

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: P195507

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195507
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-AFL-7050-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10017 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 96
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

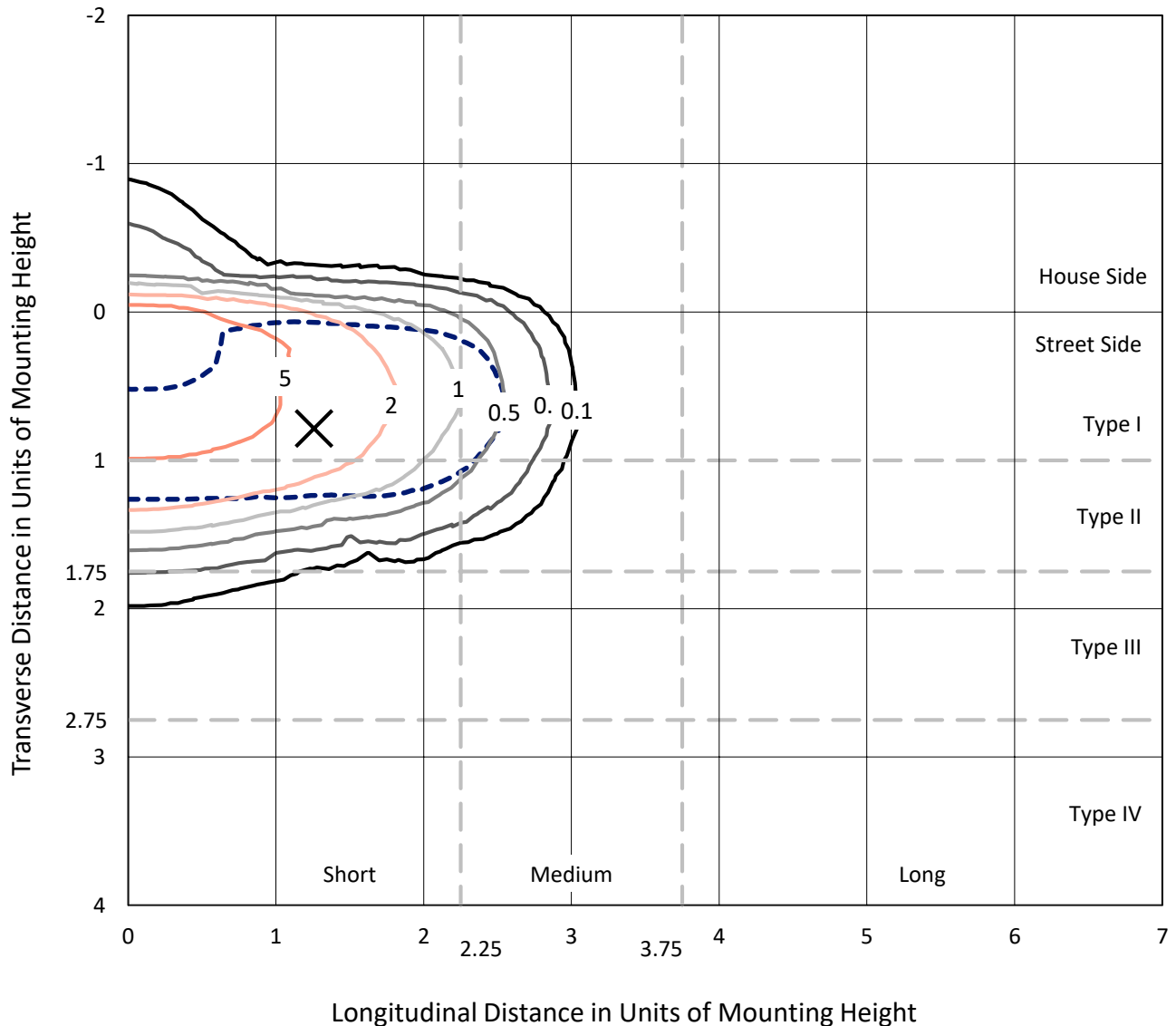


REPORT NUMBER: P195507

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7050-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

