

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: P197159

Luminaire Tested: **NAV-AF-05-D-UNV-SL4-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197159  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25678 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G5

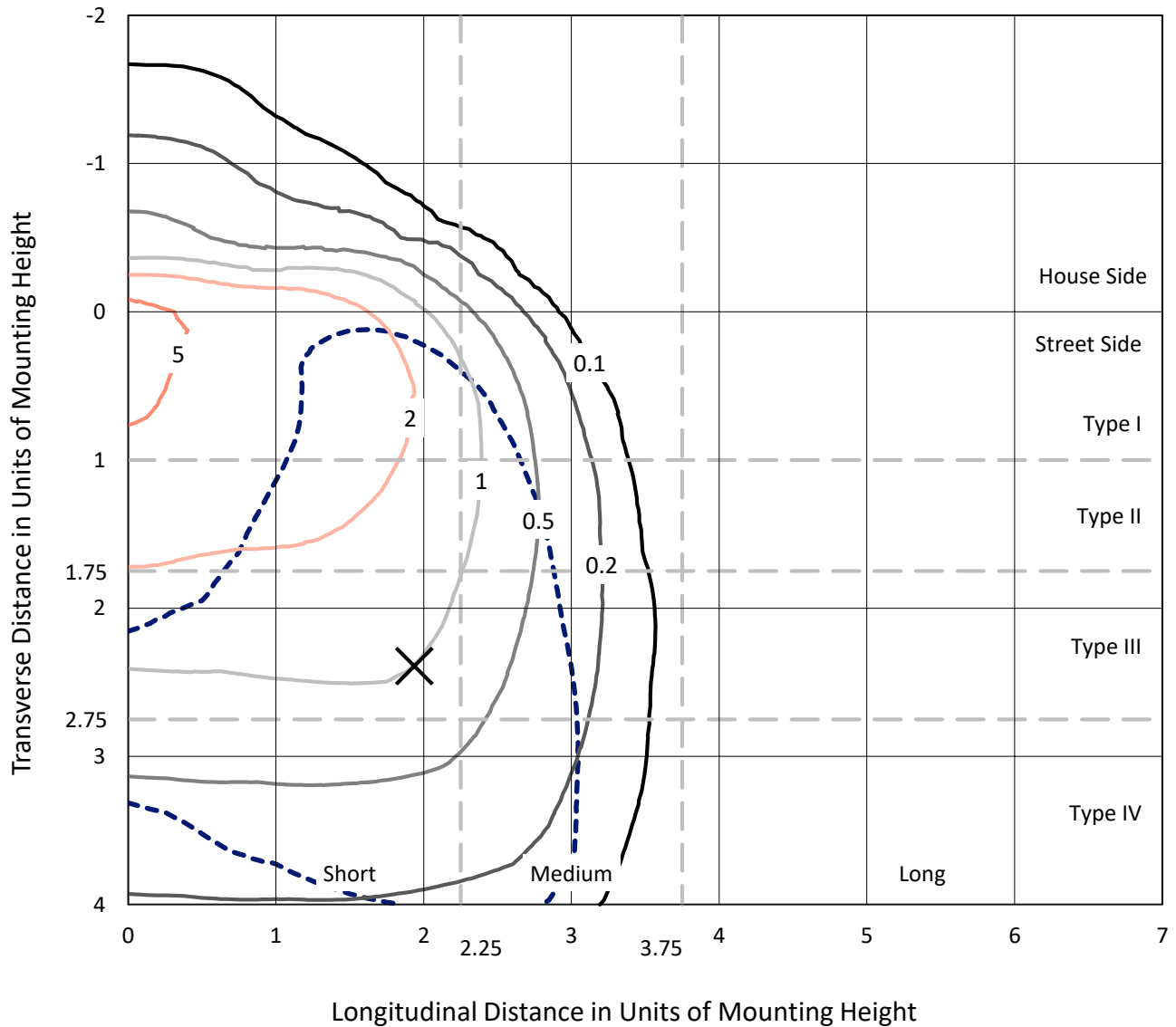
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P197159  
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### Iso-Footcandle Lines of Horizontal Illumination

