

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: P196073

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196073  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-SL2-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25090.9 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G4

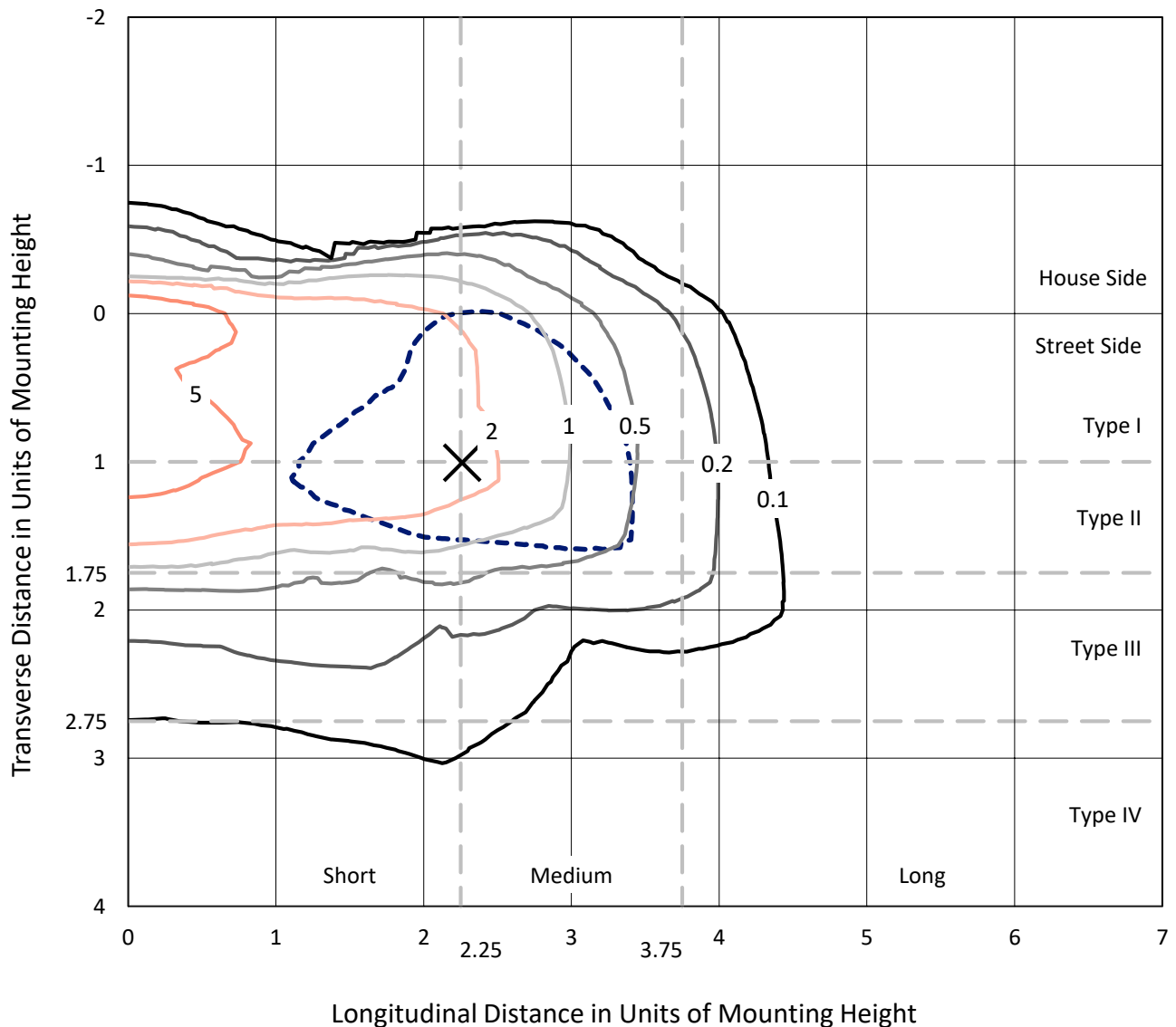
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

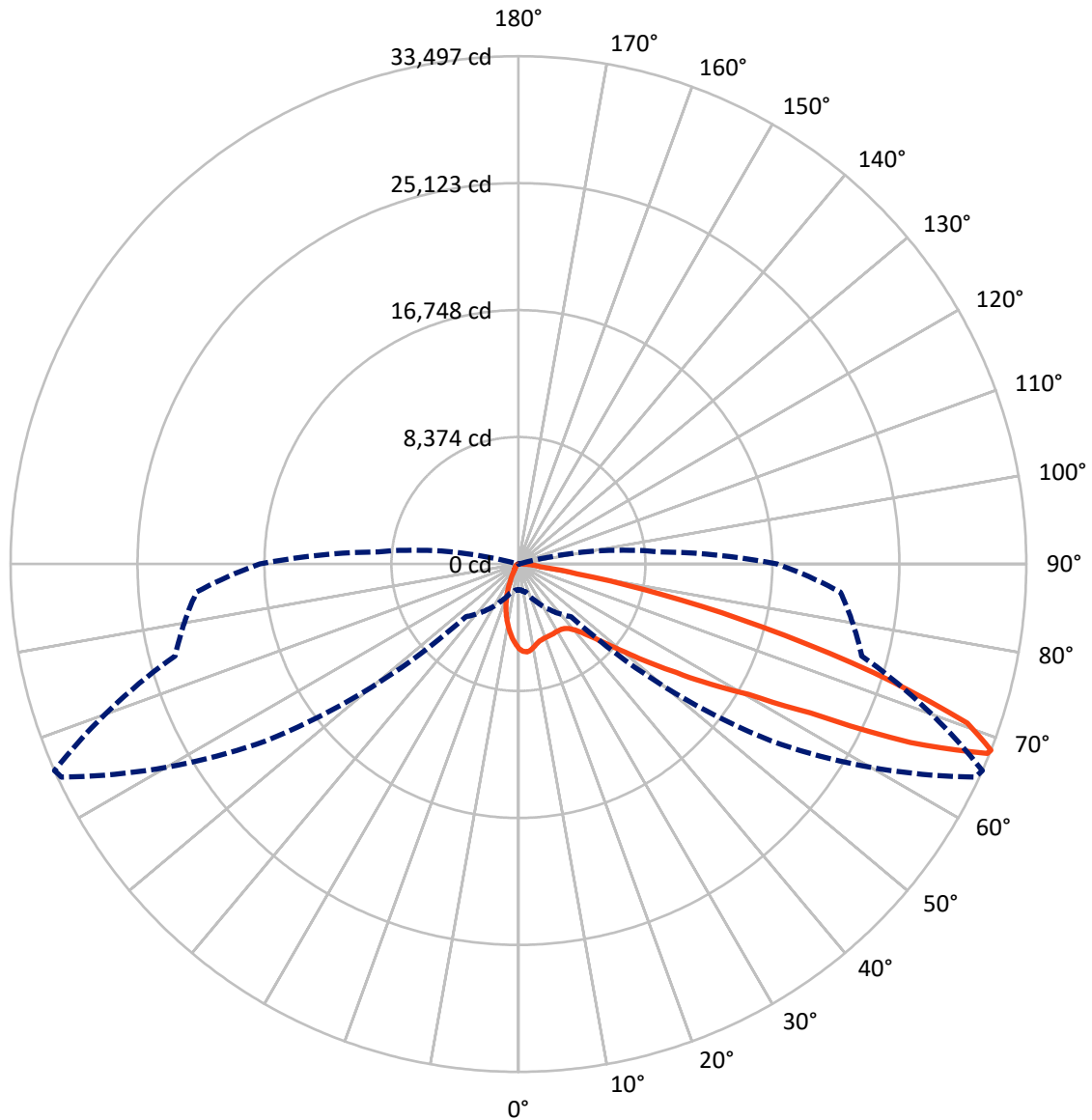
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2541.4	0.0	2541.4
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	22549.5	0.0	22549.5
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	25090.9	0.0	25090.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	458.3	1.8
10°-20°	986.0	3.9
20°-30°	1428.8	5.7
30°-40°	2187.3	8.7
40°-50°	3741.1	14.9
50°-60°	5852.2	23.3
60°-70°	6738.6	26.9
70°-80°	3372.1	13.4
80°-90°	326.6	1.3
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°	25090.9	100.0
0°-180°	25090.9	100.0



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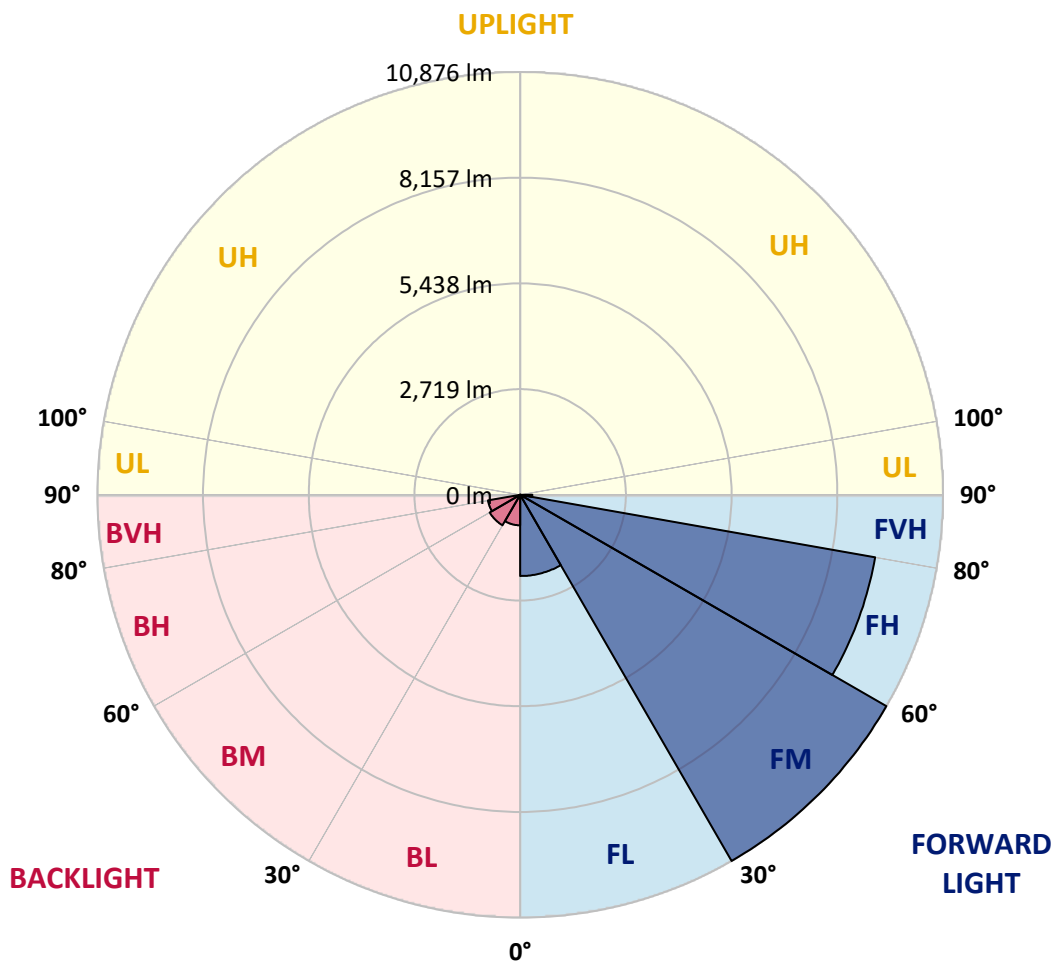
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2088.7	8.3			
FM (30°-60°)	10875.6	43.3			
FH (60°-80°)	9271.0	36.9			G4/12000
FVH (80°-90°)	314.2	1.3			G3/500
BL (0°-30°)	784.4	3.1	B2/1000		
BM (30°-60°)	905.0	3.6	B1/1000		
BH (60°-80°)	839.7	3.3	B2/1000		G2/1000
BVH (80°-90°)	12.4	0.0			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0
