

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: P196062

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196062  
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-SL2-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 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: 19804.3 lumens  
Efficiency: N/A  
Efficacy: 102.6 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

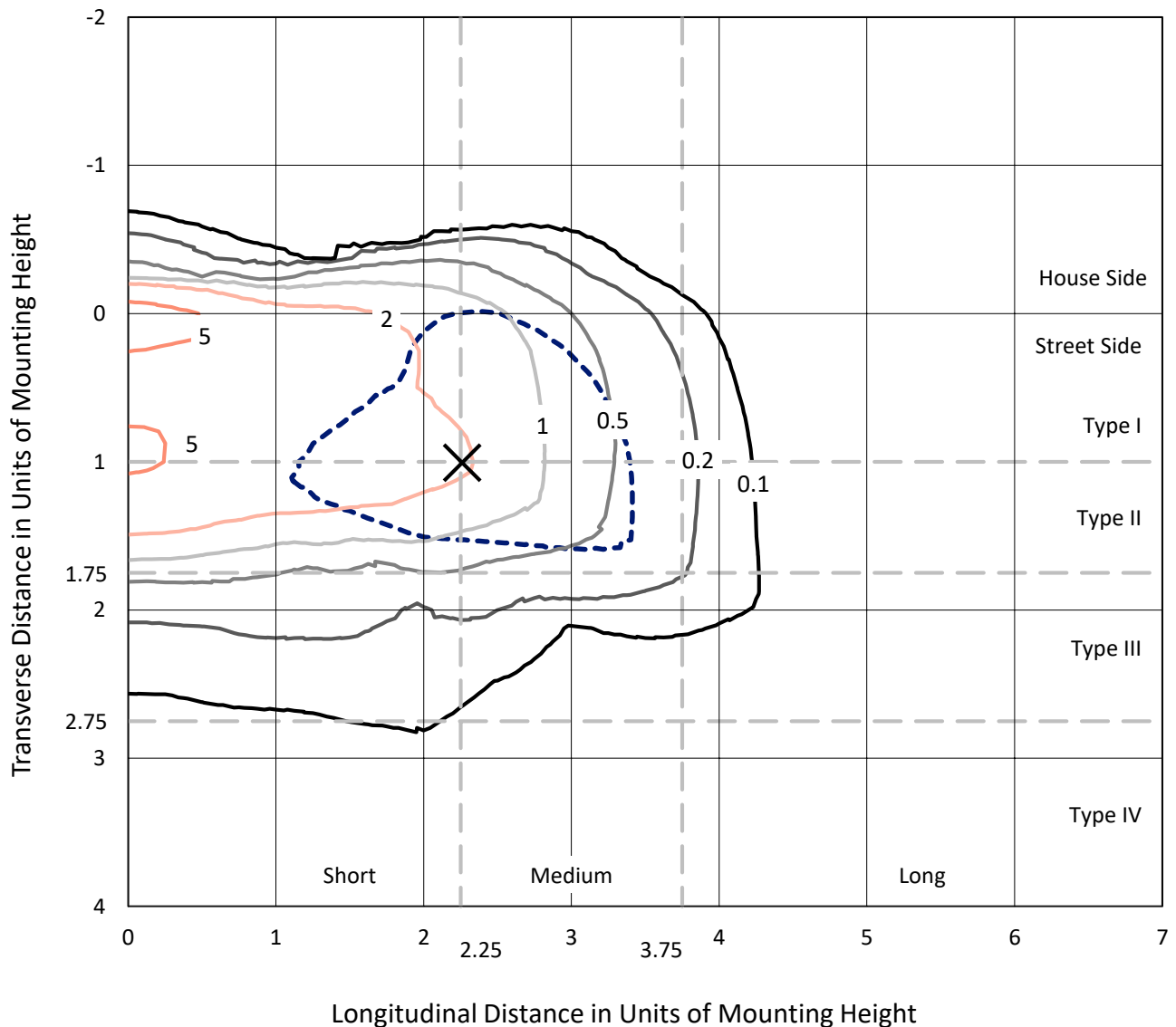
Input Watts (W): 193  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

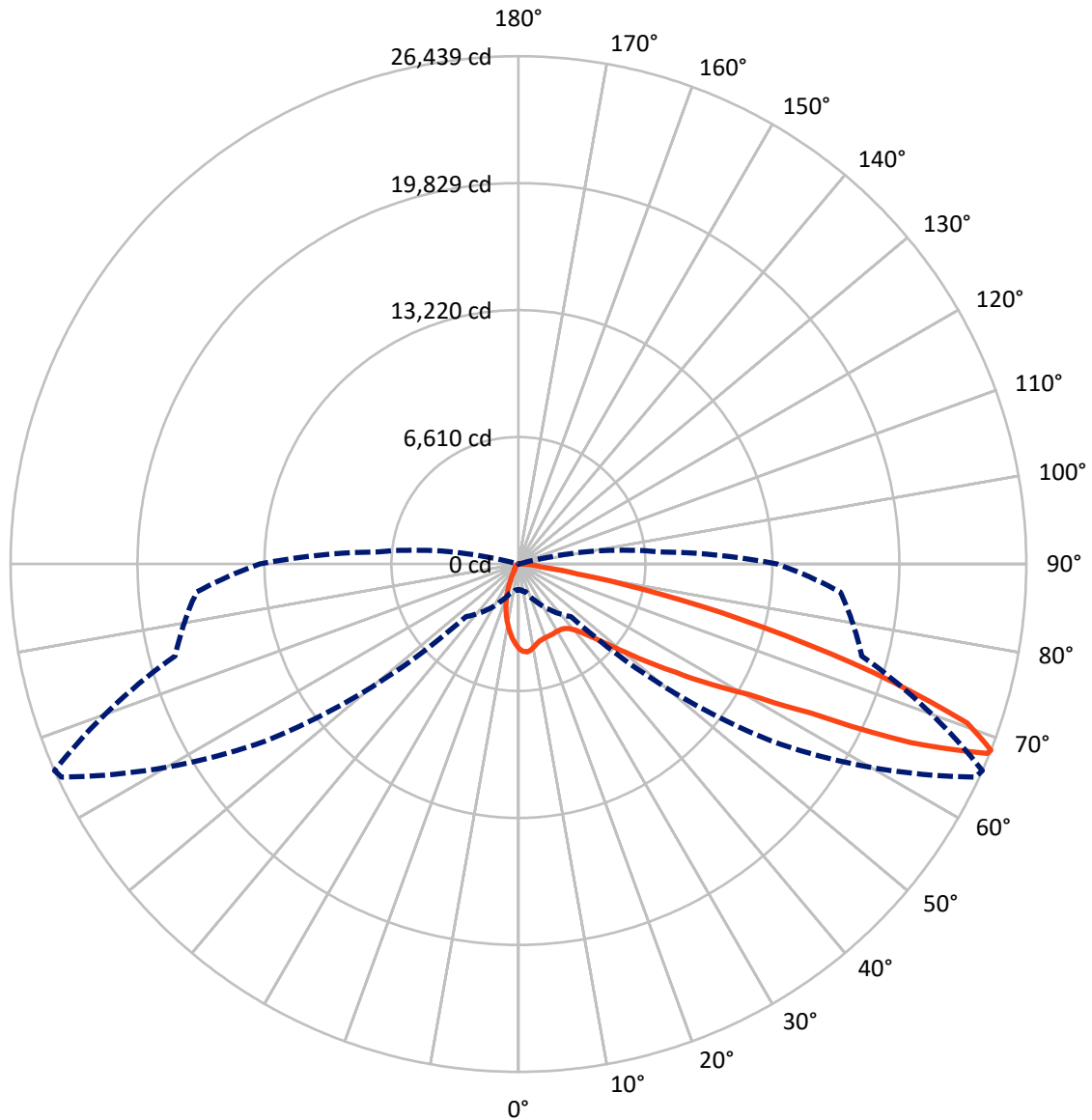
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 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	2006.0	0.0	2006.0
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	17798.4	0.0	17798.4
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	19804.3	0.0	19804.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	361.7	1.8
10°-20°	778.2	3.9
20°-30°	1127.8	5.7
30°-40°	1726.4	8.7
40°-50°	2952.9	14.9
50°-60°	4619.2	23.3
60°-70°	5318.8	26.9
70°-80°	2661.6	13.4
80°-90°	257.8	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°	19804.3	100.0
0°-180°	19804.3	100.0

**Coefficient of Utilization**



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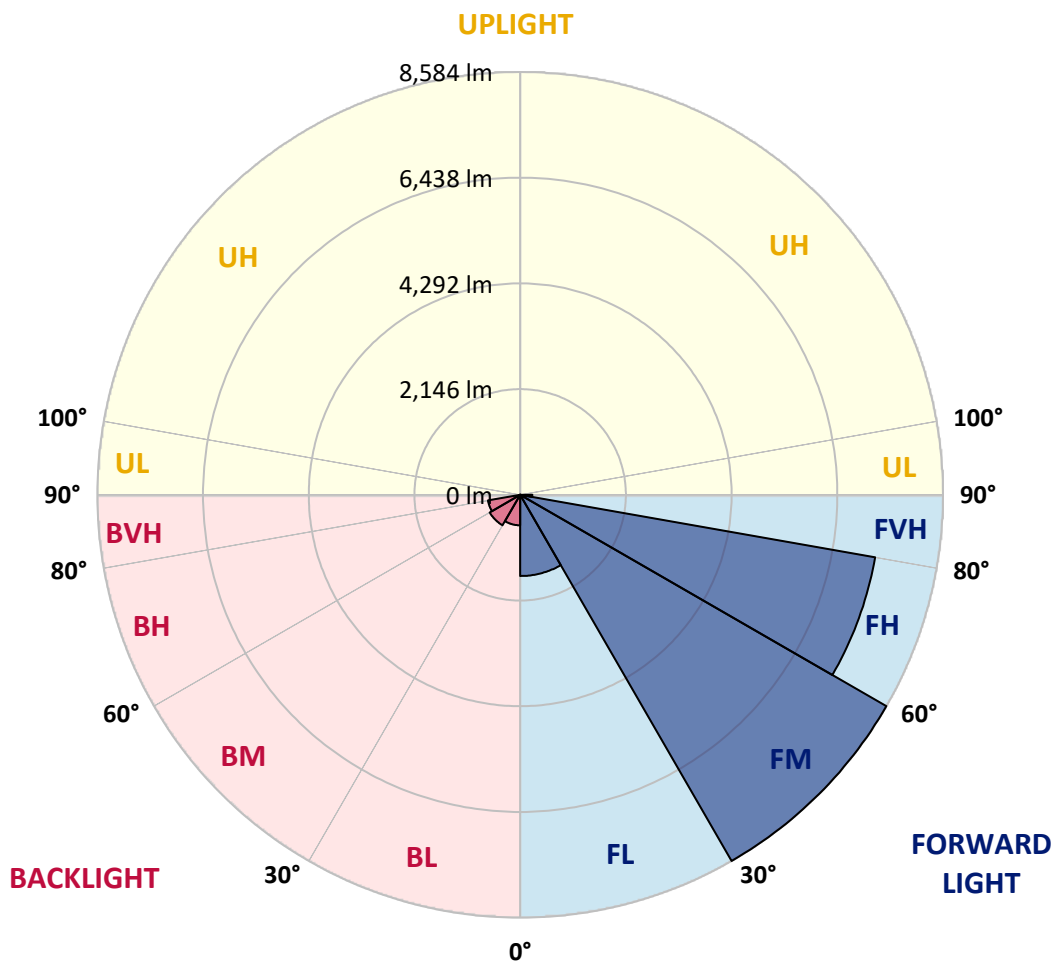
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1648.6	8.3			
FM	(30°-60°)	8584.1	43.3			
FH	(60°-80°)	7317.6	36.9			G3/7500
FVH	(80°-90°)	248.0	1.3			G3/500
BL	(0°-30°)	619.1	3.1	B2/1000		
