

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: P197032

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-8030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197032  
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-04-D-UNV-SL2-8030-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 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: 16239 lumens  
Efficiency: N/A  
Efficacy: 72.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 225  
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

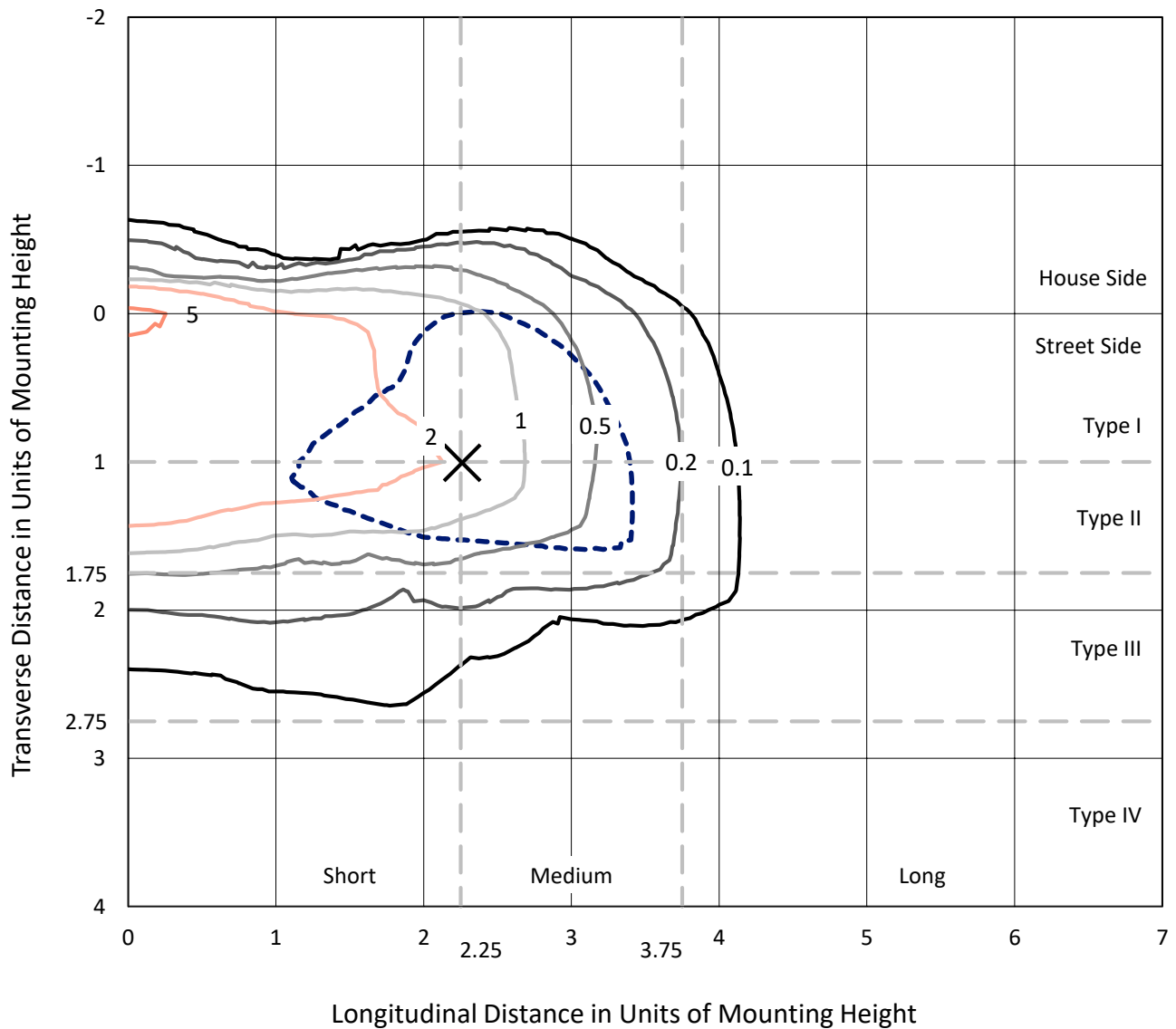


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

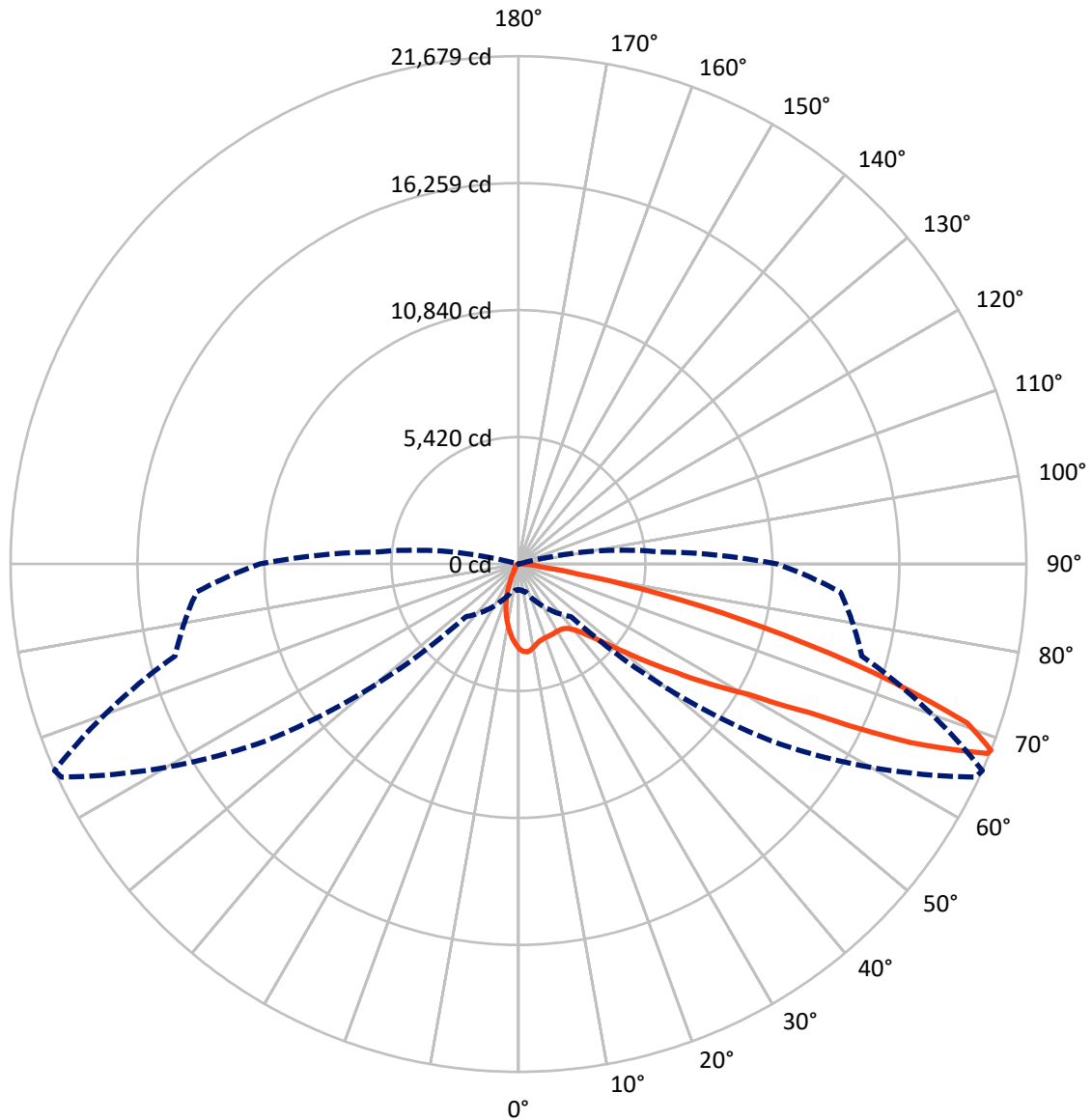


Based on 25 foot mounting height. Maximum calculated value = 5.8 fc  
 Type II - Medium - Semi-Cutoff

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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	1644.8	0.0	1644.8
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	14594.2	0.0	14594.2
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	16239.0	0.0	16239.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.6	1.8
10°-20°	638.1	3.9
20°-30°	924.7	5.7
30°-40°	1415.6	8.7
40°-50°	2421.3	14.9
50°-60°	3787.6	23.3
60°-70°	4361.3	26.9
70°-80°	2182.4	13.4
80°-90°	211.4	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°	16239.0	100.0
0°-180°	16239.0	100.0



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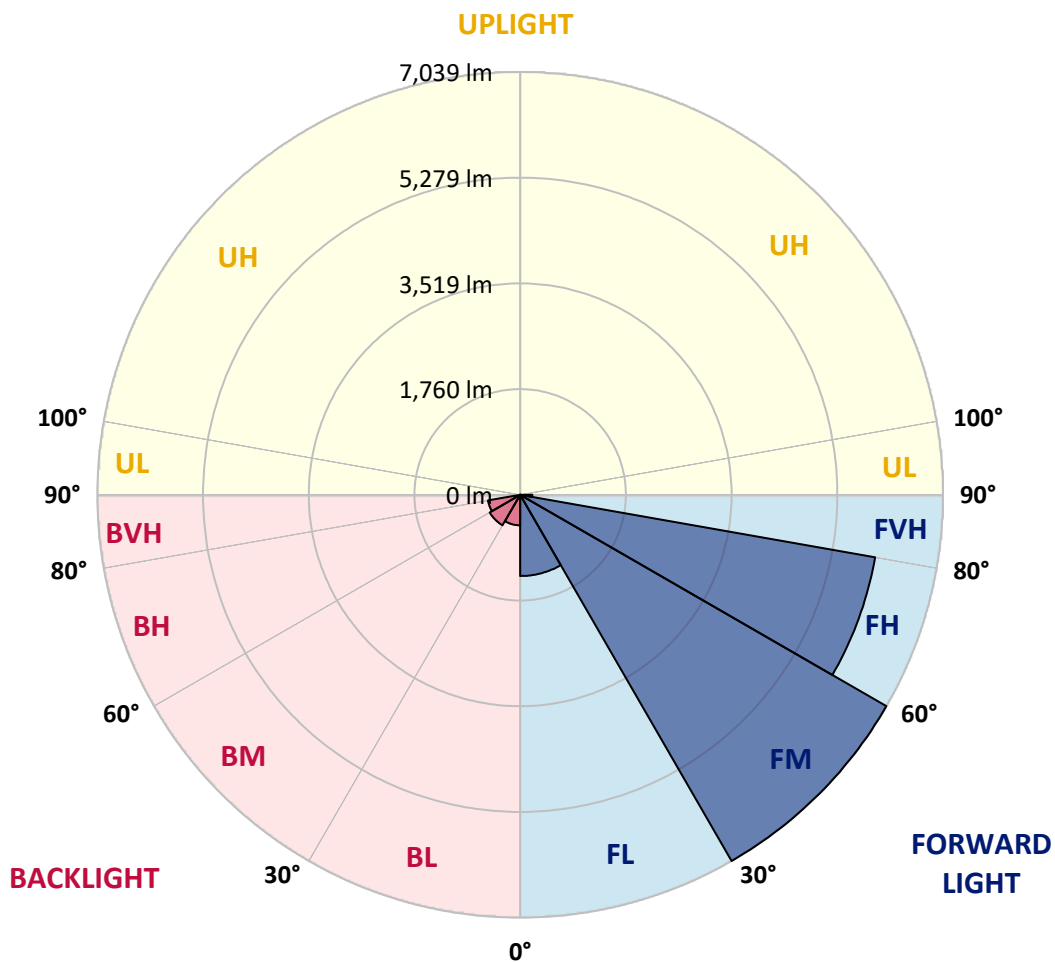
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1351.8	8.3			
