

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: P196122

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196122  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
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-SL3-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31280.8 lumens  
Efficiency: N/A  
Efficacy: 93.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G5

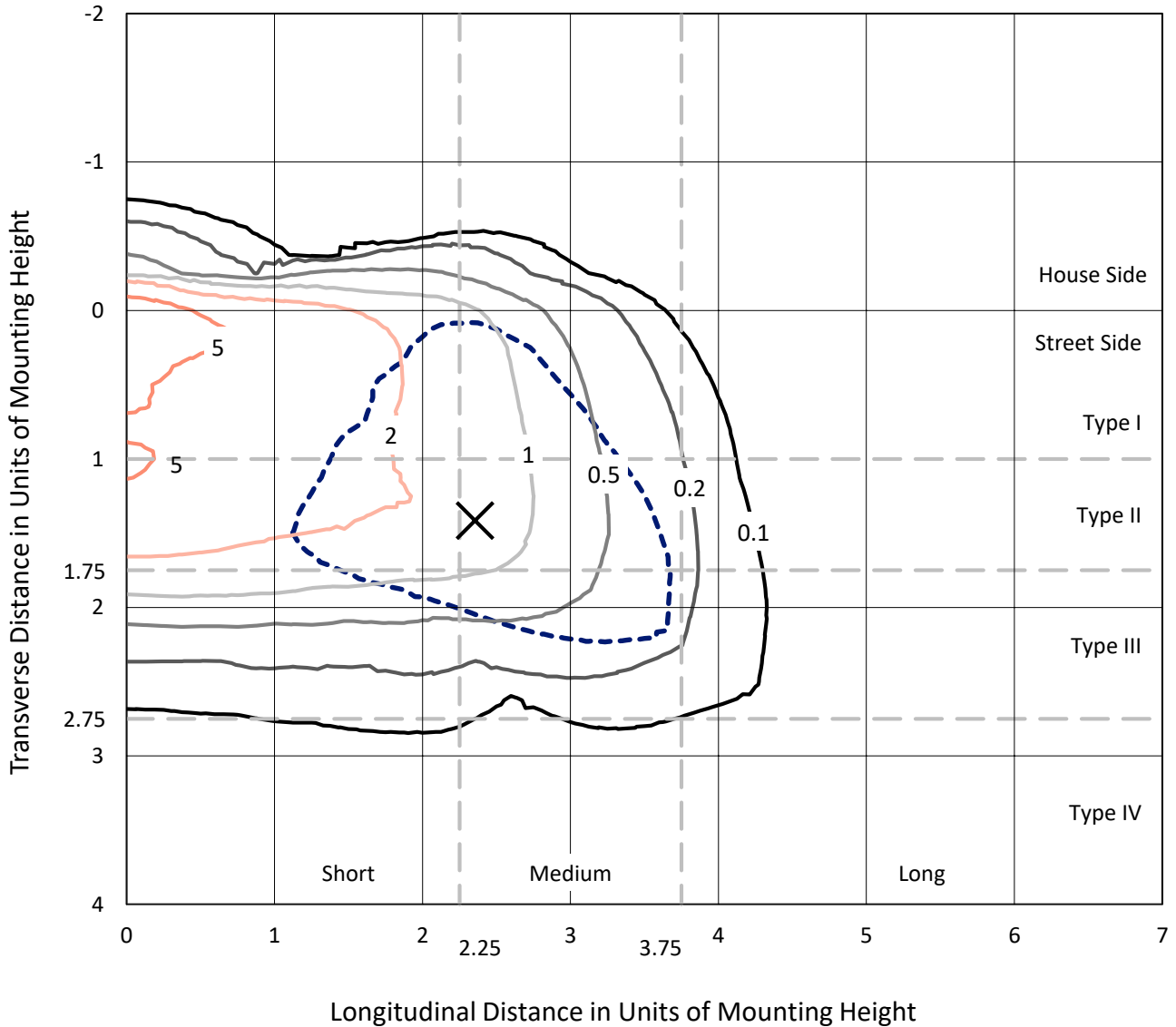
Input Watts (W): 333  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

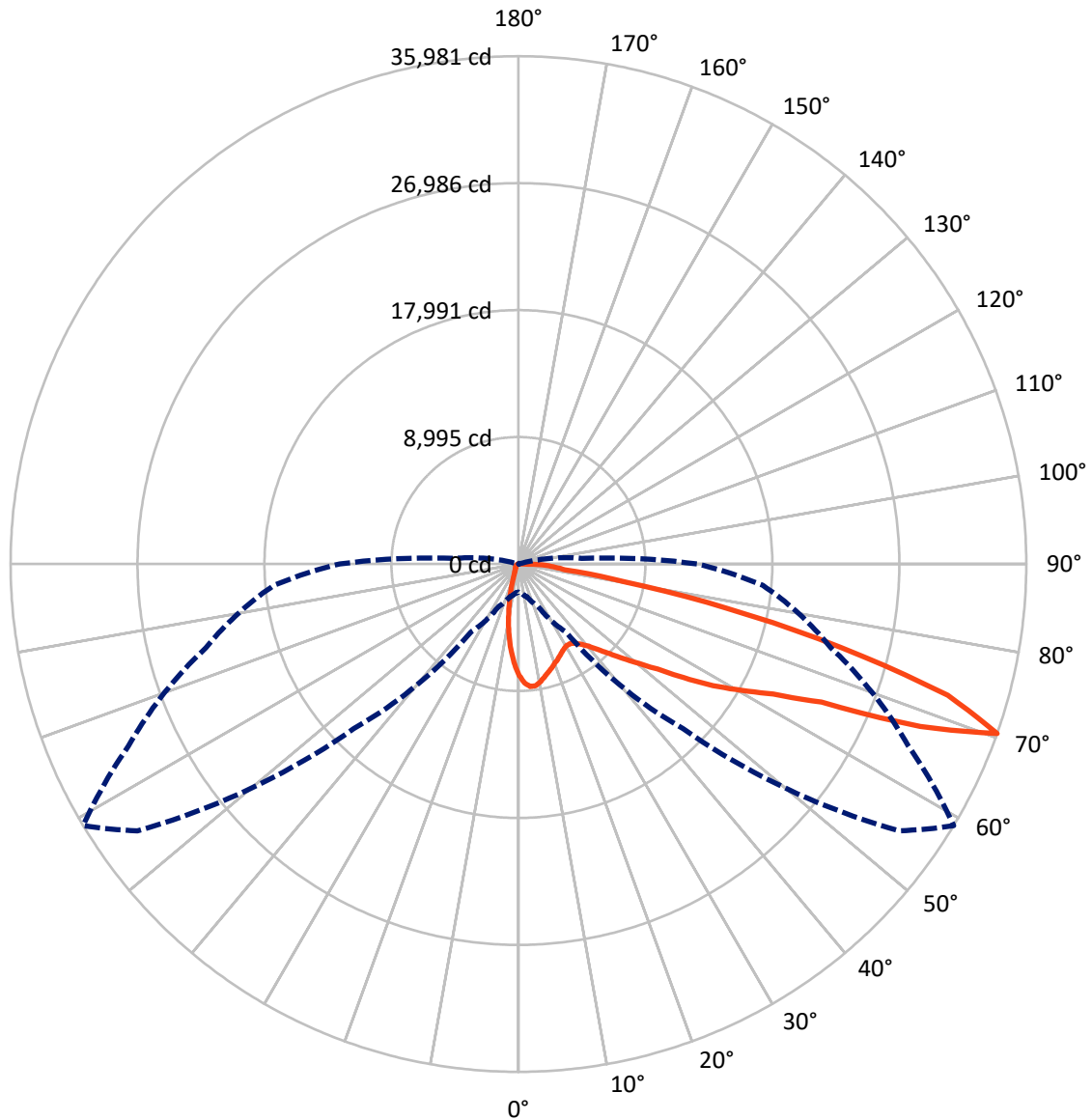
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.4 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2404.7	0.0	2404.7
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	28876.2	0.0	28876.2
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	31280.8	0.0	31280.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	650.4	2.1
10°-20°	1364.2	4.4
20°-30°	1846.7	5.9
30°-40°	2665.1	8.5
40°-50°	4426.1	14.1
50°-60°	6770.2	21.6
60°-70°	8420.6	26.9
70°-80°	4654.8	14.9
80°-90°	482.7	1.5
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°	31280.8	100.0
0°-180°	31280.8	100.0



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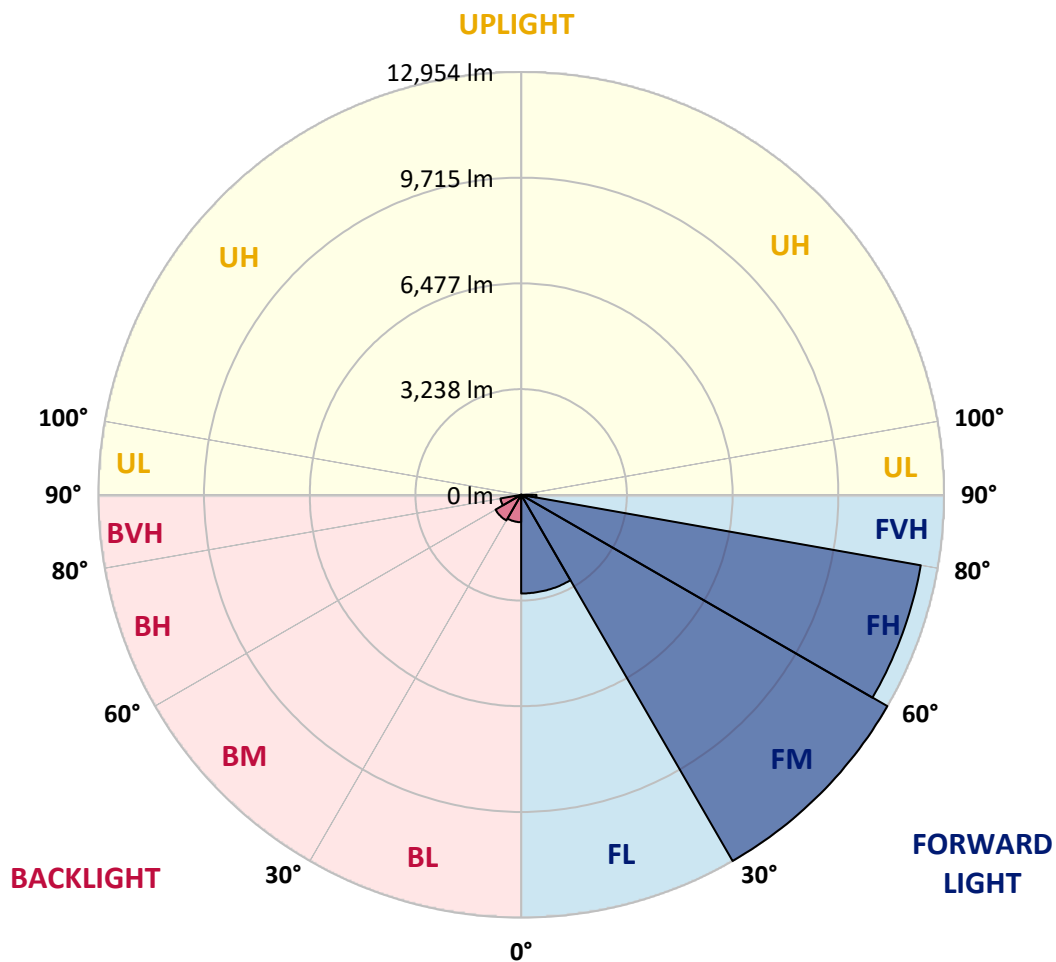
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3023.4	9.7			
FM	(30°-60°)	12953.7	41.4			
FH	(60°-80°)	12430.3	39.7			G5
FVH	(80°-90°)	468.7	1.5			G3/500
BL	(0°-30°)	838.0	2.7	B2/1000		
