

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: P196553

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196553  
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-05-D-UNV-SL2-7030-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 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: 23722.4 lumens  
Efficiency: N/A  
Efficacy: 85.0 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 - G4

Input Watts (W): 279  
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

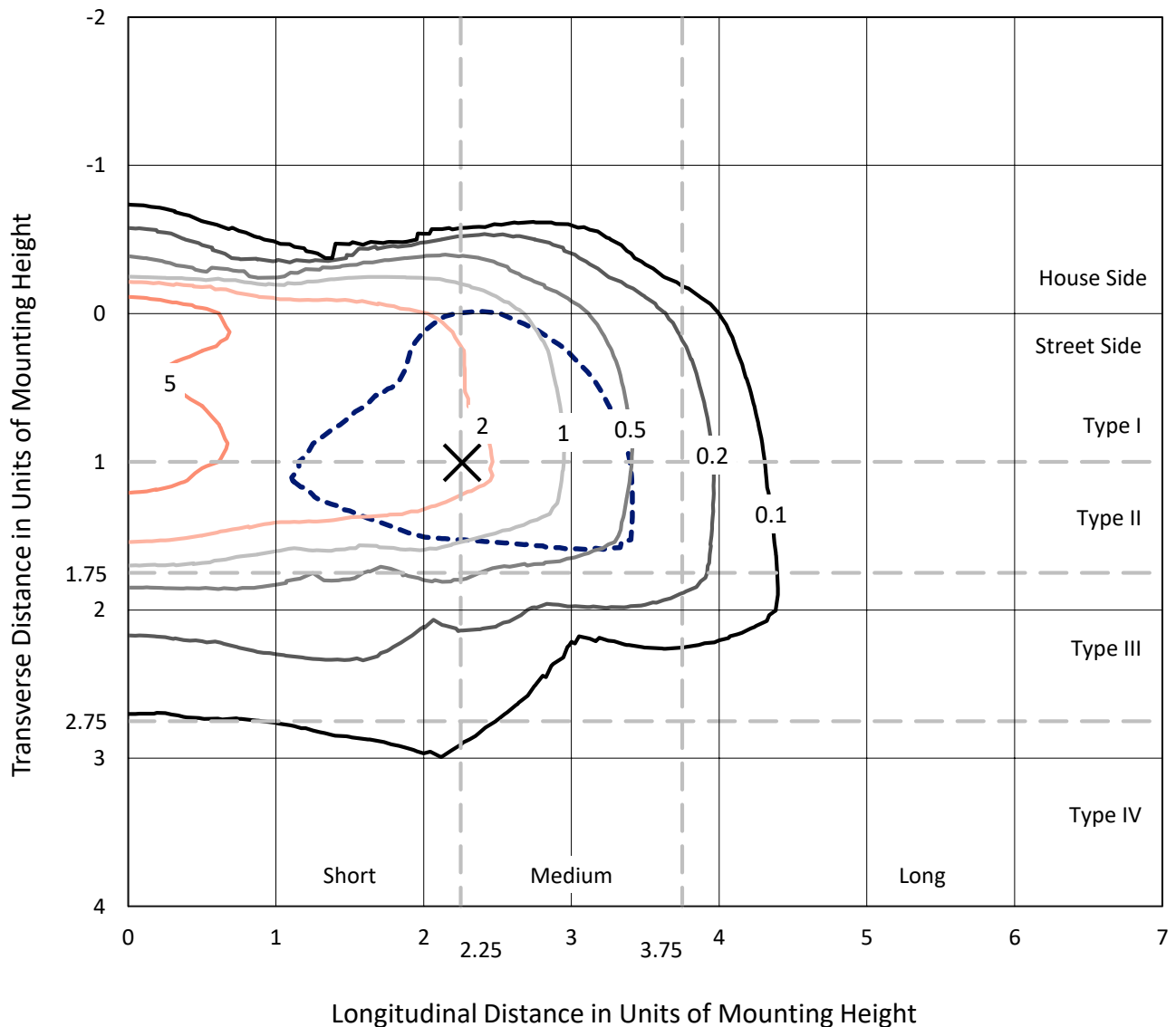


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### Iso-Footcandle Lines of Horizontal Illumination

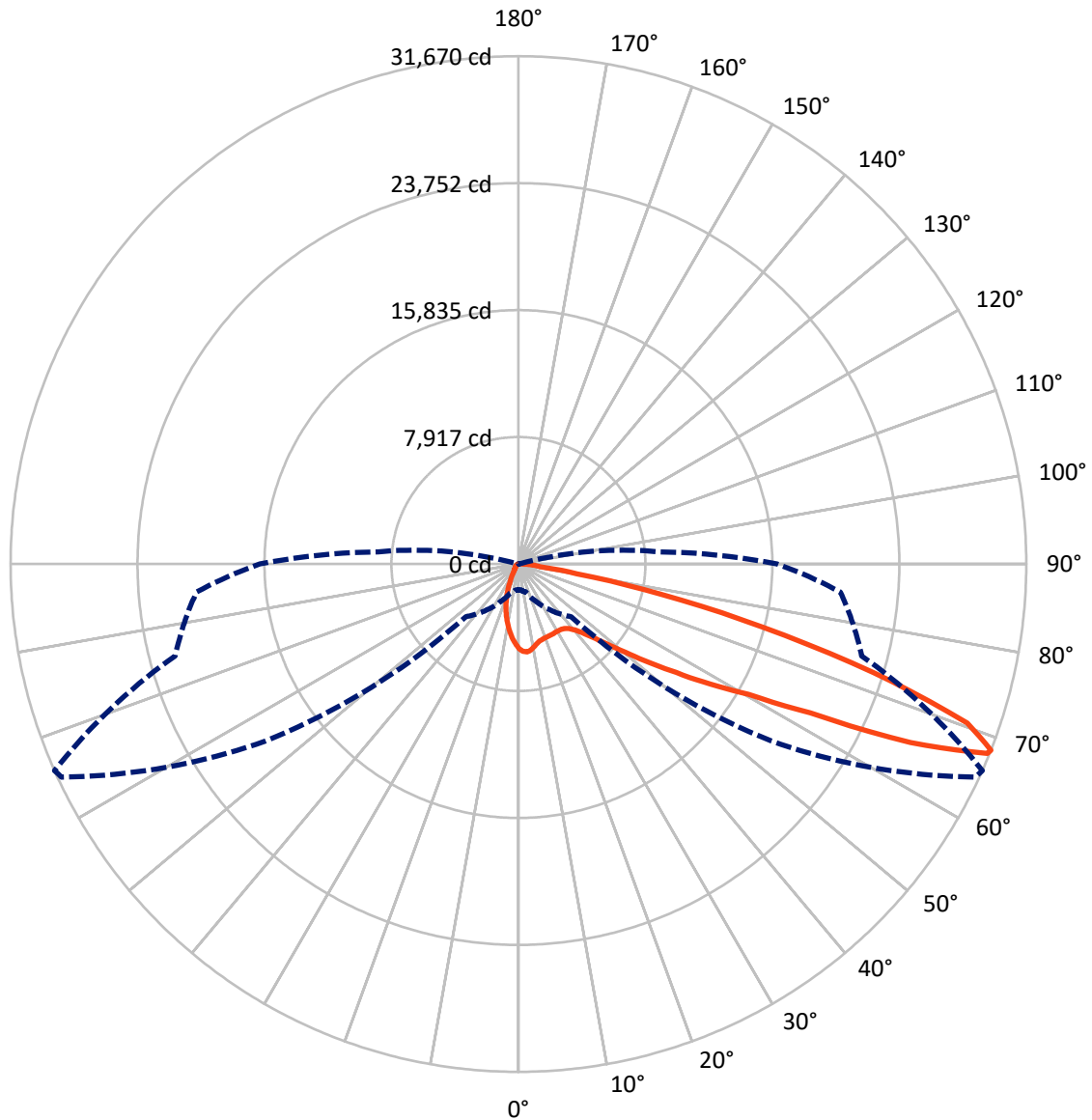
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 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	2402.8	0.0	2402.8
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	21319.5	0.0	21319.5
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	23722.4	0.0	23722.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	433.3	1.8
10°-20°	932.2	3.9
20°-30°	1350.9	5.7
30°-40°	2067.9	8.7
40°-50°	3537.1	14.9
50°-60°	5533.0	23.3
60°-70°	6371.0	26.9
70°-80°	3188.2	13.4
80°-90°	308.8	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°	23722.4	100.0
0°-180°	23722.4	100.0



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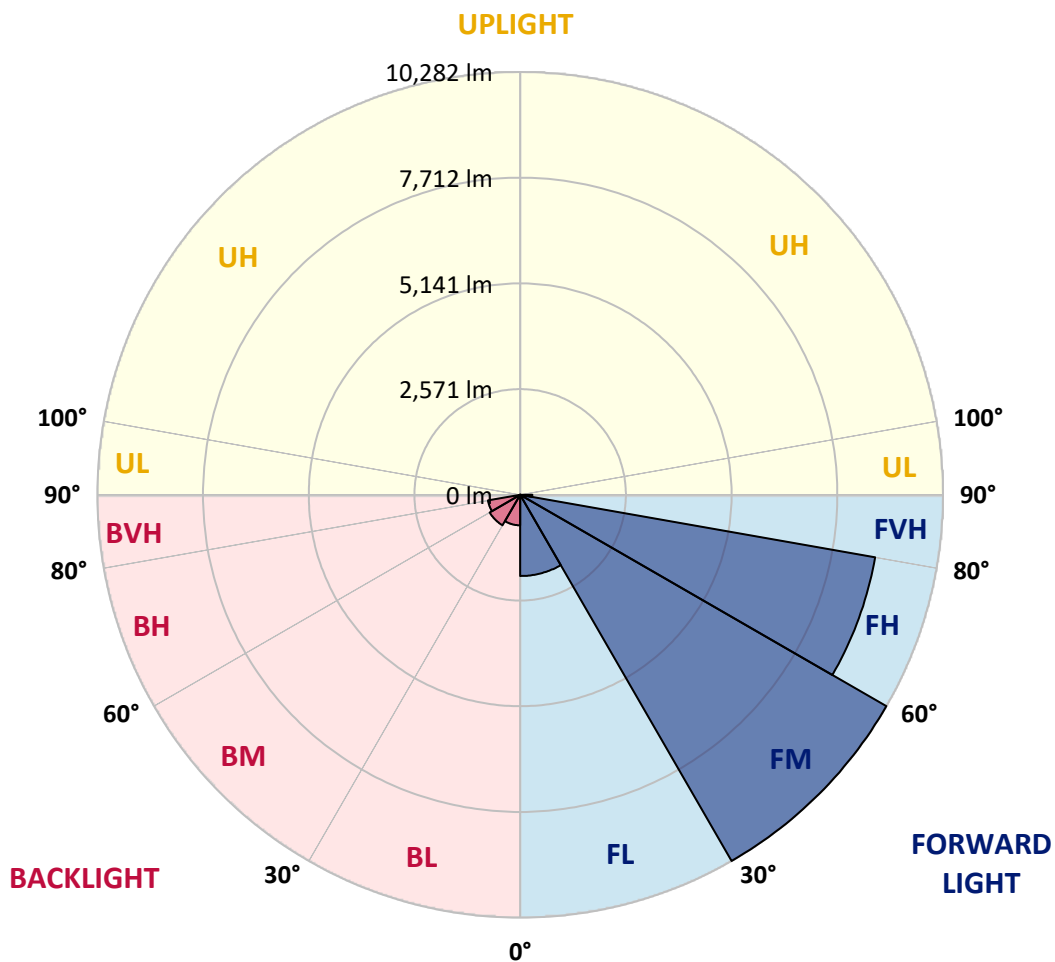
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1974.8	8.3			
FM (30°-60°)	10282.4	43.3			
