

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: P195653

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195653  
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-05-D-UNV-SL3-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 615mA 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: 19786 lumens  
Efficiency: N/A  
Efficacy: 122.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G4

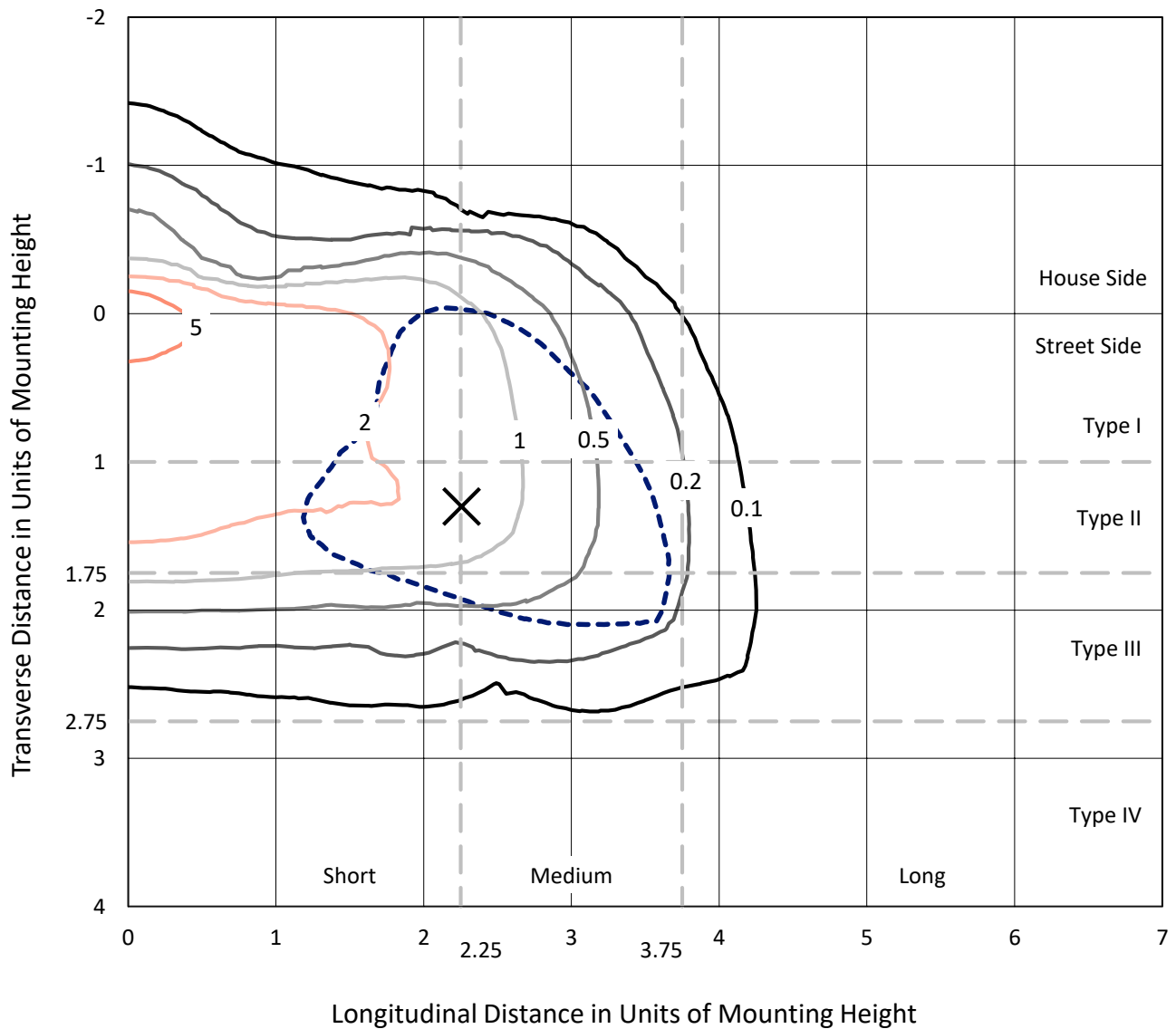
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

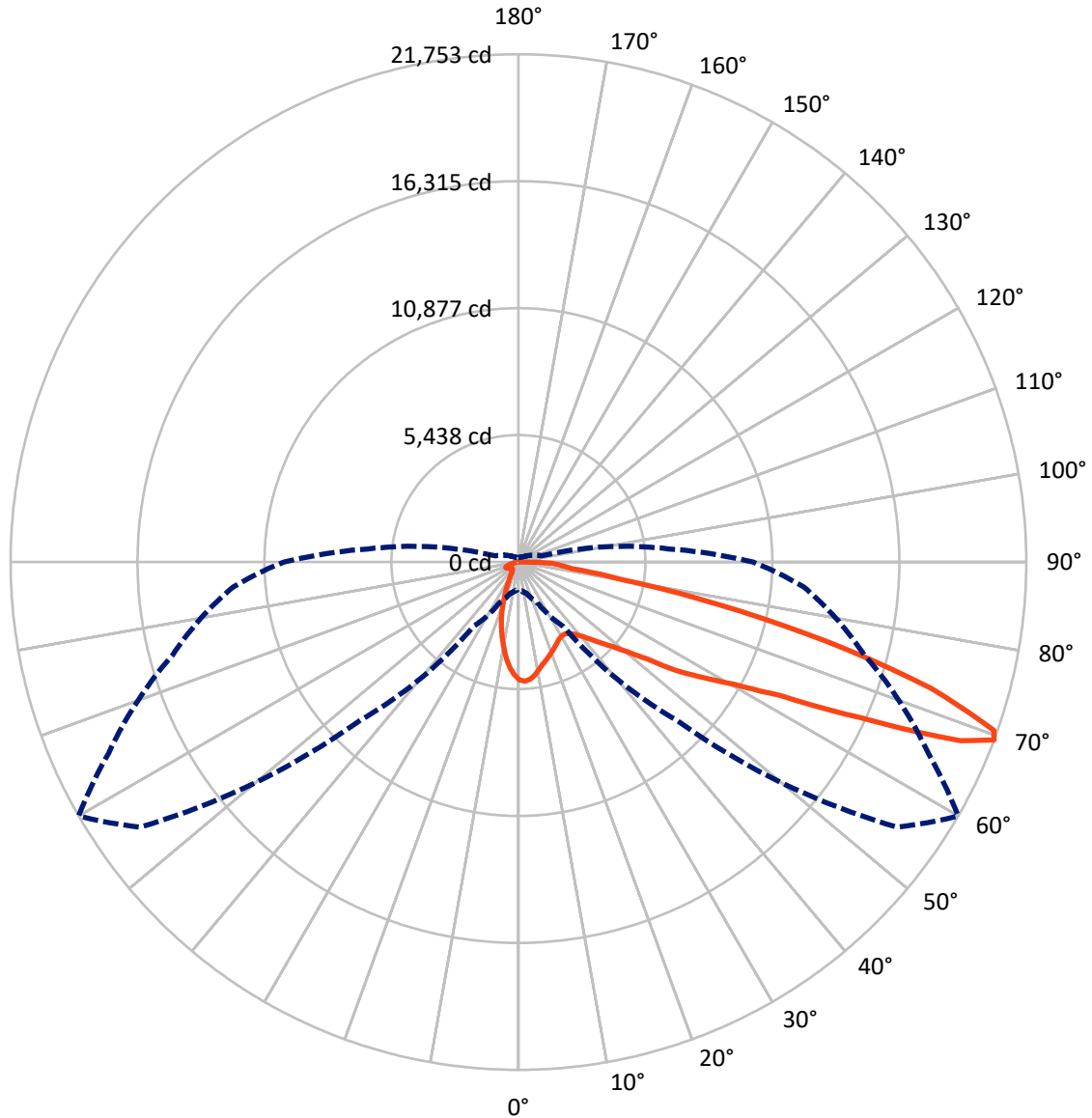
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2822.1	0.0	2822.1
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	16963.9	0.0	16963.9
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	19786.0	0.0	19786.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	428.3	2.2
10°-20°	917.0	4.6
20°-30°	1169.8	5.9
30°-40°	1609.8	8.1
40°-50°	2607.5	13.2
50°-60°	4092.4	20.7
60°-70°	5455.9	27.6
70°-80°	3034.7	15.3
80°-90°	470.7	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°	19786.0	100.0
0°-180°	19786.0	100.0

**Coefficient of Utilization**



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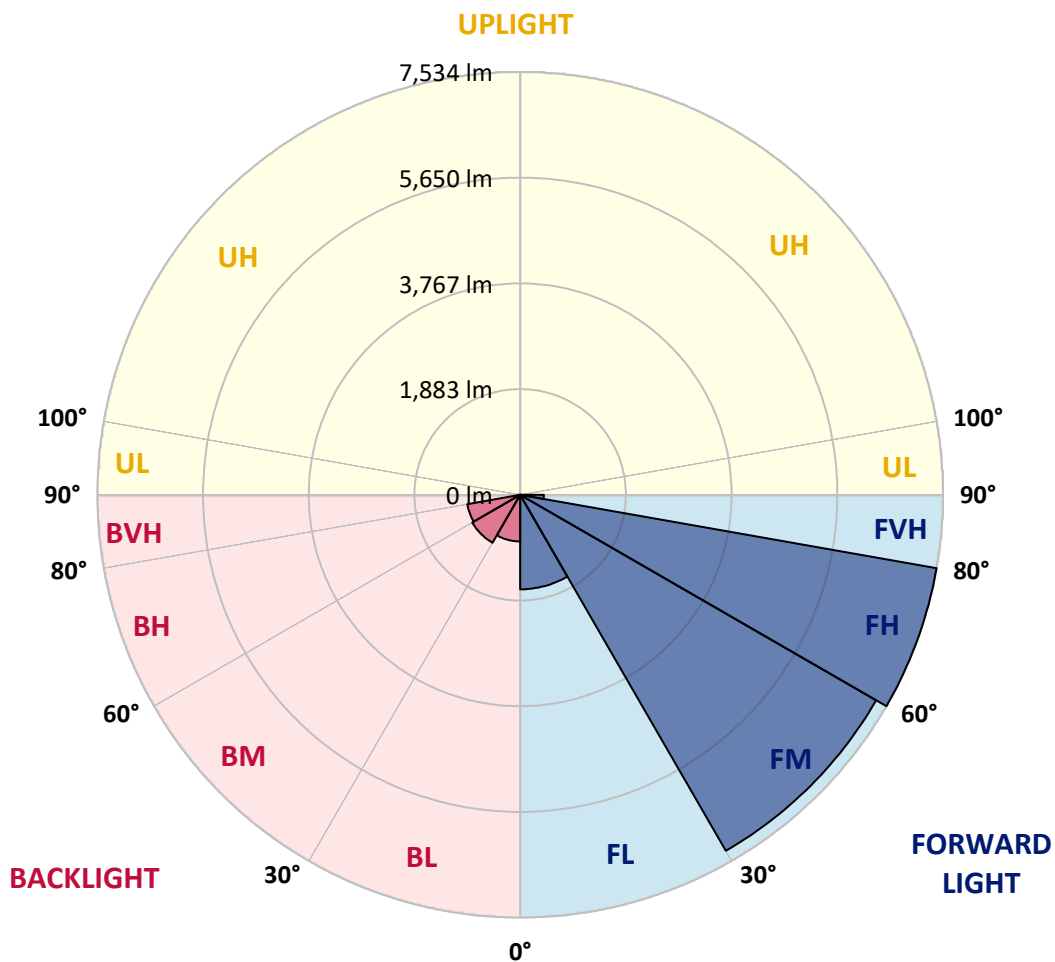
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1683.4	8.5			
FM	(30°-60°)	7323.8	37.0			
FH	(60°-80°)	7533.7	38.1			G4/12000
FVH	(80°-90°)	423.0	2.1			G3/500
BL	(0°-30°)	831.7	4.2	B2/1000		
BM	(30°-60°)	985.9	5.0	B1/1000		
BH	(60°-80°)	956.8	4.8	B2/1000		G2/1000