BM	(30°-60°)	907.7	2.9	B1/1000		
BH	(60°-80°)	645.1	2.1	B2/1000		G2/1000
BVH	(80°-90°)	13.9	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-G5**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8
2.5°	8941.0	8926.9	8867.9	8856.0	8790.0	8657.8	8504.4	8443.1	8318.0	8119.8	7900.4
5°	9089.6	9096.7	9101.5	9075.5	9066.1	8957.5	8787.7	8714.4	8547.0	8221.3	7820.2
7.5°	8532.7	8551.7	8610.6	8636.6	8749.8	8792.4	8757.0	8709.7	8577.5	8192.9	7629.0
10°	7945.2	7980.6	8044.3	8086.7	8226.0	8339.3	8483.2	8495.0	8466.7	8098.6	7414.2
12.5°	7440.2	7473.3	7544.1	7629.0	7770.5	7916.8	8131.6	8207.1	8301.6	8037.2	7260.9
15°	7006.0	7015.5	7083.9	7190.1	7376.5	7577.1	7831.9	7942.8	8126.9	8013.6	7142.9
17.5°	6626.1	6628.4	6673.3	6770.1	6996.6	7260.9	7558.2	7704.5	7938.1	7980.6	7039.0
20°	6376.0	6373.6	6376.0	6427.9	6628.4	6942.3	7303.4	7456.7	7756.4	7940.5	6932.8
22.5°	6291.0	6279.2	6225.0	6206.0	6333.5	6609.6	7041.4	7242.0	7593.6	7928.7	6855.0
25°	6394.9	6387.8	6272.1	6163.6	6175.3	6347.6	6774.8	7020.2	7466.2	7971.1	6836.1
27.5°	6729.9	6715.8	6538.8	6326.4	6191.9	6222.6	6576.6	6833.7	7364.7	8075.0	6862.1
30°	7168.8	7171.2	6982.5	6725.2	6409.0	6234.4	6470.4	6713.4	7296.3	8230.8	6918.7
32.5°	7657.3	7654.9	7520.4	7223.2	6819.6	6451.4	6517.5	6722.8	7305.7	8459.6	7027.3
35°	8162.3	8136.3	8091.5	7829.6	7357.6	6831.4	6732.2	6883.3	7404.8	8761.7	7211.3
37.5°	8745.1	8735.7	8780.5	8504.4	8023.1	7390.6	7109.8	7211.3	7654.9	9207.7	7508.7