FH (60°-80°)	8765.3	36.9			G4/12000
FVH (80°-90°)	297.1	1.3			G3/500
BL (0°-30°)	741.6	3.1	B2/1000		
BM (30°-60°)	855.6	3.6	B1/1000		
BH (60°-80°)	793.9	3.3	B2/1000		G2/1000
BVH (80°-90°)	11.7	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1
2.5°	5558.9	5562.6	5560.8	5566.3	5562.6	5534.6	5504.9	5441.5	5447.1	5365.1	5274.0
5°	5167.8	5199.4	5231.2	5262.8	5339.2	5406.1	5486.2	5504.9	5504.9	5434.1	5300.0
7.5°	4769.2	4771.2	4806.6	4849.4	4951.7	5074.6	5261.0	5428.5	5432.3	5450.8	5303.8
10°	4469.5	4478.7	4503.0	4549.5	4651.9	4773.0	4981.5	5244.1	5264.6	5402.5	5266.6
12.5°	4236.6	4247.8	4273.9	4327.9	4421.0	4545.8	4765.6	5065.4	5093.3	5355.9	5255.4
15°	4057.9	4072.7	4093.3	4147.3	4247.8	4380.1	4620.2	4946.1	4979.7	5337.4	5290.7
17.5°	3983.4	3983.4	3981.5	4018.8	4119.3	4253.5	4504.9	4882.9	4925.7	5352.2	5350.3
20°	4015.1	4009.5	3970.4	3961.0	4022.5	4156.5	4413.5	4842.0	4890.3	5380.2	5423.0
22.5°	4182.7	4171.5	4084.0	4011.4	3992.7	4082.2	4352.2	4814.0	4871.7	5437.9	5519.8
25°	4538.3	4504.9	4383.8	4219.9	4072.7	4063.5	4309.3	4799.1	4860.5	5504.9	5625.9
27.5°	5000.1	4990.9	4797.2	4577.4	4294.4	4125.0	4296.3	4787.8	4849.4	5553.3	5711.5
30°	5573.8	5577.4	5354.0	5067.2	4638.9	4298.2	4337.3	4782.3	4845.6	5557.0	5748.7
32.5°	6165.9	6169.7	5983.5	5676.2	5110.0	4596.1	4452.7	4808.4	4866.1	5542.0	5746.9
35°	6735.9	6741.4	6629.7	6382.0	5739.5	5009.5	4670.7	4897.8	4938.7	5551.5	5743.2
37.5°	7456.5	7478.9	7341.0	7110.1	6529.2	5616.6	5026.3	5078.4	5111.9	5627.7	5771.2