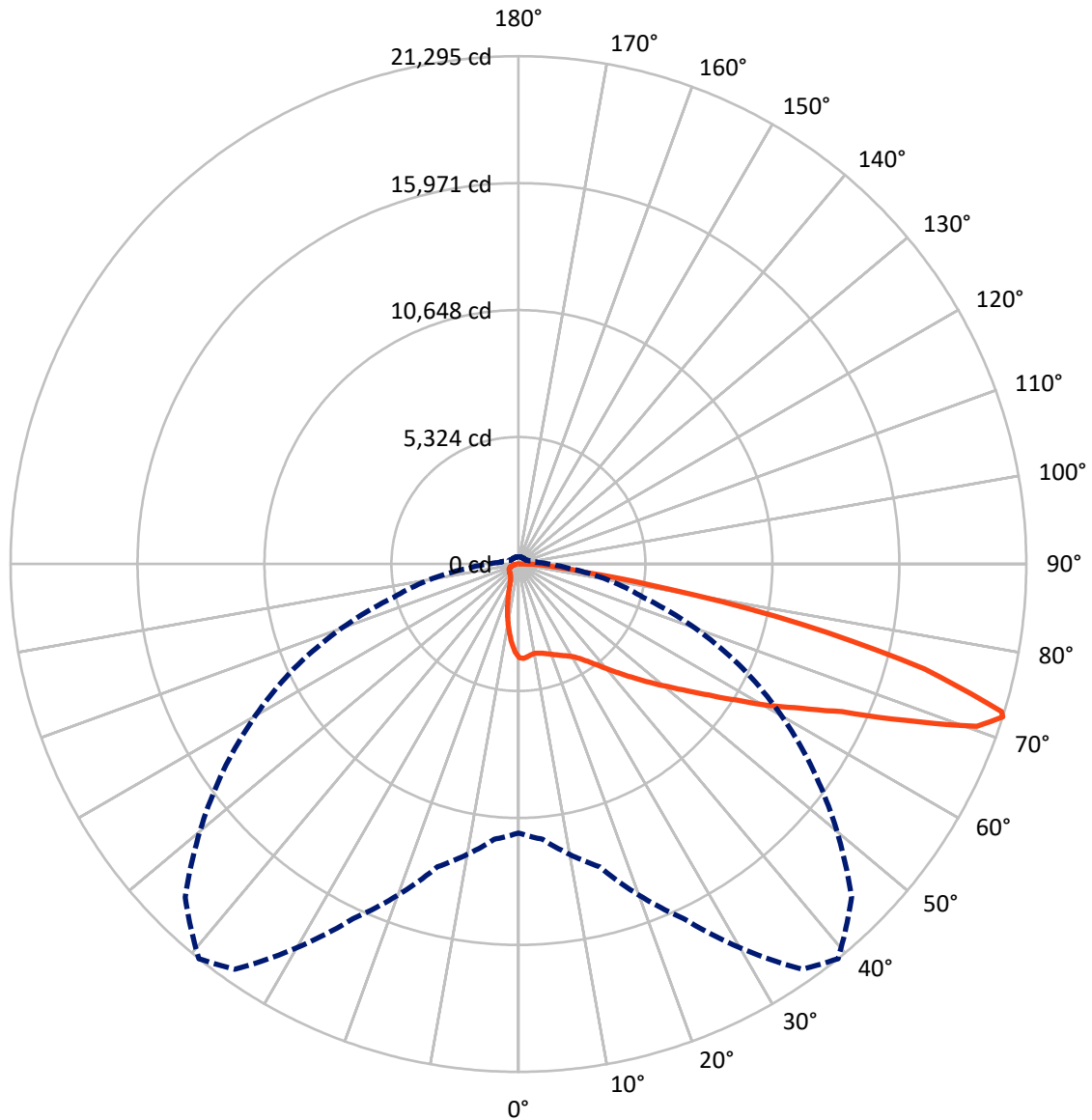
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197159  
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-8030-1200

### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-8030-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2944.3	0.0	2944.3
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	22733.7	0.0	22733.7
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	25678.0	0.0	25678.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	337.0	1.3
10°-20°	846.8	3.3
20°-30°	1319.6	5.1
30°-40°	2031.9	7.9
40°-50°	3312.4	12.9
50°-60°	5147.1	20.0
60°-70°	6889.1	26.8
70°-80°	4954.3	19.3
80°-90°	839.9	3.3
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°	25678.0	100.0
0°-180°	25678.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P197159

