

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: P196542

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196542
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-06-D-UNV-SL2-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA 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: 18723.8 lumens
Efficiency: N/A
Efficacy: 97.0 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 - G3

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

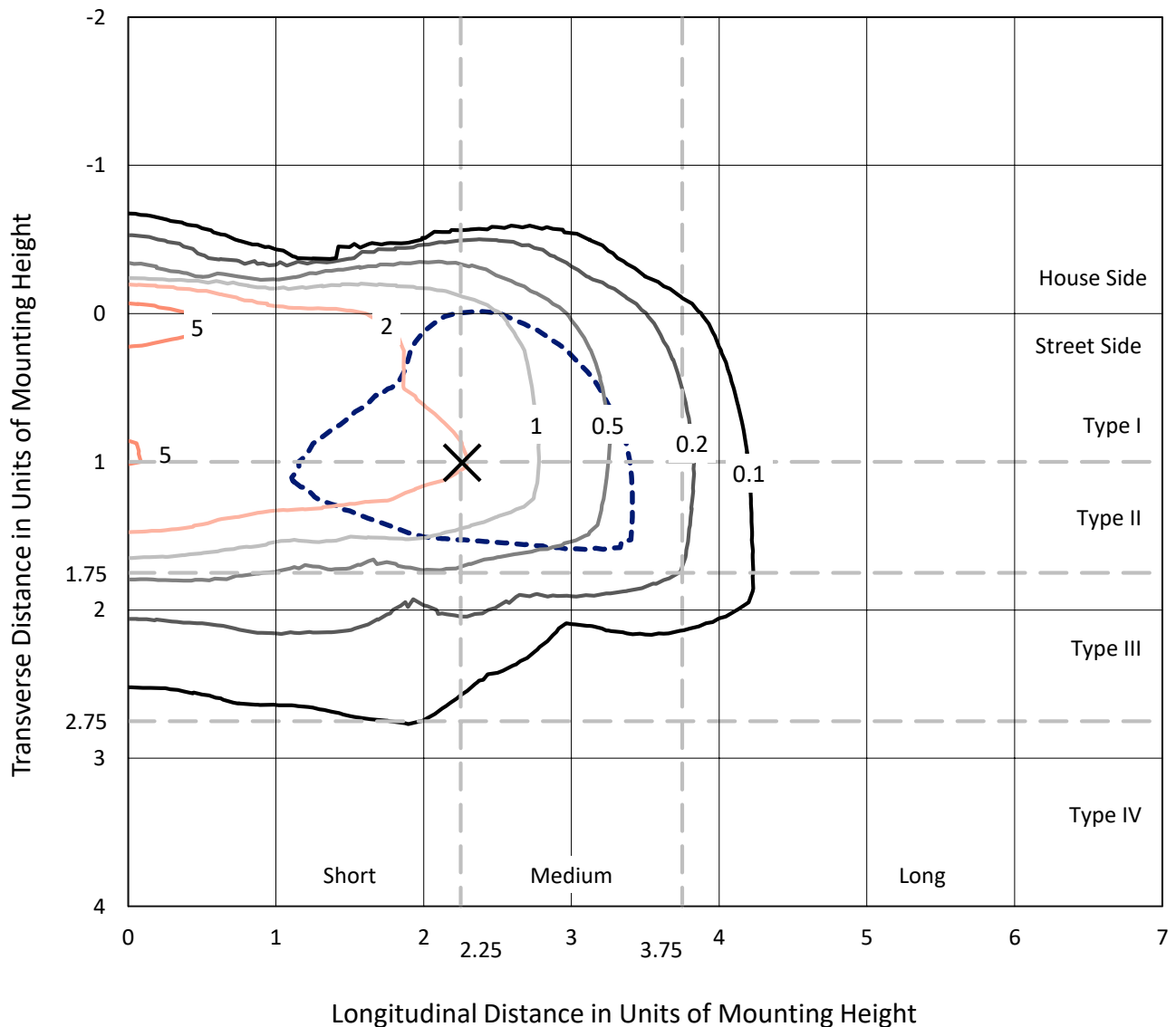


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Iso-Footcandle Lines of Horizontal Illumination

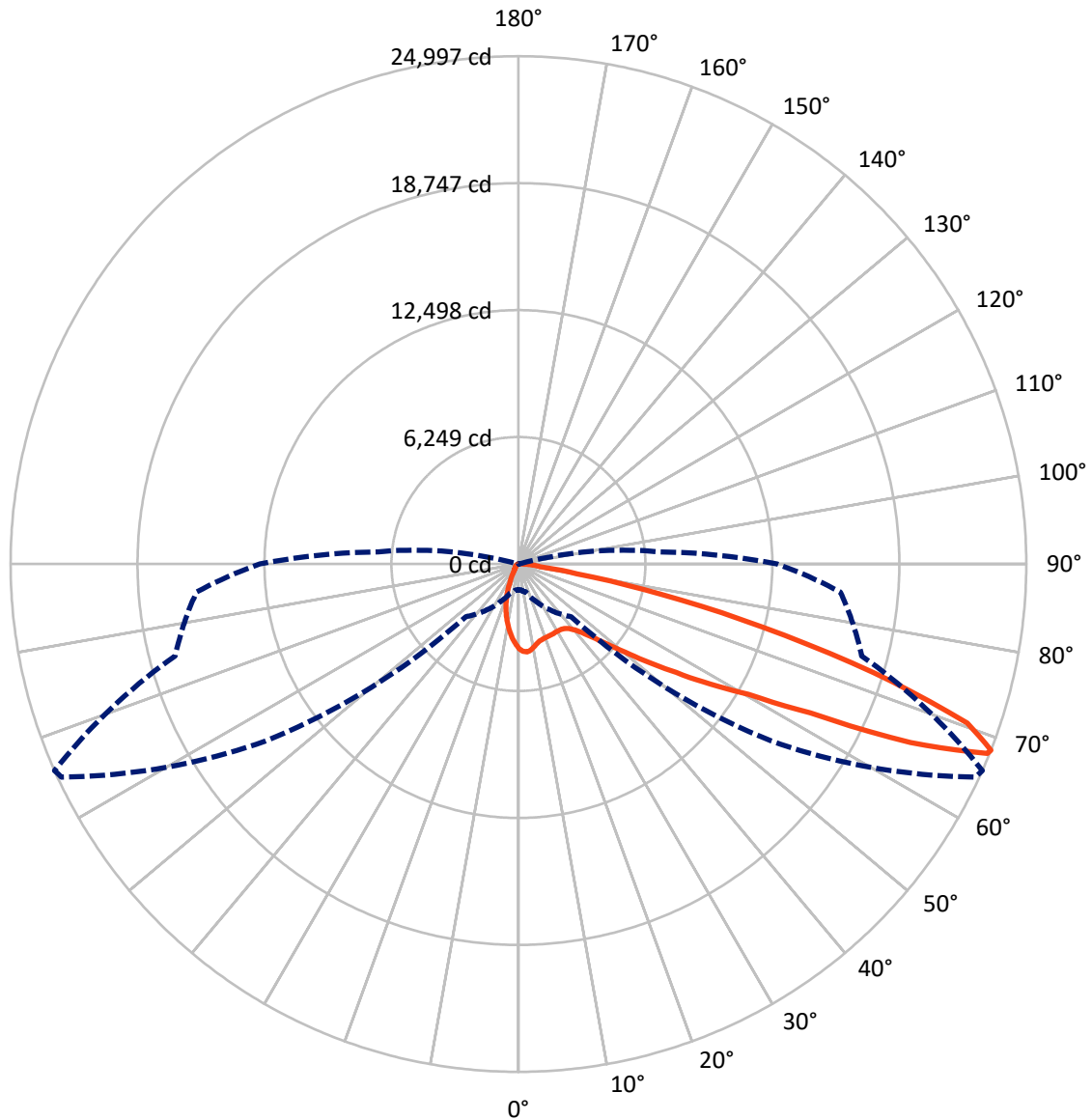
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 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
House Side	Lumens	1896.5	0.0	1896.5
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	16827.2	0.0	16827.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	18723.8	0.0	18723.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.0	1.8
10°-20°	735.8	3.9
20°-30°	1066.2	5.7
30°-40°	1632.2	8.7
40°-50°	2791.8	14.9
50°-60°	4367.1	23.3
60°-70°	5028.6	26.9
70°-80°	2516.4	13.4
80°-90°	243.7	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°	18723.8	100.0
0°-180°	18723.8	100.0

Coefficient of Utilization



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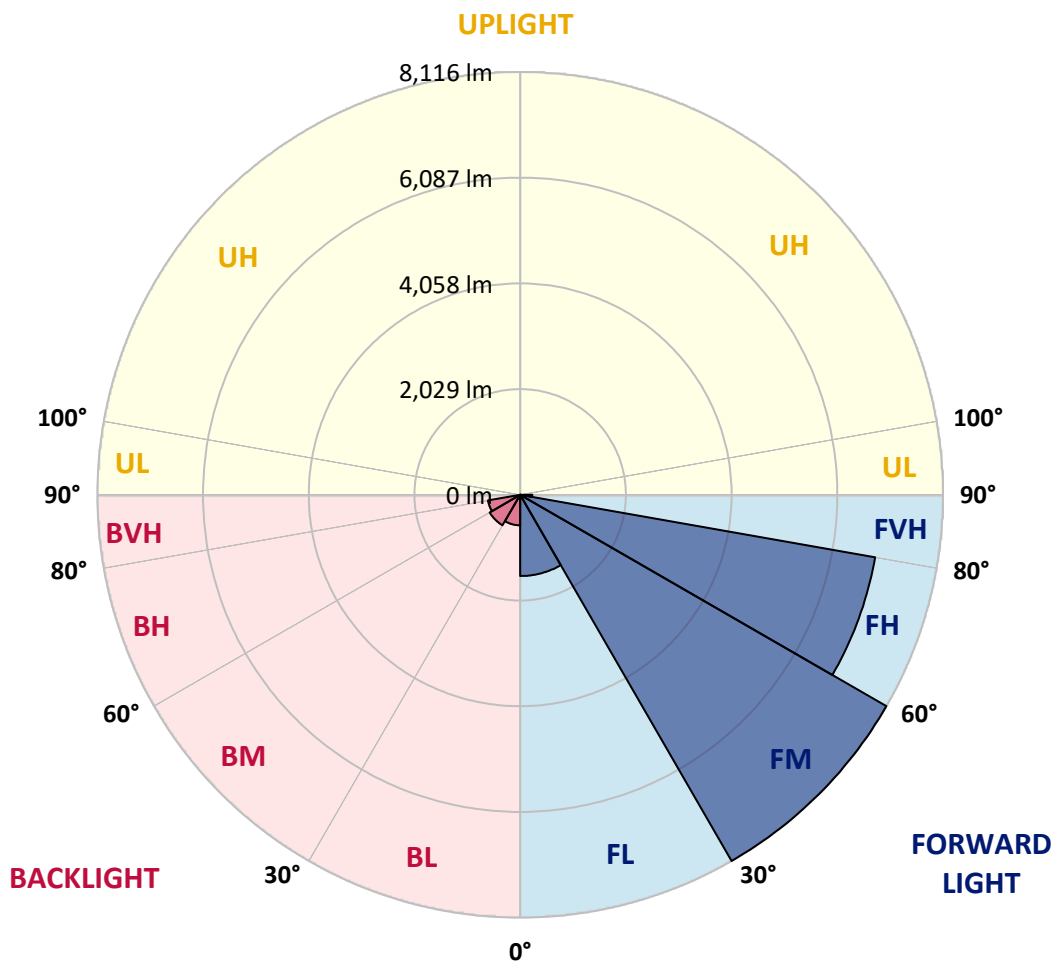
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1558.6	8.3			
FM	(30°-60°)	8115.7	43.3			