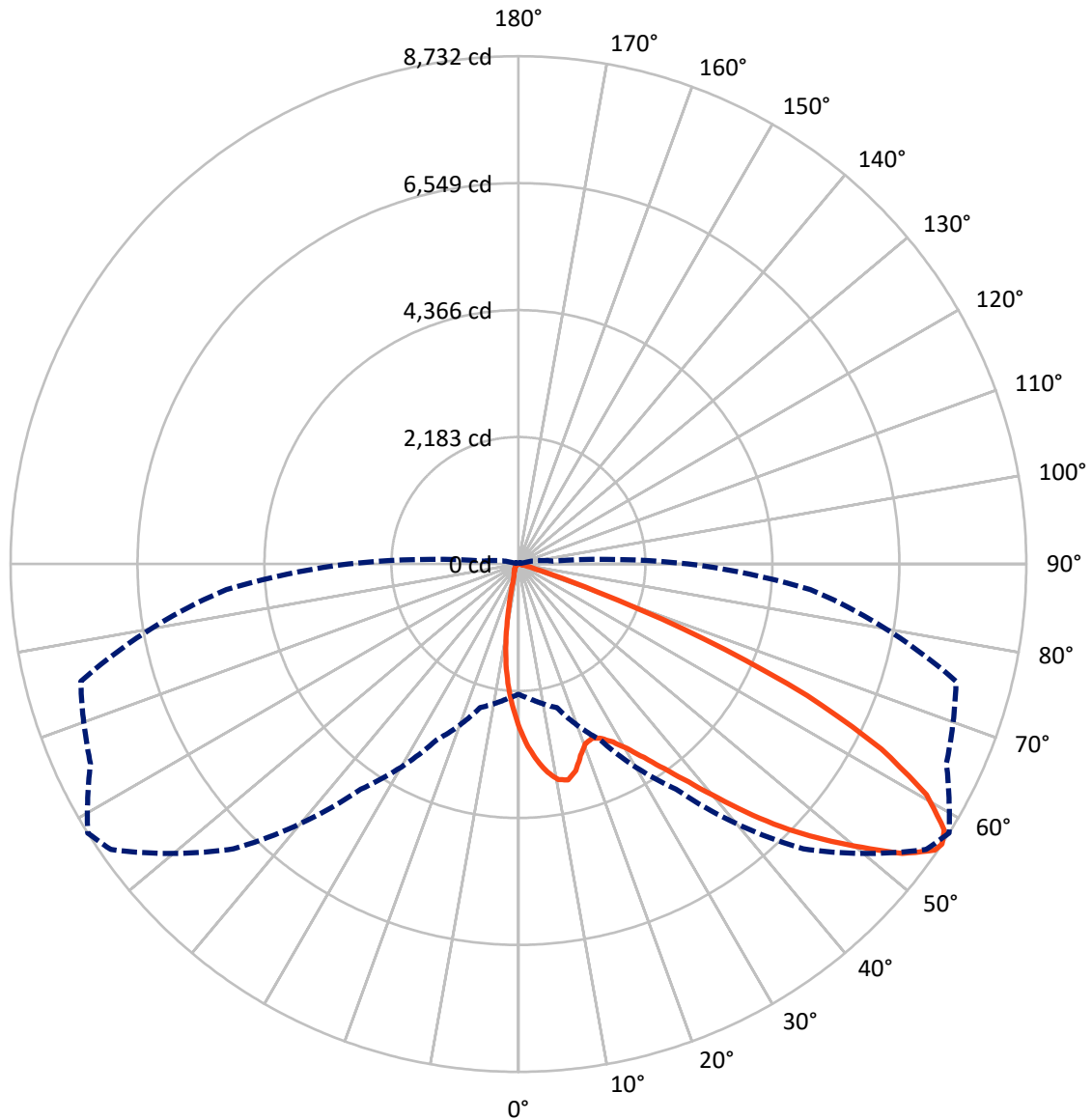


Based on 20 foot mounting height. Maximum calculated value = 8.8 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P195507

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7050-600-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

REPORT NUMBER: P195507

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7050-600-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	625.3	0.0	625.3
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	9391.7	0.0	9391.7
	% Fixture	93.8	0.0	93.8
Total	Lumens	10017.0	0.0	10017.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.9	2.4
10°-20°	563.0	5.6
20°-30°	947.3	9.5
30°-40°	1622.1	16.2
40°-50°	2447.8	24.4
50°-60°	2544.4	25.4
60°-70°	1428.4	14.3
70°-80°	195.8	2.0
80°-90°	26.5	0.3
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°	10017.0	100.0
0°-180°	10017.0	100.0



