

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: P196590

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196590
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL3-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19485.3 lumens
Efficiency: N/A
Efficacy: 101.0 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): 193
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

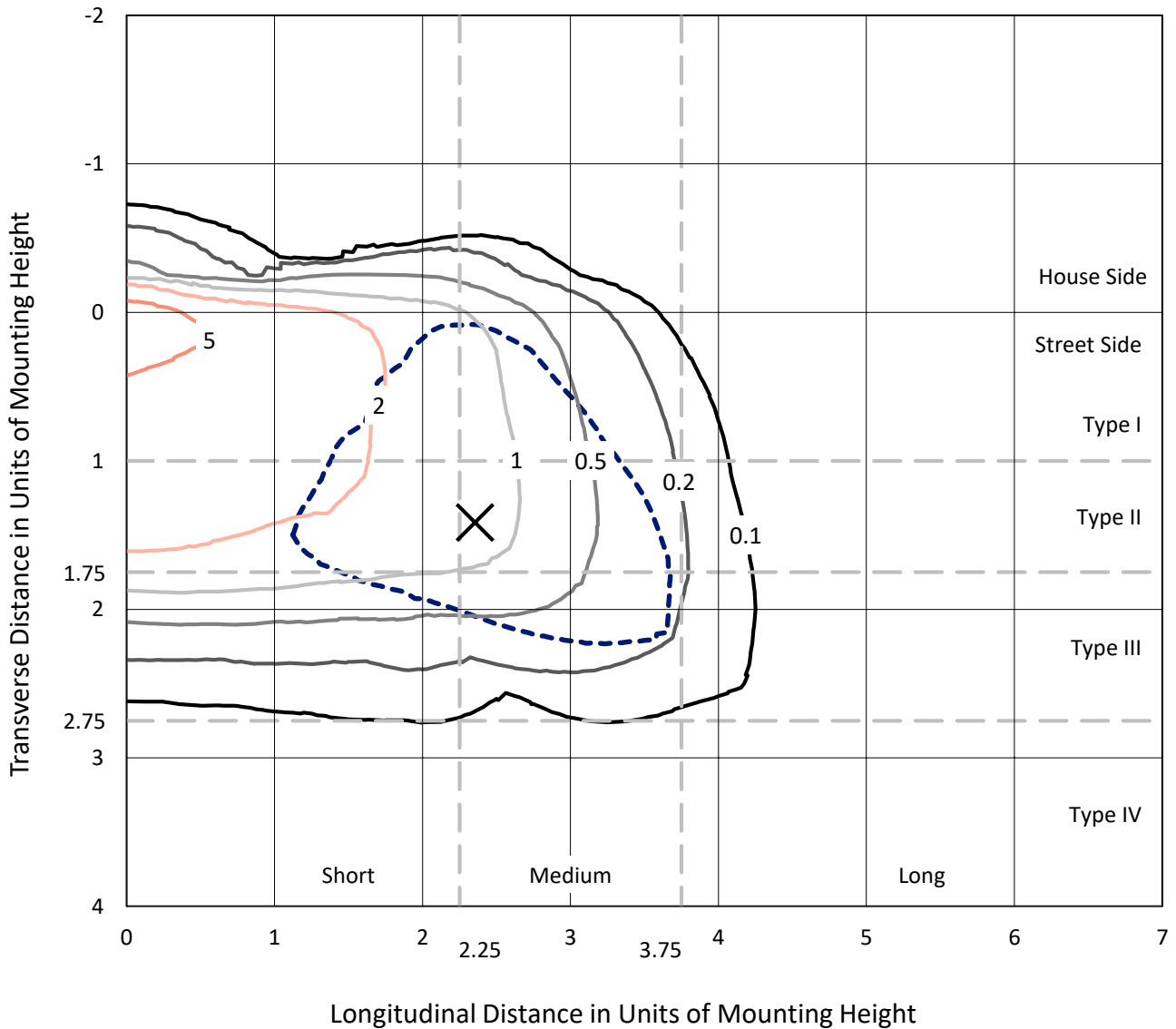


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Iso-Footcandle Lines of Horizontal Illumination

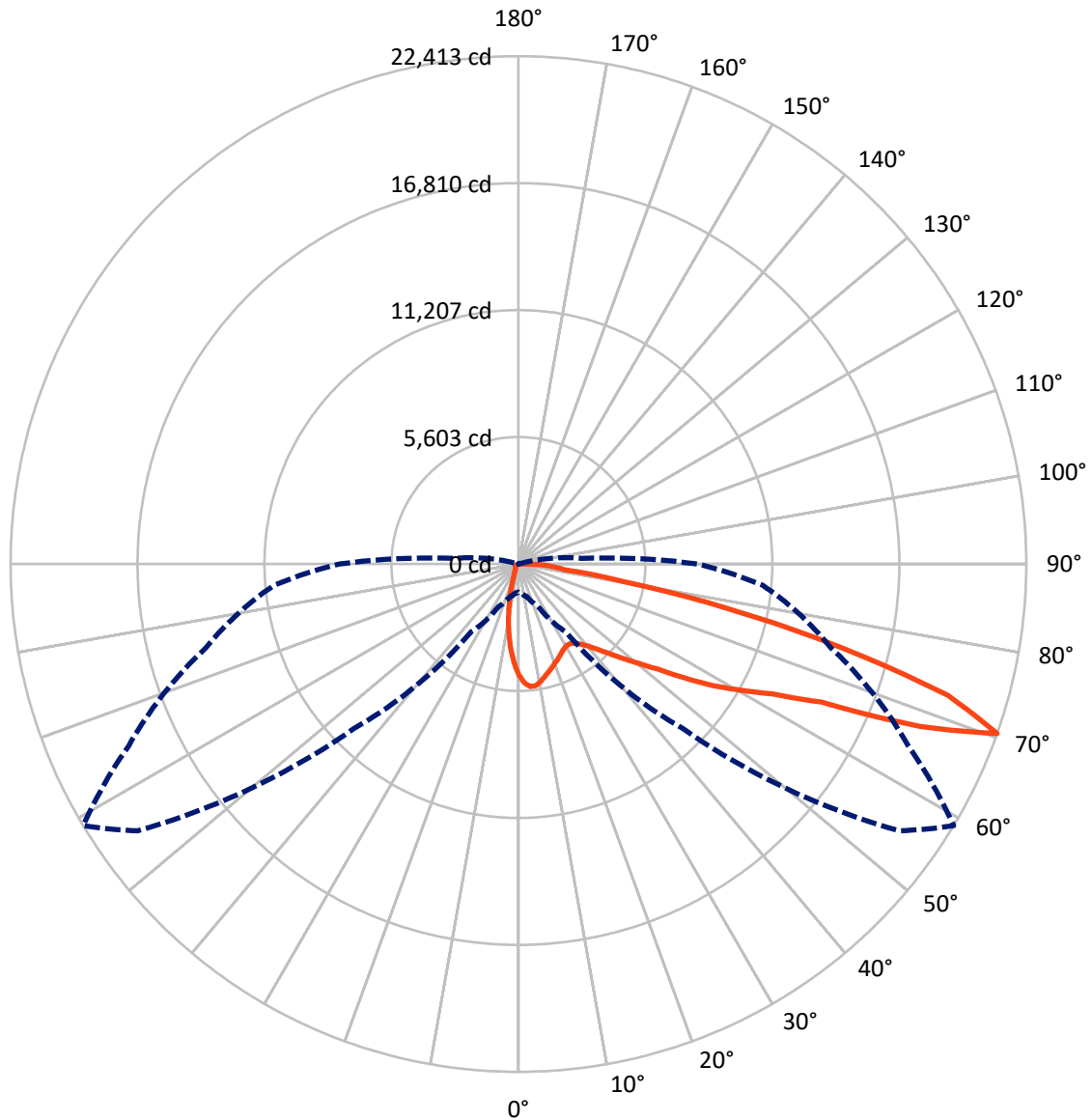
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1497.9	0.0	1497.9
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	17987.4	0.0	17987.4
	% Fixture	92.3	0.0	92.3
Total	Lumens	19485.3	0.0	19485.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.2	2.1
10°-20°	849.8	4.4
20°-30°	1150.3	5.9
30°-40°	1660.1	8.5
40°-50°	2757.1	14.1
50°-60°	4217.3	21.6
60°-70°	5245.3	26.9
70°-80°	2899.6	14.9
80°-90°	300.7	1.5
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°	19485.3	100.0
0°-180°	19485.3	100.0



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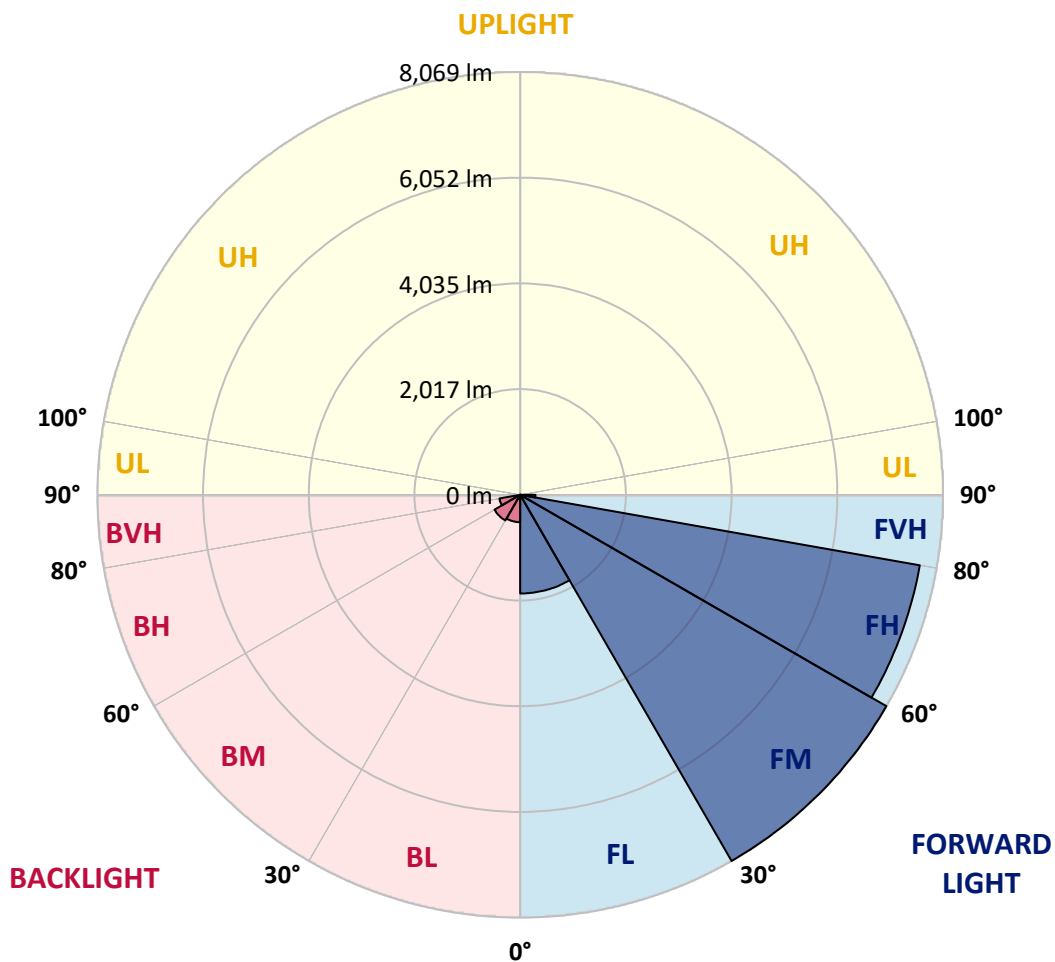
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1883.3	9.7			
FM (30°-60°)	8069.1	41.4			
FH (60°-80°)	7743.1	39.7			G4/12000
FVH (80°-90°)	292.0	1.5			G3/500
BL (0°-30°)	522.0	2.7	B2/1000		
BM (30°-60°)	565.4	2.9	B1/1000		