2.5°	5879.6	5883.5	5881.6	5887.5	5883.5	5853.9	5822.4	5755.4	5761.4	5674.7	5578.3
5°	5465.9	5499.4	5532.9	5566.4	5647.1	5718.1	5802.8	5822.4	5822.4	5747.6	5605.8
7.5°	5044.4	5046.4	5083.8	5129.1	5237.4	5367.4	5564.4	5741.7	5745.6	5765.4	5609.8
10°	4727.3	4737.2	4762.8	4812.0	4920.3	5048.4	5268.9	5546.6	5568.3	5714.1	5570.4
12.5°	4481.0	4492.9	4520.5	4577.6	4676.1	4808.1	5040.5	5357.6	5387.2	5664.9	5558.5
15°	4292.0	4307.7	4329.4	4386.5	4492.9	4632.7	4886.8	5231.6	5267.0	5645.2	5596.0
17.5°	4213.2	4213.2	4211.2	4250.7	4357.0	4498.8	4764.7	5164.6	5209.9	5660.9	5659.0
20°	4246.7	4240.7	4199.4	4189.6	4254.6	4396.3	4668.2	5121.2	5172.4	5690.5	5735.8
22.5°	4424.0	4412.1	4319.6	4242.8	4223.0	4317.6	4603.2	5091.7	5152.7	5751.5	5838.2
25°	4800.2	4764.7	4636.7	4463.3	4307.7	4297.9	4557.9	5075.9	5140.9	5822.4	5950.5
27.5°	5288.7	5278.8	5073.9	4841.5	4542.1	4362.9	4544.2	5064.1	5129.1	5873.7	6041.0
30°	5895.4	5899.3	5663.0	5359.5	4906.6	4546.1	4587.4	5058.2	5125.2	5877.6	6080.5
32.5°	6521.7	6525.6	6328.7	6003.7	5404.9	4861.3	4709.6	5085.8	5146.9	5861.8	6078.5
35°	7124.4	7130.4	7012.1	6750.1	6070.6	5298.5	4940.0	5180.3	5223.7	5871.7	6074.6
37.5°	7886.7	7910.4	7764.6	7520.3	6905.7	5940.6	5316.3	5371.4	5406.8	5952.4	6104.2
40°	9186.7	9155.2	8737.6	8324.0	7811.9	6722.6	5859.9	5700.3	5712.2	6161.2	6216.4
42.5°	10701.4	10662.0	9947.0	9234.0	8743.6	7666.1	6555.2	6204.6	6202.6	6511.8	6460.7
