

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: P195114

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7060-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195114
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-SL2-7060-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 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: 29384 lumens
Efficiency: N/A
Efficacy: 88.2 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): 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

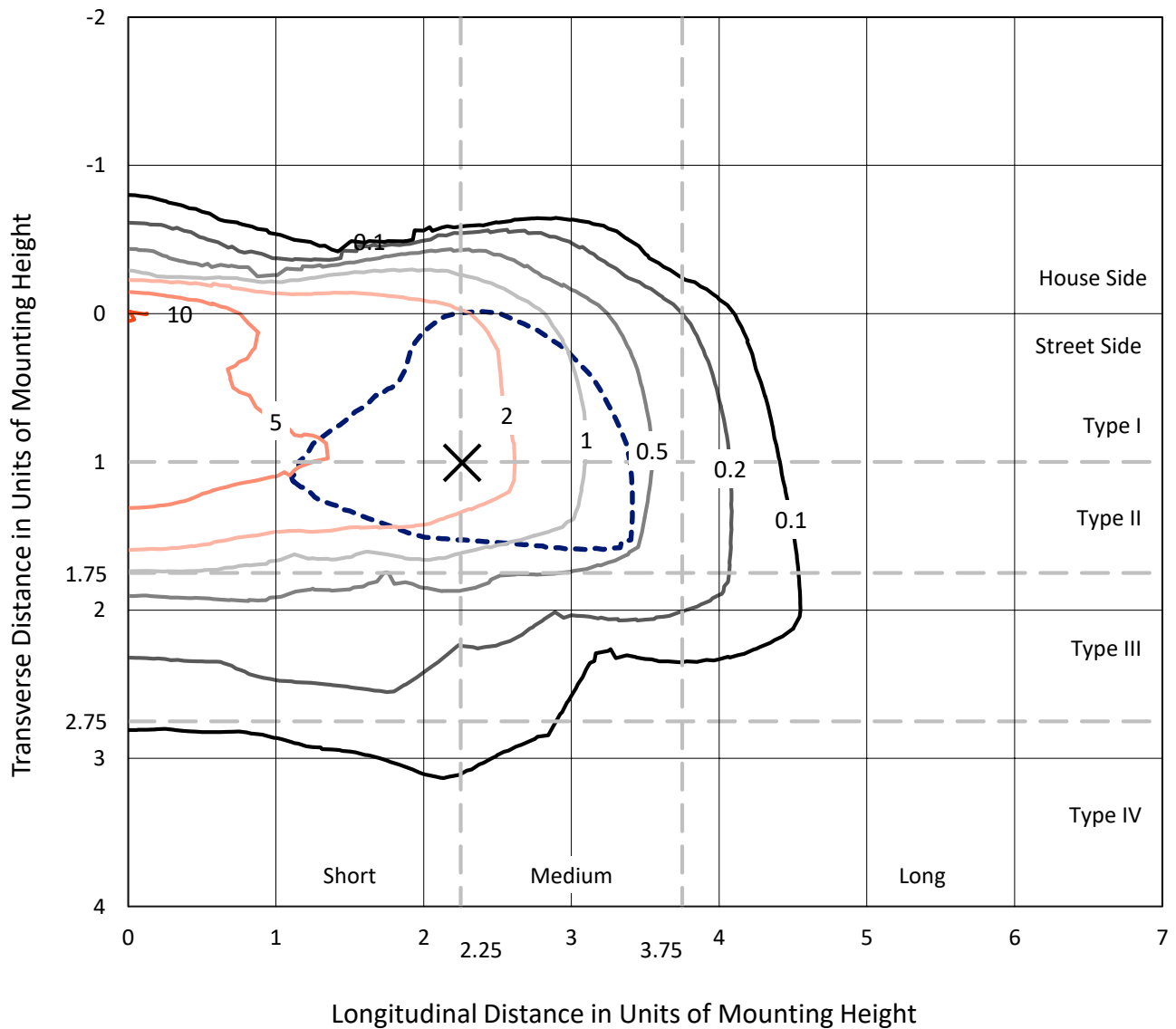


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

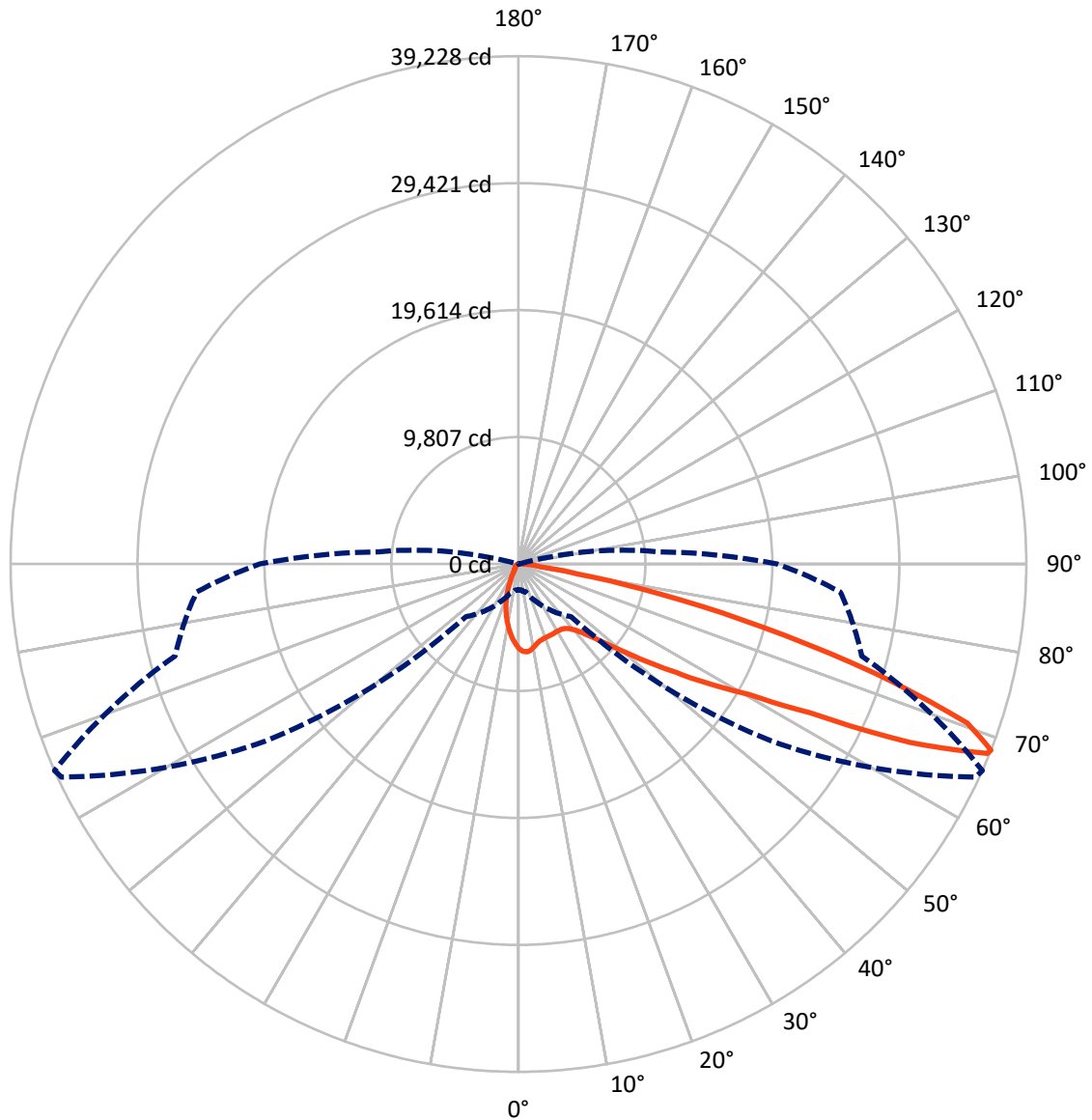


Based on 25 foot mounting height. Maximum calculated value = 10.5 fc
 Type II - Medium - Semi-Cutoff

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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
House Side	Lumens	2976.3	0.0	2976.3
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	26407.7	0.0	26407.7
	% Fixture	89.9	0.0	89.9
Total	Lumens	29384.0	0.0	29384.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	536.7	1.8
10°-20°	1154.7	3.9
20°-30°	1673.3	5.7
30°-40°	2561.5	8.7
40°-50°	4381.2	14.9
50°-60°	6853.5	23.3
60°-70°	7891.6	26.9
70°-80°	3949.1	13.4
80°-90°	382.5	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°	29384.0	100.0
0°-180°	29384.0	100.0