FM	(30°-60°)	7038.7	43.3			
FH	(60°-80°)	6000.3	36.9			G3/7500
FVH	(80°-90°)	203.4	1.3			G2/225
BL	(0°-30°)	507.7	3.1	B2/1000		
BM	(30°-60°)	585.7	3.6	B1/1000		
BH	(60°-80°)	543.4	3.3	B2/1000		G2/1000
BVH	(80°-90°)	8.0	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°	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9
2.5°	3805.3	3807.8	3806.6	3810.4	3807.8	3788.7	3768.3	3725.0	3728.8	3672.7	3610.2
5°	3537.6	3559.3	3580.9	3602.6	3654.9	3700.8	3755.6	3768.3	3768.3	3719.9	3628.1
7.5°	3264.8	3266.0	3290.3	3319.6	3389.7	3473.8	3601.3	3716.1	3718.6	3731.4	3630.6
10°	3059.5	3065.9	3082.5	3114.3	3184.5	3267.3	3410.1	3589.8	3603.9	3698.2	3605.1
12.5°	2900.2	2907.8	2925.7	2962.6	3026.4	3111.8	3262.2	3467.5	3486.6	3666.3	3597.5
15°	2777.8	2788.0	2802.0	2839.0	2907.8	2998.3	3162.8	3385.9	3408.8	3653.6	3621.7
17.5°	2726.8	2726.8	2725.5	2751.0	2819.9	2911.7	3083.8	3342.5	3371.9	3663.8	3662.5
20°	2748.5	2744.7	2717.9	2711.5	2753.6	2845.4	3021.3	3314.5	3347.6	3682.9	3712.2
22.5°	2863.2	2855.6	2795.6	2745.9	2733.2	2794.4	2979.2	3295.4	3334.9	3722.4	3778.5
25°	3106.7	3083.8	3000.9	2888.7	2788.0	2781.6	2949.9	3285.2	3327.2	3768.3	3851.2
27.5°	3422.9	3416.5	3283.9	3133.5	2939.7	2823.7	2941.0	3277.5	3319.6	3801.5	3909.8
30°	3815.5	3818.0	3665.1	3468.7	3175.5	2942.2	2969.0	3273.7	3317.0	3804.0	3935.3
32.5°	4220.9	4223.4	4095.9	3885.6	3498.1	3146.2	3048.1	3291.5	3331.1	3793.8	3934.0
35°	4611.0	4614.8	4538.3	4368.8	3928.9	3429.2	3197.2	3352.7	3380.8	3800.2	3931.5