REPORT NUMBER: P195507

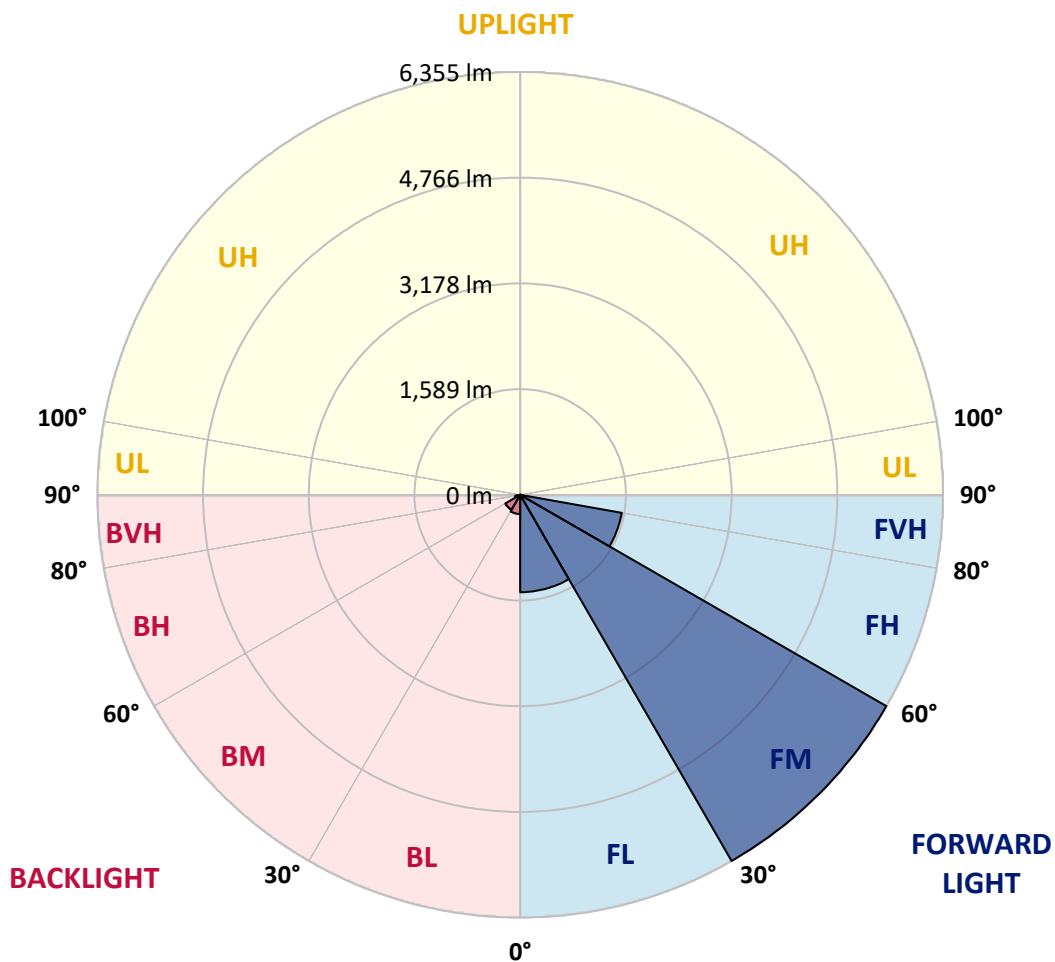
CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7050-600-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1463.7	14.6			
FM	(30°-60°)	6355.2	63.4			
FH	(60°-80°)	1550.0	15.5			G1/1800
FVH	(80°-90°)	22.9	0.2			G1/100
BL	(0°-30°)	288.4	2.9	B1/500		
BM	(30°-60°)	259.0	2.6	B1/1000		
BH	(60°-80°)	74.2	0.7	B0/110		G0/110
BVH	(80°-90°)	3.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