BH (60°-80°)	401.8	2.1	B1/500		G1/500
BVH (80°-90°)	8.7	0.0			G0/10
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°	59°	65°	75°	85°
0°	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1
2.5°	5569.5	5560.6	5523.9	5516.6	5475.4	5393.0	5297.6	5259.3	5181.4	5057.9	4921.2
5°	5662.1	5666.5	5669.5	5653.3	5647.4	5579.8	5473.9	5428.3	5323.9	5121.2	4871.4
7.5°	5315.1	5326.9	5363.6	5379.8	5450.4	5476.8	5454.9	5425.4	5343.1	5103.5	4752.2
10°	4949.2	4971.2	5010.9	5037.4	5124.2	5194.6	5284.4	5291.7	5274.1	5044.7	4618.5
12.5°	4634.7	4655.2	4699.2	4752.2	4840.4	4931.5	5065.3	5112.3	5171.1	5006.5	4522.9
15°	4364.2	4370.1	4412.7	4478.7	4594.9	4719.9	4878.7	4947.7	5062.3	4991.8	4449.4
17.5°	4127.5	4129.0	4156.9	4217.2	4358.3	4522.9	4708.1	4799.2	4944.7	4971.2	4384.7
20°	3971.7	3970.3	3971.7	4004.1	4129.0	4324.5	4549.3	4644.9	4831.6	4946.2	4318.6
22.5°	3918.8	3911.4	3877.6	3865.8	3945.3	4117.2	4386.2	4511.1	4730.2	4938.8	4270.1
25°	3983.5	3979.0	3907.0	3839.4	3846.8	3954.1	4220.1	4373.0	4650.8	4965.4	4258.3
27.5°	4192.2	4183.3	4073.0	3940.9	3857.1	3876.2	4096.6	4256.8	4587.6	5030.1	4274.4
30°	4465.5	4467.1	4349.5	4189.2	3992.3	3883.5	4030.5	4181.9	4544.9	5127.0	4309.7
32.5°	4769.8	4768.4	4684.6	4499.4	4248.0	4018.8	4059.8	4187.8	4550.8	5269.6	4377.4
35°	5084.4	5068.2	5040.3	4877.2	4583.2	4255.4	4193.7	4287.8	4612.6	5457.7	4492.0
37.5°	5447.4	5441.5	5469.5	5297.6	4997.7	4603.7	4428.9	4492.0	4768.4	5735.6	4677.3