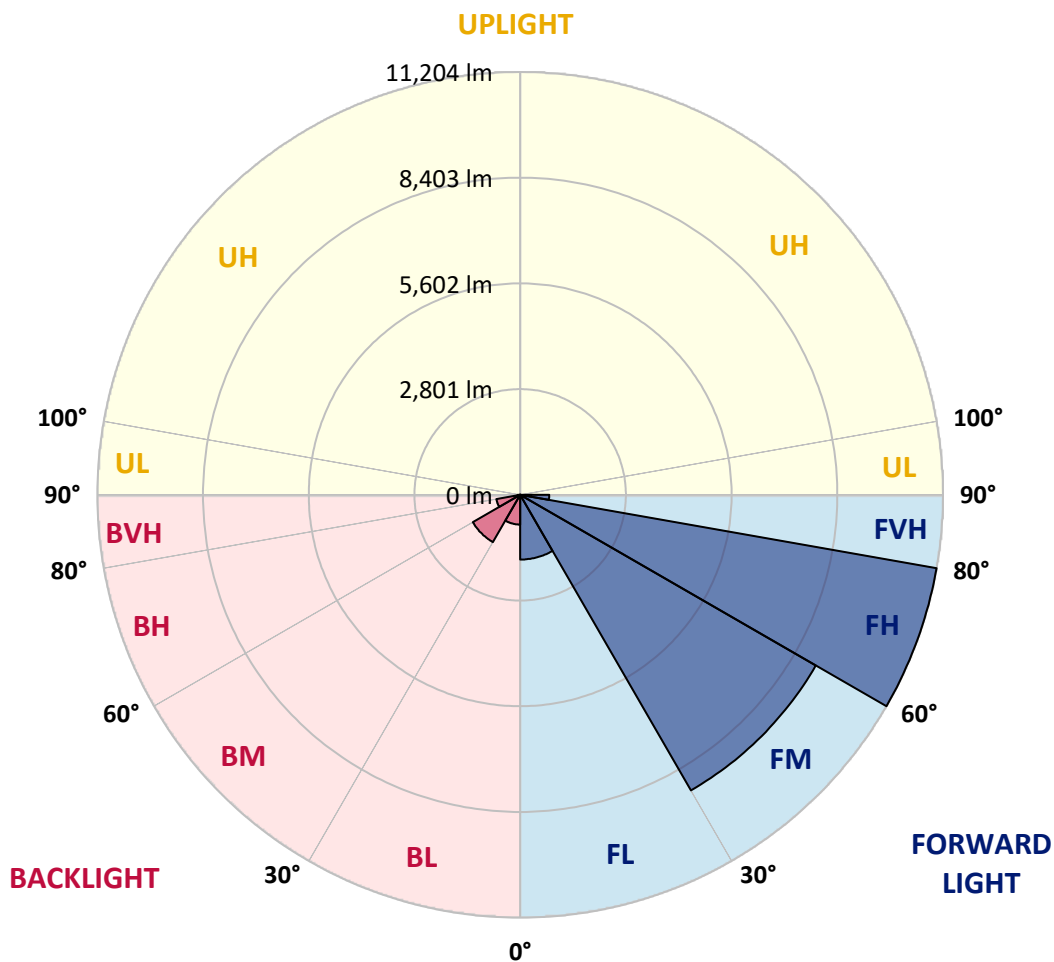
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1715.2	6.7			
FM (30°-60°)	9044.3	35.2			
FH (60°-80°)	11203.7	43.6			G4/12000
FVH (80°-90°)	770.4	3.0			G5
BL (0°-30°)	788.2	3.1	B2/1000		
BM (30°-60°)	1447.0	5.6	B2/2500		
BH (60°-80°)	639.7	2.5	B2/1000		G2/1000
BVH (80°-90°)	69.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G5**