BM	(30°-60°)	714.3	3.6	B1/1000		
BH	(60°-80°)	662.8	3.3	B2/1000		G2/1000
BVH	(80°-90°)	9.8	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°	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2
2.5°	4640.7	4643.9	4642.4	4647.0	4643.9	4620.6	4595.7	4542.8	4547.4	4479.1	4402.9
5°	4314.3	4340.7	4367.2	4393.6	4457.3	4513.3	4580.2	4595.7	4595.7	4536.6	4424.7
7.5°	3981.5	3983.2	4012.6	4048.4	4133.9	4236.6	4392.0	4532.0	4535.0	4550.6	4427.7
10°	3731.2	3739.0	3759.2	3798.1	3883.6	3984.7	4158.8	4378.0	4395.1	4510.2	4396.6
12.5°	3537.0	3546.3	3568.1	3613.1	3690.8	3795.0	3978.5	4228.8	4252.1	4471.3	4387.3
15°	3387.7	3400.1	3417.2	3462.3	3546.3	3656.6	3857.2	4129.2	4157.3	4455.8	4416.9
17.5°	3325.5	3325.5	3324.0	3355.1	3439.0	3550.9	3760.8	4076.4	4112.2	4468.1	4466.6
20°	3351.9	3347.3	3314.6	3306.8	3358.1	3470.1	3684.7	4042.2	4082.6	4491.5	4527.3
22.5°	3491.8	3482.5	3409.4	3348.8	3333.3	3407.9	3633.3	4018.9	4067.0	4539.7	4608.1
25°	3788.8	3760.8	3659.7	3522.9	3400.1	3392.3	3597.5	4006.5	4057.7	4595.7	4696.8
27.5°	4174.4	4166.6	4004.9	3821.4	3585.1	3443.7	3586.7	3997.1	4048.4	4636.1	4768.3
30°	4653.2	4656.3	4469.8	4230.3	3872.8	3588.2	3620.8	3992.5	4045.3	4639.2	4799.4
32.5°	5147.6	5150.7	4995.3	4738.7	4266.1	3837.0	3717.3	4014.3	4062.4	4626.8	4797.7
35°	5623.4	5628.0	5534.7	5327.9	4791.6	4182.1	3899.2	4088.8	4123.0	4634.6	4794.7
37.5°	6225.0	6243.7	6128.6	5935.8	5450.8	4689.0	4196.1	4239.6	4267.6	4698.3	4818.0