40°	9672.5	9620.5	9641.8	9266.6	8773.4	8143.4	7638.4	7664.4	8053.7	9797.6	7978.2
42.5°	11440.0	11230.0	10835.8	10132.6	9599.4	8978.7	8329.8	8285.0	8617.7	10512.6	8596.5
45°	13551.8	13311.1	12317.8	11088.4	10425.3	9875.5	9184.1	9063.7	9311.5	11364.5	9394.1
47.5°	15314.6	15055.1	13738.3	12086.5	11265.3	10800.4	10130.3	9988.7	10142.0	12353.2	10352.1
50°	15916.3	15772.4	14616.1	12917.1	12112.5	11838.7	11317.2	11081.2	11119.1	13419.8	11470.7
52.5°	15640.2	15590.7	14816.7	13485.9	12895.9	12985.5	12617.5	12369.6	12327.2	14585.4	12707.1
55°	15057.4	15033.8	14656.2	13802.1	13587.2	14035.6	14441.5	14226.8	13825.6	15824.3	13728.8
57.5°	14224.4	14314.0	14585.4	14410.8	14436.8	15144.7	16135.8	16246.7	15647.4	16810.7	14486.3
60°	11999.2	12239.9	13483.4	15064.5	16275.0	16990.0	17950.4	18158.1	17190.6	17485.5	15361.8
62.5°	8870.2	9214.7	10986.9	13891.7	17287.4	20498.9	20364.4	20272.4	18663.0	18389.3	16954.6
65°	5210.3	5613.7	7112.2	10854.7	15760.6	22754.8	24871.5	23597.2	20907.2	20267.6	19491.3
67.5°	2595.7	2598.1	3275.3	5729.4	11647.6	21180.9	31450.4	30714.2	25678.5	23035.6	20491.9
70°	1996.3	2050.6	2423.5	3329.6	5889.8	16496.8	32958.2	35981.1	30473.5	22912.9	17386.5
72.5°	1692.0	1727.4	2156.8	2897.7	4403.3	9056.6	28531.4	31804.4	29078.9	19359.1	12815.6
75°	1217.6	1246.0	1909.0	2628.8	4054.0	4492.9	19571.5	23587.8	21818.0	13617.9	7053.2
77.5°	302.1	299.7	665.4	2133.2	3626.9	3742.6	11230.0	15125.9	12518.4	5576.0	1812.3
80°	134.5	129.8	151.0	448.4	3374.4	3532.6	4938.9	7638.4	4802.0	903.8	554.5