Type IV Short





REPORT NUMBER: P197159

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-8030-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5
2.5°	4006.0	4007.7	4002.5	3987.0	3973.2	3966.3	3954.2	3933.6	3906.0	3887.0	3871.5
5°	3968.0	3973.2	3969.8	3943.9	3919.8	3906.0	3887.0	3857.7	3821.5	3806.0	3769.8
7.5°	3938.7	3942.2	3931.8	3902.5	3856.0	3838.8	3804.3	3766.4	3733.6	3711.2	3668.1
10°	3918.0	3921.5	3912.9	3883.6	3831.9	3811.2	3769.8	3728.4	3685.3	3657.8	3609.5
12.5°	3888.7	3895.6	3895.6	3881.8	3847.4	3833.6	3792.2	3747.4	3707.7	3678.4	3618.1
15°	3883.6	3892.2	3907.7	3906.0	3895.6	3885.3	3852.5	3807.7	3773.3	3738.8	3664.7
17.5°	3926.7	3945.6	3976.7	3987.0	3980.1	3957.7	3919.8	3878.4	3840.5	3807.7	3716.4
20°	4035.3	4045.6	4092.1	4112.8	4078.4	4045.6	3995.6	3942.2	3907.7	3881.8	3764.6
22.5°	4199.0	4212.8	4250.7	4252.4	4180.1	4140.4	4076.6	4011.1	3978.4	3968.0	3830.1
25°	4461.0	4457.6	4467.9	4424.8	4293.8	4247.3	4169.7	4093.9	4071.5	4092.1	3926.7
27.5°	4774.7	4766.1	4733.4	4621.3	4423.1	4362.8	4269.7	4202.5	4202.5	4250.7	4057.7
30°	5136.7	5128.1	5021.2	4833.3	4576.5	4507.6	4409.3	4338.6	4374.8	4467.9	4235.2
32.5°	5519.4	5488.4	5338.4	5086.7	4795.4	4719.6	4624.8	4552.4	4621.3	4779.9	4490.3
35°	5879.7	5862.4	5678.0	5379.8	5078.1	5014.3	4948.8	4859.2	4969.5	5216.0	4850.6
37.5°	6252.0	6238.2	6012.4	5695.2	5422.9	5379.8	5324.6	5262.6	5440.1	5764.2	5338.4
40°	6667.4	6639.8	6355.4	6038.2	5824.5	5803.8	5774.5	5757.3	6043.4	6526.1	5955.5
42.5°	7138.0	7084.5	6717.4	6415.7	6262.3	6279.6	6264.0	6333.0	6770.8	7405.2	6689.8
45°	7675.8	7568.9	7077.6	6817.4	6746.7	6815.6	6848.4	7024.2	7631.0	8420.4	7510.3
47.5°	8179.1	8041.2	7472.4	7253.5	7293.1	7412.1	7505.1	7815.4	8573.8	9423.6	8348.0
50°	8642.8	8487.7	7894.7	7705.1	7898.1	8067.1	8260.1	8698.0	9577.1	10456.2	9116.8
52.5°	8985.8	8873.8	8317.0	8198.1	8592.8	8816.9	9125.4	9678.8	10590.6	11440.4	9802.9
55°	9251.3	9190.9	8729.0	8763.5	9378.8	9699.4	10073.5	10709.6	11662.8	12323.0	10354.5
57.5°	9558.1	9513.3	9199.6	9446.1	10354.5	10757.8	11199.1	11905.8	12683.2	13100.4	10787.1
60°	9882.2	9882.2	9723.6	10268.3	11574.9	12036.8	12476.4	13026.2	13700.2	13800.2	10962.9
62.5°	10126.9	10190.7	10247.6	11143.9	12733.2	13307.2	13789.9	14317.3	14753.4	14144.9	10549.2
65°	10482.0	10618.2	10938.8	12155.8	14167.4	14918.9	15570.5	16013.5	15606.7	13870.9	9199.6
67.5°	11092.2	11293.9	11976.5	13662.3	16363.4	17489.0	18121.6	17356.3	15439.5	12145.4	7046.6
70°	11642.1	11926.5	13093.5	15573.9	19217.9	20386.6	20095.3	17044.3	13446.8	8903.1	4335.2
72°	11276.7	11586.9	13145.2	16406.5	20743.4	21295.0	19759.1	15105.1	10390.7	5433.2	2137.4
72.5°	11037.1	11359.4	12978.0	16385.8	20784.8	21179.5	19292.0	14334.6	9432.3	4754.1	1728.9
75°	9220.2	9496.0	11159.4	14522.4	18316.4	17592.4	15055.1	9277.1	4335.2	1535.8	889.4
77.5°	6021.0	6231.3	7694.7	10061.4	12829.7	12133.4	9163.4	4343.8	1625.5	932.5	668.8
80°	3025.2	3175.1	4118.0	5290.1	6924.2	6370.9	4230.0	2101.2	1087.7	674.0	525.7
82.5°	2104.7	2242.6	2835.5	2701.1	2894.1	2801.1	1989.2	1753.0	813.6	425.8	275.8