FH	(60°-80°)	6918.4	36.9			G3/7500
FVH	(80°-90°)	234.5	1.3			G3/500
BL	(0°-30°)	585.4	3.1	B2/1000		
BM	(30°-60°)	675.3	3.6	B1/1000		
BH	(60°-80°)	626.6	3.3	B2/1000		G2/1000
BVH	(80°-90°)	9.2	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-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5
2.5°	4387.6	4390.5	4389.1	4393.5	4390.5	4368.4	4344.9	4295.0	4299.4	4234.7	4162.7
5°	4078.8	4103.9	4128.8	4153.8	4214.1	4267.0	4330.3	4344.9	4344.9	4289.1	4183.2
7.5°	3764.3	3765.8	3793.7	3827.6	3908.4	4005.3	4152.4	4284.6	4287.6	4302.3	4186.2
10°	3527.7	3535.0	3554.1	3591.0	3671.7	3767.3	3931.9	4139.2	4155.3	4264.1	4156.8
12.5°	3344.0	3352.7	3373.4	3416.0	3489.4	3588.0	3761.4	3998.1	4020.0	4227.3	4147.9
15°	3202.8	3214.6	3230.8	3273.4	3352.7	3457.1	3646.7	3904.0	3930.4	4212.6	4175.9
17.5°	3144.1	3144.1	3142.7	3172.1	3251.3	3357.2	3555.7	3854.0	3887.8	4224.4	4222.9
20°	3169.1	3164.5	3133.8	3126.5	3174.8	3280.7	3483.6	3821.7	3859.9	4246.5	4280.2
22.5°	3301.3	3292.5	3223.3	3166.2	3151.4	3221.9	3435.1	3799.6	3845.2	4292.0	4356.7
25°	3582.1	3555.7	3460.0	3330.7	3214.6	3207.2	3401.2	3787.8	3836.3	4344.9	4440.6
27.5°	3946.6	3939.3	3786.4	3612.8	3389.6	3255.7	3391.0	3779.1	3827.6	4383.2	4508.0
30°	4399.4	4402.3	4225.8	3999.6	3661.4	3392.5	3423.3	3774.6	3824.6	4386.1	4537.4
32.5°	4866.7	4869.6	4722.6	4480.1	4033.3	3627.6	3514.5	3795.2	3840.8	4374.3	4536.0
35°	5316.5	5320.9	5232.8	5037.2	4530.1	3954.0	3686.4	3865.7	3898.1	4381.7	4533.0