BVH	(80°-90°)	47.7	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-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5
2.5°	5183.0	5196.9	5196.9	5185.5	5179.1	5142.4	5120.8	5105.6	5078.9	5029.4	4985.0
5°	4997.7	5024.4	5035.8	5040.8	5073.8	5062.4	5063.7	5053.5	5030.7	4977.4	4905.1
7.5°	4657.7	4662.8	4683.1	4717.3	4797.2	4853.1	4898.7	4907.6	4902.6	4863.2	4761.7
10°	4322.7	4331.6	4355.7	4414.1	4490.2	4570.1	4669.1	4709.7	4740.1	4727.5	4599.3
12.5°	4044.9	4046.1	4072.8	4140.0	4225.0	4325.3	4459.7	4523.2	4595.5	4624.7	4481.3
15°	3777.1	3794.9	3820.3	3901.5	4006.8	4133.7	4288.5	4376.0	4471.2	4554.9	4390.0
17.5°	3574.1	3588.1	3603.3	3670.6	3792.4	3951.0	4142.6	4236.4	4362.1	4490.2	4296.1
20°	3462.5	3467.6	3456.1	3489.1	3591.9	3763.2	3985.2	4098.1	4247.9	4428.0	4199.6
22.5°	3439.7	3439.7	3397.8	3391.4	3437.1	3581.8	3822.8	3961.1	4143.8	4384.9	4113.4
25°	3546.2	3538.6	3460.0	3387.6	3371.1	3444.7	3668.0	3838.0	4055.0	4383.6	4048.7
27.5°	3748.0	3737.8	3640.1	3518.3	3413.0	3381.3	3548.8	3722.6	3985.2	4426.8	4015.7
30°	3999.2	3995.4	3896.4	3744.2	3570.3	3406.7	3501.8	3663.0	3938.3	4506.7	4014.4
32.5°	4274.5	4256.7	4195.8	4043.6	3817.7	3547.5	3529.7	3665.5	3925.6	4623.4	4043.6
35°	4567.6	4554.9	4539.7	4386.2	4132.4	3796.2	3652.8	3753.0	3987.8	4785.8	4126.1
37.5°	4940.6	4926.7	4952.0	4784.6	4506.7	4122.3	3860.9	3928.1	4114.6	5021.8	4279.6
40°	5604.2	5563.6	5492.5	5235.0	4943.2	4521.9	4161.6	4171.7	4331.6	5337.7	4525.7