45°	12005.4	11981.7	11229.3	10277.9	9775.6	8708.1	7412.0	6931.4	6907.8	7118.5	6905.7
47.5°	12931.1	12911.4	12342.2	11388.8	10969.3	9854.4	8481.6	7922.1	7872.9	7912.3	7628.7
50°	13021.8	13000.1	12801.1	12188.6	12363.8	11536.5	9803.2	9220.2	9157.1	9096.1	8721.9
52.5°	12174.8	12172.8	12277.1	12237.8	13340.8	13701.3	11424.3	10825.5	10750.7	10595.0	10222.8
55°	10443.4	10433.5	10829.5	11404.6	13319.1	15934.9	13896.3	12736.1	12637.6	12326.5	11837.9
57.5°	7630.6	7579.5	8406.7	9626.0	12383.5	16911.9	17821.8	15109.6	14946.1	13959.3	13206.9
60°	4213.2	4232.9	5296.5	6740.3	10167.6	16718.9	21434.3	17877.1	17447.7	15367.7	14609.3
62.5°	2361.7	2410.9	3202.8	4380.6	6482.3	15153.0	23372.5	22639.7	21605.7	17010.3	16382.0
65°	1786.5	1816.0	2214.0	3380.0	4087.1	10589.2	23681.7	29299.4	28407.1	19500.1	19204.7
67.5°	1682.1	1705.8	1900.7	2802.9	3722.7	5491.5	21353.6	33238.7	33351.1	22895.9	21391.0
68°	1693.9	1723.5	1918.4	2696.5	3716.8	4912.4	20360.8	33258.5	33496.8	23443.5	21316.1
70°	1556.1	1564.0	2028.8	2645.4	3602.6	3870.4	14729.5	30979.6	31406.9	24095.4	19350.3
72.5°	594.8	596.8	910.0	2290.8	3774.0	3892.1	7419.9	24485.5	24507.0	20969.5	15086.0
75°	309.2	260.0	285.6	717.0	3604.6	3793.6	3722.7	16718.9	16614.5	14181.9	9243.8
77.5°	212.8	181.2	191.1	248.2	1498.9	3791.7	2688.6	9614.1	9592.4	6033.2	2637.5
80°	120.2	104.4	114.3	208.8	525.9	3559.3	2505.5	4132.4	3894.1	1059.7	427.4
82.5°	61.1	51.2	61.1	175.3	326.9	2239.5	2436.6	1621.1	1443.8	252.2	277.7