85°	1765.1	1908.2	2346.0	1925.4	1575.5	1435.9	1425.5	1656.5	537.8	210.3	232.7
87.5°	1539.3	1756.5	1935.8	1406.6	1080.8	953.2	1049.8	1518.6	170.6	115.5	70.7
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: P197159  
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-8030-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5	3921.5
2.5°	3845.6	3840.5	3814.6	3775.0	3745.7	3726.7	3690.5	3688.8	3692.2	3661.2	3673.3
5°	3737.1	3716.4	3649.1	3557.8	3483.7	3413.0	3335.4	3309.6	3287.2	3240.6	3245.8
7.5°	3623.3	3587.1	3469.9	3319.9	3176.8	3045.8	2916.6	2852.8	2804.5	2744.2	2744.2
10°	3556.1	3499.2	3319.9	3101.0	2873.5	2682.1	2489.1	2373.6	2289.1	2211.5	2206.4
12.5°	3552.6	3466.4	3216.5	2914.8	2602.8	2333.9	2070.2	1892.7	1766.8	1675.5	1666.8
15°	3580.2	3459.5	3130.3	2740.7	2347.7	1997.8	1672.0	1446.2	1285.9	1184.2	1173.9
17.5°	3604.3	3450.9	3037.2	2558.0	2099.5	1673.7	1311.8	1077.3	925.6	842.9	834.3
20°	3626.7	3432.0	2918.3	2365.0	1825.4	1370.4	1025.6	836.0	736.0	689.5	684.3
22.5°	3659.5	3414.7	2794.2	2147.8	1556.5	1115.3	846.4	710.2	656.7	634.3	630.9
25°	3712.9	3416.4	2673.5	1925.4	1310.0	929.1	732.6	648.1	618.8	603.3	603.3
27.5°	3790.5	3437.1	2554.6	1699.6	1101.5	801.5	665.4	615.4	596.4	584.3	580.9
30°	3904.3	3475.0	2428.7	1485.9	936.0	713.6	625.7	594.7	579.2	568.8	567.1
32.5°	4069.7	3542.3	2296.0	1291.1	810.2	651.6	596.4	577.5	565.4	556.8	555.0
35°	4316.2	3661.2	2166.7	1125.6	720.5	606.8	572.3	556.8	549.9	546.4	544.7
37.5°	4678.2	3852.5	2044.3	996.3	661.9	577.5	548.1	539.5	536.1	536.1	536.1
40°	5133.3	4104.2	1934.0	905.0	629.2	555.0	530.9	524.0	524.0	525.7	525.7
42.5°	5686.6	4419.7	1839.2	842.9	610.2	539.5	518.8	515.4	513.7	513.7	515.4
45°	6329.5	4792.0	1780.6	794.6	596.4	530.9	510.2	508.5	501.6	498.2	498.2
47.5°	6975.9	5190.2	1777.2	767.1	579.2	520.6	501.6	501.6	487.8	480.9	482.6
50°	7579.3	5547.0	1815.1	760.2	568.8	505.1	493.0	494.7	475.8	467.1	465.4
52.5°	8065.3	5819.3	1861.6	768.8	568.8	491.3	477.5	486.1	465.4	455.1	453.3
55°	8441.1	6008.9	1878.9	787.7	575.7	479.2	463.7	477.5	462.0	448.2	448.2
57.5°	8710.0	6069.3	1804.7	796.4	586.1	477.5	449.9	475.8	467.1	449.9	449.9
60°	8611.8	5719.3	1529.0	763.6	584.3	474.0	439.6	479.2	484.4	465.4	465.4
62.5°	7844.7	4785.1	1227.3	689.5	555.0	462.0	427.5	475.8	496.4	489.5	486.1
65°	6386.4	3509.5	951.5	601.6	505.1	436.1	401.6	444.7	468.9	475.8	477.5
67.5°	4500.7	2221.9	739.5	511.9	443.0	398.2	372.3	393.0	401.6	405.1	412.0
70°	2461.5	1203.2	587.8	430.9	379.2	360.3	341.3	343.0	339.6	336.1	339.6
72°	1235.9	786.0	496.4	374.0	336.1	324.1	315.4	310.3	310.3	305.1	306.8
72.5°	1063.5	730.9	479.2	360.3	325.8	315.4	308.5	303.4	301.7	298.2	299.9
75°	708.5	579.2	399.9	301.7	277.5	270.6	274.1	268.9	270.6	267.2	268.9
77.5°	572.3	498.2	339.6	255.1	237.9	227.5	234.4	236.2	239.6	236.2	234.4
80°	479.2	424.0	284.4	210.3	198.2	189.6	193.1	205.1	206.8	196.5	194.8
82.5°	310.3	341.3	224.1	163.8	151.7	148.2	156.9	168.9	172.4	158.6	155.1
85°	260.3	274.1	162.0	112.0	100.0	96.5	113.8	125.8	134.5	120.7	117.2
87.5°	72.4	134.5	79.3	53.4	44.8	44.8	55.2	65.5	77.6	79.3	79.3
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)