42.5°	6694.1	6563.4	6211.9	5738.7	5403.7	4986.3	4553.6	4505.4	4631.0	5755.2	4883.5
45°	7786.5	7639.3	7045.5	6288.1	5880.8	5484.9	5038.3	4922.9	5004.1	6241.1	5344.1
47.5°	8491.9	8419.6	7749.7	6837.4	6380.7	6028.0	5592.8	5402.4	5460.8	6791.8	5912.5
50°	8698.7	8636.6	8110.0	7267.6	6852.7	6683.9	6279.2	6026.7	6036.8	7435.0	6593.8
52.5°	8543.9	8518.6	8169.7	7534.0	7286.6	7375.4	7229.5	6878.0	6794.3	8140.5	7332.3
55°	8337.1	8346.0	8211.5	7801.7	7728.1	8019.9	8472.9	8190.0	7834.7	8875.1	8101.1
57.5°	7686.2	7692.6	8045.3	8311.8	8570.6	8923.3	9441.0	9321.7	8908.1	9668.1	8962.6
60°	6189.1	6238.6	7023.9	8206.4	9533.6	10703.4	10830.3	10624.7	10050.0	10581.6	10083.0
62.5°	4421.7	4466.1	5375.8	7124.2	9420.7	12718.2	13395.7	12578.6	11599.2	11948.1	11658.8
65°	2323.1	2315.5	3019.7	4922.9	7934.9	13185.1	17438.1	16047.5	14209.0	13827.1	13181.3
67.5°	1298.0	1339.8	1612.6	2483.0	5171.5	11604.2	20020.0	20429.8	17837.7	15317.9	13115.3
69°	1200.3	1214.2	1396.9	1919.7	3371.1	9574.2	19798.0	21753.2	19367.9	15324.3	12270.3
70°	1166.0	1181.2	1347.4	1768.7	2831.9	7844.8	18989.8	21598.4	19739.6	14984.2	11501.5
72.5°	1045.5	1065.8	1226.9	1589.8	2386.6	4043.6	15296.4	18486.1	17880.9	13096.3	8918.2
75°	891.9	926.2	1169.8	1578.4	2261.0	2570.5	10201.0	13772.6	13308.2	9366.1	5059.9
77.5°	369.2	373.0	511.3	1155.9	2372.6	2460.2	5482.4	8724.1	7723.0	4107.0	1523.8
80°	257.6	252.5	255.0	337.5	1914.6	2476.7	2812.9	4436.9	3448.5	1083.5	713.1
82.5°	217.0	214.4	224.6	211.9	648.3	2810.3	2352.3	2313.0	1624.0	583.6	340.0