37.5°	5885.4	5902.9	5794.2	5612.0	5153.3	4433.0	3967.2	4008.2	4034.7	4441.9	4555.1
40°	6855.5	6832.0	6520.4	6211.6	5829.5	5016.6	4372.9	4253.8	4262.6	4597.7	4638.9
42.5°	7985.8	7956.4	7422.8	6890.8	6524.8	5720.7	4891.7	4630.1	4628.6	4859.5	4821.2
45°	8958.8	8941.2	8379.7	7669.8	7294.9	6498.3	5531.1	5172.5	5154.9	5312.0	5153.3
47.5°	9649.7	9634.9	9210.2	8498.7	8185.7	7353.7	6329.3	5911.8	5875.1	5904.5	5692.7
50°	9717.3	9701.1	9552.6	9095.5	9226.3	8609.0	7315.6	6880.4	6833.4	6787.8	6508.6
52.5°	9085.2	9083.9	9161.7	9132.2	9955.3	10224.4	8525.2	8078.4	8022.5	7906.4	7628.6
55°	7793.3	7786.0	8081.4	8510.5	9939.2	11891.2	10369.9	9504.1	9430.6	9198.4	8833.9
57.5°	5694.3	5656.1	6273.3	7183.2	9241.0	12620.2	13299.4	11275.3	11153.3	10416.9	9855.4
60°	3144.1	3158.6	3952.5	5029.9	7587.4	12476.2	15995.1	13340.4	13020.1	11467.9	10902.0
62.5°	1762.4	1799.1	2390.0	3268.9	4837.4	11307.7	17441.4	16894.6	16123.0	12693.7	12224.9
65°	1333.2	1355.3	1652.1	2522.2	3050.0	7901.9	17672.1	21864.2	21198.4	14551.7	14331.2
67.5°	1255.3	1272.9	1418.4	2091.7	2778.0	4098.0	15934.8	24803.9	24887.7	17085.8	15962.8
68°	1264.1	1286.1	1431.7	2012.2	2773.6	3665.8	15194.0	24818.7	24996.6	17494.4	15906.8
70°	1161.2	1167.1	1514.0	1974.0	2688.5	2888.3	10991.7	23118.0	23436.9	17980.9	14439.9
72.5°	443.9	445.3	679.0	1709.5	2816.2	2904.4	5536.9	18271.9	18288.1	15648.2	11257.7
75°	230.7	194.1	213.2	535.1	2689.9	2830.9	2778.0	12476.2	12398.3	10583.1	6898.1
77.5°	158.8	135.3	142.6	185.2	1118.6	2829.5	2006.3	7174.4	7158.2	4502.2	1968.2