40°	7251.1	7226.2	6896.6	6570.1	6165.9	5306.1	4625.2	4499.2	4508.7	4863.1	4906.6
42.5°	8446.6	8415.5	7851.1	7288.4	6901.2	6050.9	5174.0	4897.3	4895.7	5139.8	5099.4
45°	9475.9	9457.2	8863.3	8112.4	7715.9	6873.3	5850.4	5470.9	5452.3	5618.7	5450.8
47.5°	10206.6	10191.0	9741.7	8989.3	8658.1	7778.1	6694.5	6253.0	6214.1	6245.2	6021.3
50°	10278.1	10261.0	10104.0	9620.4	9758.8	9105.8	7737.7	7277.5	7227.8	7179.6	6884.2
52.5°	9609.6	9608.0	9690.4	9659.3	10529.9	10814.4	9017.2	8544.6	8485.5	8362.7	8068.8
55°	8242.9	8235.2	8547.7	9001.7	10512.9	12577.5	10968.4	10052.6	9974.9	9729.3	9343.7
57.5°	6022.8	5982.4	6635.5	7597.8	9774.4	13348.6	14066.9	11926.1	11797.0	11018.1	10424.2
60°	3325.5	3341.1	4180.6	5320.2	8025.4	13196.3	16918.2	14110.4	13771.5	12129.7	11531.1
62.5°	1864.1	1902.9	2527.9	3457.7	5116.5	11960.2	18448.0	17869.6	17053.4	13426.3	12930.4
65°	1410.1	1433.5	1747.5	2667.9	3226.0	8358.0	18692.1	23126.1	22421.8	15391.4	15158.3
67.5°	1327.7	1346.4	1500.3	2212.3	2938.3	4334.4	16854.4	26235.4	26324.0	18071.8	16884.0
68°	1337.0	1360.3	1514.3	2128.4	2933.7	3877.4	16070.9	26251.0	26439.1	18504.0	16824.9
70°	1228.3	1234.4	1601.3	2087.9	2843.5	3054.9	11626.0	24452.2	24789.6	19018.6	15273.3
72.5°	469.5	471.1	718.3	1808.1	2978.8	3072.0	5856.5	19326.4	19343.5	16551.2	11907.4
75°	244.1	205.2	225.5	565.9	2845.1	2994.4	2938.3	13196.3	13113.8	11193.7	7296.2
77.5°	167.9	143.0	150.8	195.9	1183.1	2992.7	2122.1	7588.5	7571.4	4762.0	2081.7