85°	143.4	139.6	184.0	192.9	308.3	2231.8	2529.9	1818.2	1210.4	312.1	144.6
87.5°	69.8	71.1	105.3	130.7	163.7	706.7	2423.4	1437.5	935.1	135.8	58.4
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5	5048.5
2.5°	4967.3	4929.2	4894.9	4851.8	4818.8	4790.9	4752.8	4751.6	4745.2	4754.1	4756.6
5°	4856.9	4793.4	4697.0	4589.2	4513.0	4412.8	4315.1	4282.1	4245.3	4241.5	4252.9
7.5°	4690.7	4591.7	4426.8	4261.8	4096.9	3928.1	3768.3	3687.1	3608.4	3584.3	3595.7
10°	4505.4	4379.8	4127.3	3858.3	3626.2	3374.9	3131.3	2974.0	2830.6	2769.7	2785.0
12.5°	4360.8	4200.9	3845.7	3496.7	3149.1	2788.8	2467.8	2156.9	1922.2	1816.9	1823.2
15°	4236.4	4032.2	3581.8	3117.4	2682.2	2188.6	1743.3	1383.0	1177.4	1101.3	1098.8
17.5°	4102.0	3854.5	3306.4	2764.7	2200.1	1589.8	1167.3	954.1	872.9	847.5	847.5
20°	3958.6	3671.8	3018.4	2380.2	1692.5	1110.2	878.0	795.5	765.1	757.5	756.2
22.5°	3825.4	3492.9	2729.1	1970.4	1224.4	842.5	747.3	715.6	710.5	716.9	716.9
25°	3720.1	3335.6	2436.1	1539.0	890.7	705.4	664.8	661.0	680.1	702.9	706.7
27.5°	3641.4	3194.8	2146.8	1124.1	700.4	614.1	600.1	616.6	661.0	706.7	715.6
30°	3586.8	3074.2	1800.4	808.2	583.6	538.0	544.3	573.5	640.7	710.5	729.5
32.5°	3562.7	2976.5	1451.5	620.4	498.6	473.3	489.7	527.8	597.6	667.4	690.2
35°	3585.6	2905.5	1129.2	515.1	436.5	417.4	436.5	475.8	521.5	555.7	569.7
37.5°	3668.0	2880.1	850.1	456.8	395.9	376.8	392.1	418.7	439.0	451.7	458.0
40°	3841.9	2906.8	666.1	426.3	373.0	351.5	355.3	367.9	381.9	392.1	393.3