REPORT NUMBER: P195507

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7050-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1
2.5°	3412.4	3391.7	3370.3	3330.6	3293.9	3237.3	3159.4	3140.3	3079.1	2978.3	2884.3
5°	3706.6	3702.8	3688.2	3656.2	3616.4	3547.6	3459.7	3400.9	3306.1	3147.2	2966.0
7.5°	3532.3	3564.4	3617.2	3692.1	3742.5	3735.6	3668.4	3617.2	3523.2	3306.1	3046.3
10°	2977.5	2983.6	3056.2	3213.7	3462.8	3695.1	3783.0	3769.3	3682.9	3445.2	3116.6
12.5°	2781.9	2785.7	2802.5	2852.9	3014.9	3339.0	3737.2	3809.0	3802.1	3578.2	3191.5
15°	2797.1	2799.4	2804.0	2820.1	2865.9	3028.7	3504.8	3687.5	3878.5	3704.3	3264.9
17.5°	2917.9	2916.4	2901.8	2886.6	2901.1	2954.6	3267.9	3460.5	3862.5	3810.5	3325.2
20°	3153.3	3160.9	3112.0	3044.0	3008.8	3011.1	3151.0	3295.4	3772.3	3893.1	3370.3
22.5°	3484.2	3489.5	3409.3	3291.6	3188.4	3136.5	3175.4	3251.9	3668.4	3969.5	3407.0
25°	3879.3	3879.3	3767.0	3599.6	3439.9	3326.0	3292.4	3321.4	3628.6	4055.9	3443.7
27.5°	4305.8	4321.0	4174.3	3955.0	3744.0	3577.4	3472.0	3466.6	3659.2	4164.4	3485.0
30°	4769.7	4783.4	4609.2	4340.9	4091.0	3877.8	3715.8	3680.6	3776.1	4310.3	3545.3
32.5°	5231.3	5242.7	5050.1	4776.5	4485.4	4234.7	4021.5	3965.7	3986.3	4523.6	3634.0
35°	5818.2	5820.5	5576.7	5251.1	4940.1	4645.8	4376.1	4321.0	4298.1	4792.6	3761.6
37.5°	6285.2	6266.8	6112.4	5804.4	5447.5	5140.3	4823.2	4751.3	4696.3	5170.9	3959.6
40°	6395.2	6395.2	6372.3	6279.8	5996.3	5700.5	5393.3	5286.3	5164.8	5616.4	4225.5
42.5°	6108.6	6127.0	6278.3	6479.3	6481.6	6292.0	5991.7	5901.5	5687.5	6123.9	4515.9
45°	5467.4	5472.8	5835.8	6378.4	6746.8	6855.3	6633.7	6509.1	6212.6	6651.2	4781.9
47.5°	5236.6	5253.4	5407.8	6071.2	6766.6	7311.5	7249.6	7078.4	6698.6	7132.7	5030.3
50°	4882.0	4902.6	5091.4	5618.7	6587.8	7604.2	7838.9	7655.4	7141.1	7533.9	5153.3
52.5°	4033.7	4065.8	4332.5	5020.3	6140.7	7616.5	8378.4	8268.4	7594.3	7748.7	5138.8
55°	2775.7	2799.4	3110.5	3919.1	5238.9	7242.8	8610.8	8686.4	7998.6	7796.8	5068.5
56°	2239.2	2327.9	2555.6	3339.0	4725.3	6924.8	8557.3	8732.3	8118.6	7789.2	5037.9
57.5°	1480.3	1497.2	1745.5	2419.6	3794.5	6234.7	8315.8	8634.4	8273.0	7750.2	5015.7
60°	696.2	703.9	793.3	1116.6	2053.5	4543.4	7530.9	8059.7	8329.5	7668.4	5015.0
62.5°	454.0	455.5	466.2	532.7	839.9	2474.6	6243.1	7004.3	7861.0	7659.3	5000.5
65°	373.7	377.5	364.5	373.0	439.4	933.1	4403.6	5460.5	6761.3	7443.8	4836.9
67.5°	329.4	330.2	312.6	302.6	321.7	409.6	2218.6	3444.5	5057.0	6324.9	3984.0
70°	300.3	299.6	279.7	256.8	257.6	272.1	723.0	1430.7	2797.9	3755.5	2287.4
72.5°	266.7	268.3	256.8	224.7	214.0	192.6	272.1	385.9	952.3	1206.0	603.0
75°	233.9	230.8	219.3	198.7	178.8	129.2	136.8	164.3	248.4	246.1	129.9
77.5°	177.3	174.2	179.6	169.7	139.9	90.2	74.9	85.6	112.3	104.7	52.7
80°	135.3	133.7	122.3	145.2	127.6	68.0	51.2	52.7	61.1	55.8	26.0
82.5°	97.8	97.1	92.5	89.4	81.0	49.7	39.0	41.3	45.9	39.0	19.1
85°	37.4	37.4	72.6	61.1	55.8	33.6	27.5	29.8	35.2	28.3	13.0
87.5°	6.1	6.1	48.9	40.5	25.2	16.8	17.6	19.1	20.6	16.8	9.9
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: P195507