80°	89.7	77.9	85.2	155.8	392.5	2656.1	1869.7	3083.8	2906.0	790.8	318.9
82.5°	45.6	38.2	45.6	130.8	243.9	1671.2	1818.2	1209.7	1077.4	188.2	207.3
85°	11.8	11.8	22.1	91.1	151.5	548.3	1630.0	873.1	784.9	82.3	147.0
87.5°	2.9	1.4	8.8	33.8	54.4	119.1	904.0	486.5	418.9	42.6	85.2
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°	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5	4171.5
2.5°	4133.3	4092.1	4011.2	3920.1	3855.4	3784.8	3743.8	3693.7	3655.6	3621.7	3646.7
5°	4118.5	4039.2	3859.9	3658.5	3489.4	3327.8	3207.2	3092.6	3005.8	2951.5	2973.5
7.5°	4080.4	3962.8	3671.7	3357.2	3080.8	2820.6	2609.0	2419.4	2272.4	2193.1	2218.1
10°	4015.8	3849.5	3458.6	3022.0	2635.5	2268.0	1953.4	1671.2	1458.1	1358.2	1381.7
12.5°	3968.7	3749.7	3238.1	2698.7	2190.1	1668.3	1250.9	927.5	761.4	661.4	670.3
15°	3948.1	3671.7	3032.4	2357.7	1703.6	1071.5	676.1	489.5	432.1	411.6	413.0
17.5°	3951.1	3610.0	2836.8	2003.4	1212.7	615.9	414.5	373.3	364.5	360.1	360.1
20°	3958.4	3548.3	2634.0	1634.5	776.1	396.8	345.4	332.1	327.8	321.9	323.4
22.5°	3980.5	3501.2	2429.7	1264.1	477.7	323.4	305.7	294.0	286.6	277.8	279.2
25°	4014.1	3465.9	2228.4	909.8	336.6	282.2	266.0	249.8	236.6	226.3	227.8
27.5°	4034.7	3416.0	2013.7	620.3	279.2	246.9	224.8	202.9	188.2	179.3	177.9
30°	4020.0	3335.1	1769.7	407.1	246.9	213.2	186.8	161.7	147.0	139.7	139.7
32.5°	3980.5	3230.8	1500.7	296.9	218.9	183.8	151.5	129.4	119.1	114.6	116.2
35°	3934.9	3122.0	1214.1	251.3	197.0	155.8	123.5	105.9	101.4	100.0	100.0