42.5°	4118.4	2994.3	592.5	414.9	359.1	331.2	324.8	333.7	348.9	362.9	365.4
45°	4486.4	3140.2	584.9	418.7	352.7	314.7	302.0	310.9	331.2	354.0	357.8
47.5°	4962.2	3371.1	620.4	439.0	356.5	305.8	286.7	295.6	322.3	352.7	357.8
50°	5525.5	3690.9	686.4	469.4	374.3	305.8	280.4	288.0	315.9	350.2	355.3
52.5°	6189.1	4136.2	754.9	499.9	399.7	317.2	282.9	281.7	307.0	338.8	345.1
55°	6921.2	4689.4	820.9	526.5	413.6	332.4	289.3	274.1	294.4	319.7	324.8
57.5°	7782.7	5446.9	936.4	551.9	421.2	343.8	296.9	266.4	277.9	295.6	299.4
60°	8951.2	6559.6	1160.9	595.1	435.2	348.9	298.2	258.8	257.6	270.2	271.5
62.5°	10475.0	7862.6	1375.4	645.8	463.1	350.2	293.1	253.8	241.1	244.9	244.9
65°	11558.6	8342.2	1313.2	688.9	488.5	348.9	288.0	249.9	228.4	222.0	222.0
67.5°	10941.9	7369.1	1115.3	700.4	491.0	335.0	276.6	241.1	217.0	201.7	201.7
69°	10036.0	6459.3	1023.9	680.1	470.7	318.5	263.9	232.2	209.3	191.6	191.6
70°	9297.6	5770.4	968.1	656.0	446.6	304.5	252.5	223.3	201.7	186.5	185.2
72.5°	6941.5	3850.7	827.2	565.9	366.7	257.6	220.8	199.2	181.4	171.3	171.3
75°	3663.0	1929.8	677.5	461.8	282.9	205.5	181.4	167.5	157.3	156.1	154.8
77.5°	1200.3	872.9	487.2	347.6	208.1	159.9	144.6	135.8	134.5	139.6	139.6
80°	648.3	521.5	313.4	234.7	144.6	119.3	111.7	110.4	114.2	121.8	121.8
82.5°	314.7	257.6	186.5	144.6	99.0	87.5	87.5	88.8	93.9	102.8	102.8
85°	135.8	121.8	107.8	81.2	60.9	54.6	62.2	68.5	72.3	78.7	81.2
87.5°	64.7	57.1	49.5	31.7	26.6	27.9	33.0	40.6	48.2	53.3	54.6
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)