37.5°	5104.3	5119.6	5025.3	4867.2	4469.5	3844.8	3440.7	3476.4	3499.3	3852.5	3950.6
40°	5945.7	5925.3	5655.0	5387.3	5055.9	4350.9	3792.5	3689.3	3696.9	3987.6	4023.3
42.5°	6926.0	6900.5	6437.8	5976.3	5658.9	4961.5	4242.5	4015.6	4014.4	4214.5	4181.4
45°	7769.9	7754.6	7267.7	6651.9	6326.9	5635.9	4797.1	4486.0	4470.7	4607.1	4469.5
47.5°	8369.1	8356.3	7987.9	7370.9	7099.4	6377.8	5489.3	5127.3	5095.4	5120.9	4937.3
50°	8427.7	8413.7	8285.0	7888.5	8001.9	7466.5	6344.7	5967.4	5926.6	5887.0	5644.8
52.5°	7879.6	7878.3	7945.9	7920.4	8634.3	8867.5	7393.9	7006.3	6957.9	6857.2	6616.2
55°	6759.0	6752.6	7008.9	7381.1	8620.2	10313.2	8993.7	8242.9	8179.1	7977.7	7661.6
57.5°	4938.6	4905.4	5440.9	6230.0	8014.7	10945.5	11534.4	9779.0	9673.2	9034.5	8547.6
60°	2726.8	2739.6	3427.9	4362.4	6580.5	10820.5	13872.4	11570.1	11292.2	9946.0	9455.2
62.5°	1528.5	1560.4	2072.8	2835.2	4195.4	9807.1	15126.8	14652.6	13983.3	11009.2	10602.6
65°	1156.2	1175.4	1432.9	2187.6	2645.2	6853.3	15327.0	18962.7	18385.2	12620.6	12429.3
67.5°	1088.7	1104.0	1230.2	1814.0	2409.4	3554.2	13820.2	21512.3	21585.0	14818.3	13844.4
68°	1096.3	1115.5	1241.7	1745.2	2405.6	3179.4	13177.7	21525.1	21679.3	15172.7	13795.9
70°	1007.1	1012.2	1313.0	1712.1	2331.6	2505.0	9533.0	20050.1	20326.8	15594.7	12523.7
72.5°	385.0	386.3	589.0	1482.6	2442.5	2519.0	4802.2	15847.1	15861.1	13571.6	9763.7
75°	200.1	168.3	184.8	464.0	2332.9	2455.3	2409.4	10820.5	10753.0	9178.6	5982.7