80°	94.8	82.4	90.1	164.8	415.1	2809.3	1977.6	3261.8	3073.7	836.5	337.4
82.5°	48.2	40.4	48.2	138.4	258.1	1767.7	1923.1	1279.5	1139.6	199.0	219.2
85°	12.5	12.5	23.3	96.4	160.1	579.9	1724.2	923.5	830.2	87.1	155.5
87.5°	3.1	1.5	9.3	35.8	57.5	125.9	956.2	514.6	443.0	45.1	90.1
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°	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2	4412.2
2.5°	4371.8	4328.3	4242.8	4146.3	4078.0	4003.3	3959.8	3907.0	3866.5	3830.7	3857.2
5°	4356.2	4272.3	4082.6	3869.6	3690.8	3519.9	3392.3	3271.1	3179.3	3121.8	3145.2
7.5°	4315.8	4191.4	3883.6	3550.9	3258.6	2983.4	2759.6	2559.0	2403.5	2319.6	2346.0
10°	4247.4	4071.8	3658.2	3196.4	2787.5	2398.9	2066.2	1767.7	1542.3	1436.5	1461.4
12.5°	4197.7	3966.0	3424.9	2854.4	2316.5	1764.6	1323.1	981.0	805.4	699.6	708.9
15°	4175.9	3883.6	3207.4	2493.7	1801.9	1133.3	715.1	517.7	457.1	435.3	436.9
17.5°	4179.1	3818.4	3000.5	2119.0	1282.6	651.4	438.4	394.9	385.6	380.9	380.9
20°	4186.8	3753.0	2786.0	1728.8	820.9	419.7	365.4	351.4	346.7	340.4	342.1
22.5°	4210.1	3703.3	2569.9	1337.0	505.2	342.1	323.4	311.0	303.2	293.8	295.4
25°	4245.9	3665.9	2356.9	962.4	356.0	298.5	281.4	264.3	250.3	239.5	241.0
27.5°	4267.6	3613.1	2129.9	656.1	295.4	261.2	237.8	214.5	199.0	189.7	188.1
30°	4252.1	3527.6	1871.9	430.7	261.2	225.5	197.4	171.0	155.5	147.7	147.7
32.5°	4210.1	3417.2	1587.3	314.0	231.7	194.4	160.1	136.8	125.9	121.2	122.9
35°	4161.9	3302.2	1284.2	265.9	208.4	164.8	130.6	111.9	107.3	105.7	105.7