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7050-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1	2836.1
2.5°	2828.5	2777.3	2664.9	2556.4	2461.6	2357.7	2305.0	2243.8	2220.9	2175.0	2179.6
5°	2857.5	2750.5	2525.1	2287.4	2069.6	1847.9	1690.5	1542.2	1459.7	1377.9	1377.9
7.5°	2887.3	2723.8	2375.3	1995.4	1628.6	1248.8	979.8	764.2	644.3	564.0	561.7
10°	2908.0	2689.4	2204.8	1656.9	1115.8	643.5	388.2	305.7	275.9	262.9	262.1
12.5°	2934.7	2655.0	2010.7	1257.9	619.8	305.7	242.3	229.3	223.9	220.9	220.9
15°	2957.6	2606.1	1775.3	846.0	325.6	229.3	208.6	204.1	203.3	202.5	203.3
17.5°	2963.0	2536.5	1493.3	495.2	236.2	200.2	191.1	187.2	187.2	186.5	186.5
20°	2950.8	2444.8	1181.5	305.7	204.1	184.2	174.2	169.7	168.9	168.9	168.9
22.5°	2925.5	2327.9	873.5	231.6	185.7	169.7	156.7	152.1	152.1	152.8	153.6
25°	2894.2	2189.6	599.9	199.5	172.0	154.4	141.4	136.8	138.3	139.9	140.6
27.5°	2854.5	2024.5	392.8	172.7	153.6	139.1	127.6	124.6	127.6	130.7	132.2
30°	2814.7	1843.4	266.0	149.8	133.0	122.3	115.4	114.6	119.2	126.1	126.9
32.5°	2788.7	1657.6	201.0	134.5	116.9	107.8	104.7	106.2	113.1	120.8	122.3
35°	2786.4	1476.5	171.2	122.3	106.2	97.8	96.3	100.9	108.5	114.6	116.2
37.5°	2822.4	1306.9	155.1	113.1	97.8	89.4	87.1	95.5	102.4	108.5	110.1
40°	2895.0	1154.8	144.4	104.7	90.9	81.0	79.5	86.4	93.2	100.1	102.4
42.5°	2985.9	1012.6	132.2	96.3	83.3	71.8	70.3	75.7	82.5	92.5	94.0
45°	3064.6	880.4	119.2	87.1	74.9	61.9	61.1	67.3	72.6	81.8	83.3
47.5°	3131.1	770.4	107.0	77.2	64.2	55.0	54.3	57.3	60.4	68.8	70.3
50°	3096.0	677.1	94.8	63.4	52.0	47.4	46.6	46.6	50.4	58.8	60.4
52.5°	3009.6	619.0	83.3	52.7	42.8	40.5	38.2	39.0	42.8	46.6	47.4
55°	2940.1	591.5	73.4	46.6	35.9	33.6	31.3	30.6	31.3	29.8	28.3
56°	2923.2	588.5	71.1	45.1	34.4	31.3	28.3	26.7	26.0	22.9	22.2
57.5°	2915.6	588.5	67.3	42.0	32.1	28.3	24.5	21.4	18.3	16.0	16.0
60°	2909.5	592.3	62.7	36.7	27.5	22.9	17.6	13.0	10.7	10.7	10.7
62.5°	2896.5	590.8	57.3	30.6	23.7	17.6	10.7	8.4	7.6	8.4	9.2
65°	2750.5	548.7	50.4	24.5	18.3	12.2	6.1	6.1	6.9	8.4	9.2
67.5°	2216.3	415.7	41.3	19.1	13.0	9.2	5.3	5.3	6.9	8.4	9.2
70°	1217.4	219.3	35.2	13.8	9.9	7.6	5.3	4.6	6.9	8.4	9.2
72.5°	297.3	91.7	32.1	10.7	9.2	6.9	4.6	4.6	6.9	8.4	9.2
75°	73.4	68.8	26.0	8.4	7.6	6.1	4.6	4.6	6.9	8.4	9.2
77.5°	34.4	90.9	17.6	7.6	6.9	5.3	4.6	4.6	6.9	8.4	8.4
80°	20.6	68.8	10.7	6.9	6.1	5.3	4.6	4.6	6.9	8.4	9.2
82.5°	12.2	19.9	7.6	6.9	6.1	4.6	4.6	4.6	6.9	8.4	9.2
85°	10.7	9.9	7.6	6.9	6.1	5.3	4.6	4.6	7.6	9.2	9.2
87.5°	8.4	7.6	6.9	6.1	6.1	5.3	4.6	4.6	6.9	8.4	9.2
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)