40°	6025.1	5992.8	6006.1	5772.2	5465.1	5072.7	4758.1	4774.3	5016.7	6103.0	4969.7
42.5°	7126.1	6995.4	6749.8	6311.8	5979.5	5593.0	5188.7	5160.9	5368.1	6548.5	5354.9
45°	8441.7	8291.8	7672.9	6907.1	6494.1	6151.6	5721.0	5645.9	5800.2	7079.1	5851.7
47.5°	9539.8	9378.0	8557.8	7528.8	7017.2	6727.7	6310.3	6222.1	6317.7	7695.0	6448.5
50°	9914.5	9824.8	9104.6	8046.3	7545.0	7374.6	7049.6	6902.7	6926.2	8359.3	7145.2
52.5°	9742.5	9711.7	9229.5	8400.5	8033.1	8088.9	7859.6	7705.3	7678.8	9085.5	7915.5
55°	9379.5	9364.8	9129.6	8597.5	8463.8	8743.0	8995.9	8862.0	8612.2	9857.2	8551.9
57.5°	8860.6	8916.4	9085.5	8976.7	8992.9	9433.9	10051.2	10120.3	9746.9	10471.6	9023.7
60°	7474.4	7624.4	8399.1	9383.8	10137.9	10583.3	11181.6	11310.9	10708.3	10892.0	9569.2
62.5°	5525.3	5739.9	6843.9	8653.4	10768.6	12769.1	12685.3	12627.9	11625.5	11455.0	10561.3
65°	3245.5	3497.0	4430.4	6761.6	9817.5	14174.3	15492.9	14699.0	13023.3	12625.0	12141.4
67.5°	1616.9	1618.3	2040.2	3569.0	7255.5	13193.9	19591.0	19132.3	15995.5	14349.2	12764.6
70°	1243.6	1277.4	1509.6	2074.1	3668.9	10276.2	20530.3	22413.1	18982.3	14272.7	10830.4
72.5°	1054.0	1075.9	1343.5	1805.1	2742.9	5641.5	17772.6	19811.4	18113.6	12059.2	7983.0
75°	758.5	776.1	1189.2	1637.5	2525.3	2798.6	12191.3	14693.1	13590.8	8482.9	4393.6
77.5°	188.2	186.8	414.5	1328.8	2259.3	2331.3	6995.4	9422.1	7797.9	3473.4	1128.8
