65°	2235.3	2228.1	2905.6	4736.8	7635.1	12686.9	16779.2	15441.2	13672.1	13304.7	12683.3
67.5°	1249.0	1289.3	1551.7	2389.2	4976.1	11165.8	19263.6	19657.9	17163.7	14739.2	12619.8
69°	1154.9	1168.3	1344.1	1847.1	3243.8	9212.4	19050.0	20931.3	18636.2	14745.3	11806.8
70°	1122.0	1136.7	1296.6	1701.8	2724.9	7548.4	18272.3	20782.3	18993.8	14418.1	11066.9
72.5°	1006.0	1025.5	1180.5	1529.7	2296.4	3890.8	14718.5	17787.6	17205.3	12601.5	8581.2
75°	858.2	891.2	1125.6	1518.7	2175.6	2473.4	9815.6	13252.2	12805.4	9012.2	4868.7
77.5°	355.3	358.9	492.0	1112.1	2283.0	2367.2	5275.2	8394.5	7431.3	3951.9	1466.3
80°	247.8	243.0	245.4	324.7	1842.2	2383.1	2706.6	4269.3	3318.2	1042.6	686.1
82.5°	208.8	206.3	216.2	203.9	623.9	2704.1	2263.5	2225.6	1562.6	561.6	327.2
85°	138.0	134.3	177.0	185.5	296.6	2147.5	2434.4	1749.5	1164.7	300.4	139.2
87.5°	67.2	68.4	101.3	125.7	157.5	680.0	2331.8	1383.2	899.7	130.7	56.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196618

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7030-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6	4857.6
2.5°	4779.5	4743.0	4709.9	4668.5	4636.8	4609.8	4573.3	4572.1	4566.0	4574.4	4576.9
5°	4673.3	4612.4	4519.5	4415.8	4342.5	4246.1	4152.1	4120.2	4084.8	4081.3	4092.2
7.5°	4513.4	4418.2	4259.5	4100.8	3942.1	3779.8	3625.9	3547.7	3472.0	3448.9	3459.8
10°	4335.2	4214.3	3971.3	3712.5	3489.2	3247.4	3013.1	2861.6	2723.8	2665.1	2679.7
12.5°	4196.0	4042.1	3700.4	3364.6	3030.1	2683.4	2374.5	2075.4	1849.5	1748.2	1754.3
15°	4076.4	3879.8	3446.5	2999.6	2580.8	2106.0	1677.4	1330.7	1132.9	1059.7	1057.2
17.5°	3947.0	3709.0	3181.5	2660.3	2116.9	1529.7	1123.1	918.1	839.9	815.5	815.5
20°	3809.0	3533.1	2904.3	2290.3	1628.6	1068.2	844.8	765.5	736.2	728.9	727.6
22.5°	3680.8	3361.0	2626.0	1895.9	1178.2	810.6	719.0	688.6	683.6	689.8	689.8
25°	3579.6	3209.6	2344.0	1480.9	857.0	678.8	639.7	636.1	654.4	676.4	680.0
27.5°	3503.8	3074.1	2065.6	1081.6	673.9	590.9	577.4	593.3	636.1	680.0	688.6
30°	3451.3	2958.0	1732.5	777.7	561.6	517.7	523.8	551.9	616.6	683.6	702.0
32.5°	3428.1	2864.1	1396.7	597.0	479.7	455.4	471.2	507.8	575.0	642.1	664.2
35°	3450.1	2795.7	1086.6	495.7	420.0	401.6	420.0	457.8	501.7	534.8	548.2
37.5°	3529.4	2771.3	818.0	439.6	380.9	362.6	377.3	402.8	422.4	434.7	440.8
40°	3696.7	2796.9	641.0	410.2	358.9	338.1	341.9	354.0	367.4	377.3	378.5
42.5°	3962.9	2881.1	570.2	399.3	345.5	318.6	312.5	321.1	335.8	349.2	351.6
45°	4316.9	3021.6	562.8	402.8	339.4	302.7	290.5	299.2	318.6	340.6	344.2
47.5°	4774.7	3243.8	597.0	422.4	343.1	294.2	275.9	284.4	310.1	339.4	344.2
50°	5316.8	3551.5	660.5	451.7	360.1	294.2	269.8	277.1	304.0	336.9	341.9
52.5°	5955.2	3979.9	726.3	481.0	384.6	305.2	272.3	271.1	295.4	325.9	332.0
55°	6659.7	4512.2	789.8	506.6	398.0	319.9	278.4	263.8	283.2	307.7	312.5
57.5°	7488.6	5241.0	901.0	531.1	405.4	330.8	285.7	256.3	267.3	284.4	288.1
60°	8613.0	6311.7	1117.0	572.5	418.8	335.8	287.0	249.0	247.8	260.0	261.2
62.5°	10079.2	7565.5	1323.3	621.3	445.6	336.9	282.0	244.2	231.9	235.7	235.7
65°	11121.8	8027.1	1263.6	662.8	470.1	335.8	277.1	240.5	219.7	213.6	213.6
67.5°	10528.6	7090.6	1073.2	673.9	472.4	322.4	266.1	231.9	208.8	194.2	194.2
69°	9656.9	6215.3	985.2	654.4	452.9	306.5	253.9	223.4	201.5	184.3	184.3
70°	8946.2	5552.3	931.6	631.2	429.7	293.1	243.0	214.9	194.2	179.5	178.2
72.5°	6679.2	3705.2	796.0	544.5	352.8	247.8	212.4	191.6	174.6	164.8	164.8
75°	3524.6	1856.9	651.9	444.3	272.3	197.8	174.6	161.1	151.5	150.1	148.9
77.5°	1154.9	839.9	468.8	334.6	200.2	153.8	139.2	130.7	129.4	134.3	134.3
80°	623.9	501.7	301.5	225.8	139.2	114.7	107.4	106.2	110.0	117.2	117.2
82.5°	302.7	247.8	179.5	139.2	95.3	84.2	84.2	85.4	90.3	98.9	98.9
85°	130.7	117.2	103.8	78.1	58.6	52.5	59.9	65.9	69.6	75.7	78.1
87.5°	62.3	54.9	47.6	30.5	25.6	26.9	31.8	39.2	46.4	51.3	52.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)