85°	15.8	15.8	29.6	122.1	202.9	734.7	2184.4	1170.1	1051.8	110.3	197.0
87.5°	4.0	1.9	11.9	45.3	72.8	159.6	1211.4	651.9	561.4	57.1	114.3
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°	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0	5590.0
2.5°	5538.8	5483.6	5375.3	5253.2	5166.5	5072.0	5016.9	4949.9	4898.7	4853.4	4886.8
5°	5519.1	5412.7	5172.4	4902.6	4676.1	4459.5	4297.9	4144.3	4028.1	3955.1	3984.7
7.5°	5467.9	5310.3	4920.3	4498.8	4128.5	3779.9	3496.2	3242.1	3045.1	2938.8	2972.3
10°	5381.2	5158.6	4634.7	4049.8	3531.6	3039.3	2617.7	2239.5	1953.9	1820.0	1851.5
12.5°	5318.2	5024.7	4339.3	3616.3	2934.8	2235.7	1676.2	1242.9	1020.3	886.4	898.2
15°	5290.6	4920.3	4063.5	3159.4	2282.9	1435.9	906.0	655.9	579.1	551.5	553.5
17.5°	5294.6	4837.6	3801.5	2684.7	1625.0	825.3	555.5	500.3	488.5	482.6	482.6
20°	5304.4	4754.9	3529.7	2190.3	1040.0	531.8	462.9	445.2	439.3	431.4	433.3
22.5°	5334.0	4691.9	3256.0	1693.9	640.2	433.3	409.7	393.9	384.1	372.3	374.2
25°	5379.3	4644.6	2986.1	1219.3	451.0	378.2	356.5	334.8	317.1	303.3	305.4
27.5°	5406.8	4577.6	2698.5	831.2	374.2	330.9	301.4	271.8	252.2	240.3	238.3
30°	5387.2	4469.3	2371.5	545.6	330.9	285.6	250.1	216.7	197.0	187.1	187.1
32.5°	5334.0	4329.4	2011.0	397.9	293.5	246.2	202.9	173.3	159.6	153.6	155.6
35°	5272.9	4183.7	1627.0	336.9	263.9	208.8	165.4	141.8	136.0	133.9	133.9
37.5°	5239.5	4057.6	1258.6	305.4	236.4	173.3	136.0	122.1	116.2	116.2	116.2