82.5°	94.4	89.7	94.4	165.2	1127.9	3277.6	2985.1	3310.7	1758.0	309.1	236.0
85°	30.7	28.3	51.9	139.2	316.2	1890.1	2911.9	2473.0	1307.3	132.2	158.1
87.5°	4.7	4.7	18.9	75.5	92.1	630.0	1708.4	1713.1	587.6	77.8	70.8
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°	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8	7909.8
2.5°	7789.5	7650.2	7454.3	7258.6	7081.5	6899.8	6753.5	6685.1	6654.4	6611.9	6519.9
5°	7610.1	7357.6	6928.1	6505.8	6111.7	5734.2	5410.8	5226.8	5028.5	5019.1	4922.3
7.5°	7322.2	6963.5	6286.3	5630.3	5028.5	4452.8	3957.3	3636.3	3416.9	3280.0	3185.7
10°	7001.3	6541.2	5644.4	4721.8	3903.0	3133.7	2496.6	2081.3	1828.8	1701.4	1628.2
12.5°	6746.5	6168.3	5012.0	3851.1	2824.6	1942.1	1349.8	1047.7	913.2	861.3	837.7
15°	6527.0	5826.1	4419.8	3072.3	1885.4	1116.1	781.0	682.0	660.7	660.7	658.4
17.5°	6305.2	5495.8	3843.9	2307.8	1186.9	731.5	615.9	601.7	604.1	611.2	611.2
20°	6095.2	5182.0	3289.5	1644.7	778.7	585.2	559.2	554.5	561.6	571.0	568.7
22.5°	5925.2	4905.9	2770.4	1130.3	599.3	530.9	514.4	507.4	512.1	519.1	516.8
25°	5804.9	4669.9	2293.7	788.2	521.5	483.8	464.8	455.4	450.7	455.4	453.1
27.5°	5731.8	4471.6	1845.3	592.3	467.2	436.6	413.0	394.0	382.3	382.3	377.6
30°	5684.5	4285.2	1446.6	490.8	422.4	389.3	356.3	330.3	311.5	306.8	304.4
32.5°	5682.2	4124.8	1080.7	434.1	379.9	342.2	302.1	269.0	247.8	243.1	240.7
35°	5741.2	3995.0	795.2	391.7	342.2	297.4	252.5	217.1	198.2	198.2	195.9