80°	83.8	80.9	94.1	279.2	2101.9	2200.5	3076.5	4758.1	2991.3	563.0	345.5
82.5°	58.8	55.8	58.8	102.9	702.6	2041.7	1859.5	2062.3	1095.1	192.6	147.0
85°	19.1	17.6	32.3	86.8	197.0	1177.4	1813.8	1540.4	814.3	82.3	98.5
87.5°	2.9	2.9	11.8	47.1	57.4	392.5	1064.1	1067.1	366.0	48.5	44.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1	4927.1
2.5°	4852.2	4765.5	4643.4	4521.4	4411.3	4298.0	4206.9	4164.2	4145.2	4118.6	4061.3
5°	4740.4	4583.2	4315.6	4052.5	3807.0	3571.9	3370.5	3255.8	3132.4	3126.5	3066.3
7.5°	4561.1	4337.7	3915.9	3507.2	3132.4	2773.8	2465.0	2265.2	2128.5	2043.1	1984.3
10°	4361.2	4074.6	3516.1	2941.3	2431.2	1952.0	1555.2	1296.5	1139.1	1059.9	1014.3
12.5°	4202.4	3842.3	3122.1	2398.9	1759.5	1209.7	840.7	652.6	568.8	536.5	521.8
15°	4065.7	3629.1	2753.2	1913.7	1174.4	695.2	486.5	424.8	411.6	411.6	410.0
17.5°	3927.6	3423.4	2394.5	1437.6	739.3	455.7	383.6	374.9	376.3	380.7	380.7
20°	3796.8	3227.9	2049.0	1024.6	485.1	364.5	348.3	345.5	349.8	355.7	354.2
22.5°	3690.9	3056.0	1725.6	704.0	373.3	330.7	320.4	316.0	318.9	323.4	321.9
25°	3615.9	2908.9	1428.8	490.9	324.8	301.3	289.5	283.7	280.8	283.7	282.2
27.5°	3570.4	2785.4	1149.5	369.0	291.0	271.9	257.2	245.5	238.0	238.0	235.2
30°	3541.0	2669.3	901.1	305.7	263.1	242.5	221.9	205.7	194.1	191.1	189.6
32.5°	3539.6	2569.4	673.2	270.4	236.6	213.2	188.2	167.6	154.4	151.5	149.9
35°	3576.3	2488.6	495.4	243.9	213.2	185.2	157.4	135.3	123.5	123.5	122.1