77.5°	137.7	117.3	123.7	160.6	970.1	2454.0	1740.1	6222.3	6208.3	3904.7	1707.0
80°	77.8	67.6	73.9	135.1	340.4	2303.6	1621.6	2674.5	2520.3	685.8	276.6
82.5°	39.5	33.1	39.5	113.5	211.6	1449.5	1576.9	1049.2	934.4	163.2	179.7
85°	10.2	10.2	19.1	79.0	131.3	475.5	1413.8	757.2	680.7	71.4	127.5
87.5°	2.5	1.3	7.6	29.3	47.2	103.3	784.0	422.0	363.3	37.0	73.9
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°	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9	3617.9
2.5°	3584.8	3549.1	3478.9	3399.9	3343.8	3282.6	3246.9	3203.6	3170.4	3141.1	3162.8
5°	3572.0	3503.2	3347.6	3173.0	3026.4	2886.2	2781.6	2682.2	2607.0	2559.8	2578.9
7.5°	3538.9	3436.9	3184.5	2911.7	2672.0	2446.4	2262.8	2098.3	1970.8	1902.0	1923.7
10°	3482.8	3338.7	2999.6	2621.0	2285.7	1967.0	1694.2	1449.5	1264.6	1177.9	1198.3
12.5°	3442.0	3252.0	2808.4	2340.5	1899.5	1446.9	1084.9	804.4	660.3	573.7	581.3
15°	3424.1	3184.5	2629.9	2044.8	1477.5	929.3	586.4	424.5	374.8	356.9	358.2
17.5°	3426.7	3130.9	2460.4	1737.6	1051.7	534.1	359.5	323.8	316.2	312.3	312.3
20°	3433.0	3077.4	2284.4	1417.6	673.1	344.2	299.6	288.1	284.3	279.2	280.5
22.5°	3452.2	3036.6	2107.3	1096.3	414.3	280.5	265.2	255.0	248.6	240.9	242.2
25°	3481.5	3006.0	1932.6	789.1	291.9	244.8	230.7	216.7	205.2	196.3	197.6
27.5°	3499.3	2962.6	1746.5	538.0	242.2	214.2	195.0	175.9	163.2	155.5	154.3
30°	3486.6	2892.5	1534.9	353.1	214.2	184.8	161.9	140.2	127.5	121.1	121.1
32.5°	3452.2	2802.0	1301.6	257.5	189.9	159.4	131.3	112.2	103.3	99.4	100.7
35°	3412.7	2707.7	1053.0	218.0	170.8	135.1	107.1	91.8	88.0	86.7	86.7