40°	8685.7	8655.8	8261.0	7870.0	7385.7	6355.9	5540.2	5389.4	5400.5	5825.1	5877.3
42.5°	10117.7	10080.5	9404.5	8730.4	8266.7	7247.9	6197.6	5866.1	5864.3	6156.6	6108.2
45°	11350.5	11328.2	10616.8	9717.3	9242.5	8233.1	7007.7	6553.4	6531.0	6730.3	6529.2
47.5°	12225.8	12207.2	11669.0	10767.6	10371.0	9317.0	8019.0	7490.0	7443.5	7480.8	7212.5
50°	12311.5	12291.0	12102.8	11523.7	11689.4	10907.4	9268.5	8717.2	8657.7	8599.9	8246.2
52.5°	11510.7	11508.9	11607.4	11570.2	12613.1	12954.0	10801.2	10235.1	10164.3	10017.1	9665.2
55°	9873.8	9864.5	10238.8	10782.6	12592.6	15065.8	13138.3	12041.5	11948.3	11654.0	11192.2
57.5°	7214.4	7166.0	7948.2	9100.9	11708.1	15989.4	16849.9	14285.4	14130.9	13197.9	12486.4
60°	3983.4	4002.0	5007.7	6372.6	9613.0	15807.0	20265.2	16902.0	16496.0	14529.4	13812.4
62.5°	2232.8	2279.3	3028.0	4141.7	6128.7	14326.4	22097.6	21404.9	20427.2	16082.5	15488.5
65°	1689.0	1717.0	2093.2	3195.7	3864.2	10011.5	22390.1	27701.3	26857.7	18436.5	18157.1
67.5°	1590.4	1612.7	1797.1	2650.0	3519.7	5192.0	20188.8	31425.8	31531.9	21647.0	20224.2
68°	1601.5	1629.5	1813.8	2549.4	3514.1	4644.5	19250.3	31444.4	31669.8	22164.8	20153.5
70°	1471.1	1478.6	1918.1	2501.1	3406.0	3659.3	13926.0	29289.7	29693.9	22781.1	18294.9
72.5°	562.3	564.3	860.4	2165.8	3568.1	3679.9	7015.2	23149.9	23170.4	19825.7	14263.1
75°	292.4	245.9	270.0	677.9	3407.9	3586.8	3519.7	15807.0	15708.2	13408.3	8739.6
77.5°	201.1	171.3	180.6	234.7	1417.2	3584.9	2542.0	9089.8	9069.3	5704.1	2493.7