37.5°	3671.8	2441.5	374.9	223.4	194.1	161.7	132.3	111.7	101.4	104.4	104.4
40°	3849.6	2432.6	305.7	207.3	177.9	141.2	107.3	91.1	86.8	91.1	91.1
42.5°	4121.6	2479.7	271.9	195.5	163.2	120.5	89.7	77.9	76.5	80.9	80.9
45°	4476.0	2572.3	252.8	185.2	147.0	100.0	75.0	67.6	66.1	72.0	72.0
47.5°	4905.0	2697.3	235.2	173.5	130.8	82.3	63.2	57.4	57.4	63.2	64.7
50°	5413.7	2866.3	217.5	161.7	117.6	69.1	52.9	48.5	49.9	55.8	57.4
52.5°	5998.7	3073.6	201.4	151.5	102.9	55.8	44.1	41.2	42.6	48.5	49.9
55°	6502.9	3254.4	182.3	141.2	83.8	45.6	36.7	35.3	36.7	44.1	44.1
57.5°	6942.4	3427.8	164.7	125.0	66.1	36.7	29.4	29.4	32.3	39.7	41.2
60°	7525.9	3701.2	149.9	105.9	49.9	28.0	23.5	25.0	29.4	35.3	36.7
62.5°	8559.3	4165.7	130.8	88.2	36.7	22.1	19.1	20.5	26.4	33.8	35.3
65°	9852.8	4605.2	108.8	73.5	28.0	16.2	14.7	19.1	26.4	33.8	35.3
67.5°	9720.5	4005.5	85.2	58.8	20.5	13.2	11.8	17.6	25.0	33.8	35.3
70°	7883.2	2807.5	63.2	39.7	16.2	11.8	11.8	17.6	25.0	32.3	33.8
72.5°	5468.1	1562.5	48.5	26.4	14.7	11.8	10.3	16.2	23.5	32.3	33.8
75°	2601.8	479.2	38.2	19.1	13.2	10.3	8.8	16.2	23.5	32.3	33.8
77.5°	499.8	122.1	30.9	16.2	11.8	10.3	8.8	14.7	23.5	30.9	32.3
80°	169.1	54.4	25.0	14.7	11.8	10.3	8.8	14.7	22.1	29.4	30.9
82.5°	92.7	30.9	22.1	13.2	11.8	8.8	7.3	13.2	20.5	29.4	30.9
85°	72.0	22.1	17.6	13.2	11.8	8.8	7.3	13.2	20.5	28.0	29.4
87.5°	36.7	16.2	14.7	13.2	11.8	8.8	7.3	11.8	19.1	26.4	29.4
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)