37.5°	5894.5	3919.5	601.7	358.6	311.5	259.5	212.4	179.3	162.9	167.6	167.6
40°	6180.2	3905.3	490.8	332.8	285.5	226.6	172.3	146.3	139.2	146.3	146.3
42.5°	6616.7	3980.8	436.6	313.8	262.0	193.5	143.9	125.1	122.8	129.8	129.8
45°	7185.3	4129.6	405.9	297.4	236.0	160.5	120.3	108.5	106.2	115.6	115.6
47.5°	7874.4	4330.0	377.6	278.4	210.0	132.2	101.5	92.1	92.1	101.5	103.8
50°	8690.9	4601.4	349.2	259.5	188.7	110.9	84.9	77.8	80.2	89.7	92.1
52.5°	9630.1	4934.2	323.3	243.1	165.2	89.7	70.8	66.1	68.4	77.8	80.2
55°	10439.4	5224.4	292.6	226.6	134.5	73.1	59.0	56.7	59.0	70.8	70.8
57.5°	11144.9	5502.9	264.3	200.6	106.2	59.0	47.2	47.2	51.9	63.7	66.1
60°	12081.8	5941.8	240.7	169.9	80.2	44.8	37.7	40.1	47.2	56.7	59.0
62.5°	13740.7	6687.4	210.0	141.6	59.0	35.4	30.7	33.0	42.5	54.3	56.7
65°	15817.3	7393.0	174.6	117.9	44.8	26.0	23.6	30.7	42.5	54.3	56.7
67.5°	15604.8	6430.3	136.9	94.4	33.0	21.3	18.9	28.3	40.1	54.3	56.7
70°	12655.2	4507.1	101.5	63.7	26.0	18.9	18.9	28.3	40.1	51.9	54.3
72.5°	8778.1	2508.4	77.8	42.5	23.6	18.9	16.5	26.0	37.7	51.9	54.3
75°	4176.7	769.3	61.4	30.7	21.3	16.5	14.1	26.0	37.7	51.9	54.3
77.5°	802.3	195.9	49.5	26.0	18.9	16.5	14.1	23.6	37.7	49.5	51.9
80°	271.4	87.4	40.1	23.6	18.9	16.5	14.1	23.6	35.4	47.2	49.5
82.5°	148.6	49.5	35.4	21.3	18.9	14.1	11.8	21.3	33.0	47.2	49.5
85°	115.6	35.4	28.3	21.3	18.9	14.1	11.8	21.3	33.0	44.8	47.2
87.5°	59.0	26.0	23.6	21.3	18.9	14.1	11.8	18.9	30.7	42.5	47.2
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)