37.5°	3391.0	2626.1	814.6	197.6	153.0	112.2	88.0	79.0	75.2	75.2	75.2
40°	3415.2	2563.6	603.0	182.3	135.1	93.1	73.9	67.6	66.3	66.3	66.3
42.5°	3518.5	2542.0	441.1	169.5	117.3	77.8	63.7	58.6	57.4	58.6	58.6
45°	3719.9	2589.1	334.0	156.8	100.7	63.7	54.8	51.0	51.0	52.3	52.3
47.5°	4061.5	2710.2	274.1	144.1	84.1	53.5	47.2	44.6	44.6	45.9	45.9
50°	4591.8	2934.6	246.0	130.0	70.1	45.9	39.5	38.2	38.2	39.5	40.8
52.5°	5397.5	3361.7	232.0	116.0	57.4	38.2	33.1	31.9	33.1	34.4	34.4
55°	6293.7	3908.6	215.4	102.0	48.4	31.9	26.8	26.8	28.0	30.6	30.6
57.5°	7128.7	4436.3	200.1	84.1	42.1	25.5	21.7	21.7	24.2	26.8	26.8
60°	8010.9	4953.9	179.7	67.6	35.7	20.4	17.8	17.8	21.7	24.2	25.5
62.5°	9100.8	5555.6	153.0	53.5	28.0	15.3	12.7	16.6	20.4	24.2	24.2
65°	10676.5	6303.9	119.8	42.1	21.7	11.5	10.2	15.3	19.1	22.9	24.2
67.5°	11248.9	6208.3	90.5	34.4	16.6	8.9	8.9	14.0	19.1	22.9	22.9
68°	11039.8	5999.2	86.7	33.1	15.3	8.9	8.9	14.0	19.1	22.9	22.9
70°	9619.7	4904.2	71.4	25.5	12.7	7.6	7.6	12.7	19.1	21.7	22.9
72.5°	7202.6	3258.4	61.2	16.6	11.5	7.6	6.4	12.7	17.8	21.7	21.7
75°	4131.6	1352.6	52.3	12.7	10.2	6.4	6.4	11.5	17.8	21.7	21.7
77.5°	1167.7	316.2	42.1	10.2	8.9	6.4	5.1	11.5	16.6	20.4	20.4
80°	214.2	94.3	33.1	8.9	7.6	6.4	5.1	11.5	16.6	20.4	20.4
82.5°	141.5	44.6	24.2	8.9	7.6	6.4	5.1	10.2	15.3	19.1	19.1
85°	105.8	31.9	15.3	8.9	7.6	6.4	5.1	10.2	15.3	19.1	19.1
87.5°	58.6	14.0	11.5	10.2	8.9	6.4	5.1	8.9	14.0	17.8	17.8
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)