37.5°	4135.5	3202.7	993.5	241.0	186.6	136.8	107.3	96.4	91.8	91.8	91.8
40°	4165.0	3126.4	735.4	222.3	164.8	113.4	90.1	82.4	80.8	80.8	80.8
42.5°	4291.0	3100.1	538.0	206.7	143.0	94.8	77.7	71.5	70.0	71.5	71.5
45°	4536.6	3157.5	407.3	191.2	122.9	77.7	66.9	62.2	62.2	63.7	63.7
47.5°	4953.2	3305.3	334.3	175.6	102.6	65.3	57.5	54.4	54.4	56.0	56.0
50°	5600.0	3578.9	300.0	158.6	85.5	56.0	48.2	46.6	46.6	48.2	49.7
52.5°	6582.6	4099.7	282.9	141.5	70.0	46.6	40.4	38.9	40.4	41.9	41.9
55°	7675.5	4766.6	262.7	124.4	59.1	38.9	32.6	32.6	34.2	37.3	37.3
57.5°	8693.9	5410.3	244.1	102.6	51.4	31.1	26.4	26.4	29.6	32.6	32.6
60°	9769.7	6041.5	219.2	82.4	43.6	24.9	21.8	21.8	26.4	29.6	31.1
62.5°	11098.9	6775.3	186.6	65.3	34.2	18.6	15.5	20.3	24.9	29.6	29.6
65°	13020.5	7688.0	146.2	51.4	26.4	14.0	12.5	18.6	23.3	28.0	29.6
67.5°	13718.6	7571.4	110.4	41.9	20.3	10.8	10.8	17.1	23.3	28.0	28.0
68°	13463.7	7316.3	105.7	40.4	18.6	10.8	10.8	17.1	23.3	28.0	28.0
70°	11731.7	5980.9	87.1	31.1	15.5	9.3	9.3	15.5	23.3	26.4	28.0
72.5°	8784.0	3973.8	74.7	20.3	14.0	9.3	7.8	15.5	21.8	26.4	26.4
75°	5038.7	1649.5	63.7	15.5	12.5	7.8	7.8	14.0	21.8	26.4	26.4
77.5°	1424.0	385.6	51.4	12.5	10.8	7.8	6.2	14.0	20.3	24.9	24.9
80°	261.2	115.1	40.4	10.8	9.3	7.8	6.2	14.0	20.3	24.9	24.9
82.5°	172.6	54.4	29.6	10.8	9.3	7.8	6.2	12.5	18.6	23.3	23.3
85°	129.0	38.9	18.6	10.8	9.3	7.8	6.2	12.5	18.6	23.3	23.3
87.5°	71.5	17.1	14.0	12.5	10.8	7.8	6.2	10.8	17.1	21.8	21.8
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)