80°	113.6	98.7	108.0	197.4	497.2	3365.0	2368.8	3907.0	3681.7	1001.9	404.2
82.5°	57.7	48.4	57.7	165.7	309.1	2117.5	2303.6	1532.7	1365.0	238.4	262.6
85°	14.9	14.9	28.0	115.5	191.9	694.7	2065.2	1106.1	994.5	104.3	186.2
87.5°	3.8	1.8	11.2	42.8	69.0	150.9	1145.2	616.4	530.8	54.0	108.0
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°	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1	5285.1
2.5°	5236.7	5184.6	5082.0	4966.7	4884.8	4795.4	4743.2	4679.9	4631.5	4588.7	4620.2
5°	5218.1	5117.4	4890.3	4635.3	4421.0	4216.2	4063.5	3918.2	3808.3	3739.4	3767.4
7.5°	5169.7	5020.7	4651.9	4253.5	3903.3	3573.7	3305.5	3065.3	2879.1	2778.5	2810.1
10°	5087.7	4877.4	4382.0	3828.8	3339.1	2873.5	2474.9	2117.5	1847.3	1720.8	1750.6
12.5°	5028.1	4750.7	4102.5	3419.2	2774.7	2113.7	1584.8	1175.1	964.6	838.0	849.2
15°	5002.1	4651.9	3841.9	2987.0	2158.4	1357.5	856.6	620.1	547.5	521.3	523.4
17.5°	5005.8	4573.7	3594.2	2538.3	1536.4	780.3	525.2	473.0	461.8	456.2	456.2
20°	5015.1	4495.5	3337.3	2070.8	983.3	502.8	437.6	420.8	415.3	407.9	409.7
22.5°	5043.0	4435.9	3078.4	1601.5	605.2	409.7	387.4	372.5	363.2	352.0	353.8
25°	5085.9	4391.2	2823.2	1152.8	426.4	357.6	337.1	316.7	299.8	286.8	288.7
27.5°	5111.9	4327.9	2551.3	785.9	353.8	312.8	284.9	257.0	238.4	227.2	225.3
30°	5093.3	4225.5	2242.2	515.8	312.8	270.0	236.5	204.9	186.2	176.9	176.9
32.5°	5043.0	4093.3	1901.3	376.2	277.5	232.8	191.9	163.9	150.9	145.2	147.2
35°	4985.3	3955.5	1538.3	318.5	249.5	197.4	156.5	134.1	128.5	126.6	126.6