37.5°	3909.9	3027.9	939.2	227.8	176.4	129.4	101.4	91.1	86.8	86.8	86.8
40°	3937.8	2955.9	695.2	210.3	155.8	107.3	85.2	77.9	76.5	76.5	76.5
42.5°	4056.8	2930.9	508.6	195.5	135.3	89.7	73.5	67.6	66.1	67.6	67.6
45°	4289.1	2985.3	385.1	180.9	116.2	73.5	63.2	58.8	58.8	60.3	60.3
47.5°	4683.0	3125.0	316.0	166.1	97.0	61.7	54.4	51.5	51.5	52.9	52.9
50°	5294.4	3383.6	283.6	149.9	80.9	52.9	45.6	44.1	44.1	45.6	47.0
52.5°	6223.4	3876.1	267.4	133.8	66.1	44.1	38.2	36.7	38.2	39.7	39.7
55°	7256.7	4506.6	248.4	117.6	55.8	36.7	30.9	30.9	32.3	35.3	35.3
57.5°	8219.5	5115.1	230.7	97.0	48.5	29.4	25.0	25.0	28.0	30.9	30.9
60°	9236.7	5711.8	207.3	77.9	41.2	23.5	20.5	20.5	25.0	28.0	29.4
62.5°	10493.4	6405.7	176.4	61.7	32.3	17.6	14.7	19.1	23.5	28.0	28.0
65°	12310.1	7268.5	138.2	48.5	25.0	13.2	11.8	17.6	22.1	26.4	28.0
67.5°	12970.0	7158.2	104.4	39.7	19.1	10.3	10.3	16.2	22.1	26.4	26.4
68°	12729.0	6917.2	100.0	38.2	17.6	10.3	10.3	16.2	22.1	26.4	26.4
70°	11091.6	5654.6	82.3	29.4	14.7	8.8	8.8	14.7	22.1	25.0	26.4
72.5°	8304.7	3757.0	70.6	19.1	13.2	8.8	7.3	14.7	20.5	25.0	25.0
75°	4763.8	1559.5	60.3	14.7	11.8	7.3	7.3	13.2	20.5	25.0	25.0
77.5°	1346.4	364.5	48.5	11.8	10.3	7.3	5.9	13.2	19.1	23.5	23.5
80°	246.9	108.8	38.2	10.3	8.8	7.3	5.9	13.2	19.1	23.5	23.5
82.5°	163.2	51.5	28.0	10.3	8.8	7.3	5.9	11.8	17.6	22.1	22.1
85°	122.1	36.7	17.6	10.3	8.8	7.3	5.9	11.8	17.6	22.1	22.1
87.5°	67.6	16.2	13.2	11.8	10.3	7.3	5.9	10.3	16.2	20.5	20.5
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)