40°	5276.8	3961.1	931.7	281.6	208.8	143.8	114.3	104.4	102.4	102.4	102.4
42.5°	5436.4	3927.6	681.5	262.0	181.2	120.2	98.5	90.6	88.6	90.6	90.6
45°	5747.6	4000.5	516.1	242.2	155.6	98.5	84.7	78.8	78.8	80.7	80.7
47.5°	6275.5	4187.6	423.5	222.6	130.0	82.8	72.8	68.9	68.9	70.9	70.9
50°	7094.9	4534.2	380.1	200.9	108.3	70.9	61.1	59.1	59.1	61.1	63.0
52.5°	8339.7	5194.1	358.4	179.2	88.6	59.1	51.2	49.2	51.2	53.2	53.2
55°	9724.5	6039.1	332.9	157.5	74.9	49.2	41.3	41.3	43.4	47.3	47.3
57.5°	11014.6	6854.6	309.2	130.0	65.0	39.4	33.5	33.5	37.4	41.3	41.3
60°	12377.6	7654.2	277.7	104.4	55.1	31.5	27.6	27.6	33.5	37.4	39.4
62.5°	14061.7	8584.0	236.4	82.8	43.4	23.6	19.7	25.6	31.5	37.4	37.4
65°	16496.3	9740.2	185.2	65.0	33.5	17.7	15.8	23.6	29.6	35.5	37.4
67.5°	17380.7	9592.4	139.8	53.2	25.6	13.8	13.8	21.7	29.6	35.5	35.5
68°	17057.6	9269.5	133.9	51.2	23.6	13.8	13.8	21.7	29.6	35.5	35.5
70°	14863.4	7577.4	110.3	39.4	19.7	11.9	11.9	19.7	29.6	33.5	35.5
72.5°	11128.8	5034.6	94.5	25.6	17.7	11.9	9.8	19.7	27.6	33.5	33.5
75°	6383.8	2089.9	80.7	19.7	15.8	9.8	9.8	17.7	27.6	33.5	33.5
77.5°	1804.3	488.5	65.0	15.8	13.8	9.8	7.9	17.7	25.6	31.5	31.5
80°	330.9	145.8	51.2	13.8	11.9	9.8	7.9	17.7	25.6	31.5	31.5
82.5°	218.6	68.9	37.4	13.8	11.9	9.8	7.9	15.8	23.6	29.6	29.6
85°	163.5	49.2	23.6	13.8	11.9	9.8	7.9	15.8	23.6	29.6	29.6
87.5°	90.6	21.7	17.7	15.8	13.8	9.8	7.9	13.8	21.7	27.6	27.6
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)