37.5°	4953.6	3836.3	1190.0	288.7	223.4	163.9	128.5	115.5	110.0	110.0	110.0
40°	4989.0	3745.0	880.8	266.3	197.4	135.9	108.0	98.7	96.8	96.8	96.8
42.5°	5139.9	3713.4	644.3	247.7	171.3	113.6	93.1	85.7	83.8	85.7	85.7
45°	5434.1	3782.2	488.0	229.0	147.2	93.1	80.1	74.6	74.6	76.4	76.4
47.5°	5933.3	3959.2	400.4	210.5	122.9	78.2	69.0	65.2	65.2	67.0	67.0
50°	6707.9	4286.9	359.5	190.0	102.3	67.0	57.7	55.8	55.8	57.7	59.5
52.5°	7884.8	4910.7	338.9	169.5	83.8	55.8	48.4	46.6	48.4	50.3	50.3
55°	9194.0	5709.7	314.7	149.0	70.8	46.6	39.2	39.2	41.0	44.7	44.7
57.5°	10413.8	6480.7	292.4	122.9	61.4	37.2	31.6	31.6	35.4	39.2	39.2
60°	11702.5	7236.8	262.6	98.7	52.1	29.8	26.1	26.1	31.6	35.4	37.2
62.5°	13294.7	8115.8	223.4	78.2	41.0	22.4	18.6	24.2	29.8	35.4	35.4
65°	15596.5	9208.9	175.1	61.4	31.6	16.7	14.9	22.4	28.0	33.6	35.4
67.5°	16432.7	9069.3	132.2	50.3	24.2	13.0	13.0	20.4	28.0	33.6	33.6
68°	16127.2	8763.8	126.6	48.4	22.4	13.0	13.0	20.4	28.0	33.6	33.6
70°	14052.7	7164.1	104.3	37.2	18.6	11.2	11.2	18.6	28.0	31.6	33.6
72.5°	10521.7	4760.0	89.4	24.2	16.7	11.2	9.3	18.6	26.1	31.6	31.6
75°	6035.6	1975.9	76.4	18.6	14.9	9.3	9.3	16.7	26.1	31.6	31.6
77.5°	1705.9	461.8	61.4	14.9	13.0	9.3	7.4	16.7	24.2	29.8	29.8
80°	312.8	137.7	48.4	13.0	11.2	9.3	7.4	16.7	24.2	29.8	29.8
82.5°	206.7	65.2	35.4	13.0	11.2	9.3	7.4	14.9	22.4	28.0	28.0
85°	154.6	46.6	22.4	13.0	11.2	9.3	7.4	14.9	22.4	28.0	28.0
87.5°	85.7	20.4	16.7	14.9	13.0	9.3	7.4	13.0	20.4	26.1	26.1
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)