Coefficient of Utilization



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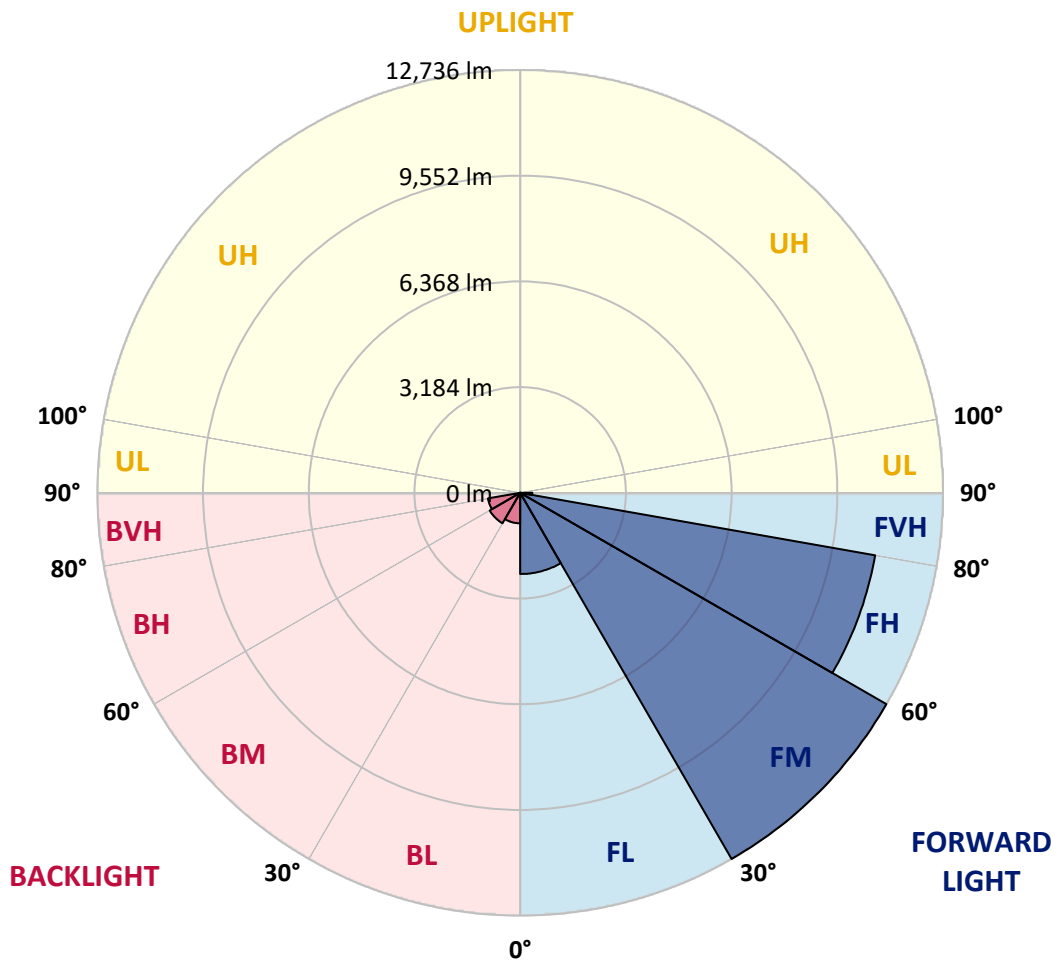
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2446.1	8.3			
FM	(30°-60°)	12736.4	43.3			
FH	(60°-80°)	10857.3	36.9			G4/12000
FVH	(80°-90°)	368.0	1.3			G3/500
BL	(0°-30°)	918.6	3.1	B2/1000		
BM	(30°-60°)	1059.8	3.6	B2/2500		
BH	(60°-80°)	983.3	3.3	B2/1000		G2/1000
BVH	(80°-90°)	14.5	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°	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5
2.5°	6885.6	6890.2	6887.9	6894.8	6890.2	6855.6	6818.7	6740.2	6747.2	6645.7	6532.6
5°	6401.2	6440.4	6479.6	6518.8	6613.4	6696.4	6795.6	6818.7	6818.7	6731.0	6564.9
7.5°	5907.5	5909.8	5953.6	6006.7	6133.6	6285.8	6516.5	6724.1	6728.7	6751.8	6569.5
10°	5536.1	5547.7	5577.7	5635.3	5762.2	5912.1	6170.5	6495.7	6521.1	6691.8	6523.4
12.5°	5247.8	5261.6	5293.9	5360.8	5476.2	5630.7	5902.9	6274.3	6308.9	6634.1	6509.6
15°	5026.3	5044.8	5070.2	5137.1	5261.6	5425.4	5723.0	6126.7	6168.2	6611.1	6553.4
17.5°	4934.1	4934.1	4931.8	4977.9	5102.5	5268.6	5580.0	6048.2	6101.3	6629.5	6627.2
20°	4973.3	4966.4	4917.9	4906.4	4982.5	5148.6	5466.9	5997.5	6057.5	6664.1	6717.2
22.5°	5180.9	5167.1	5058.6	4968.7	4945.6	5056.3	5390.8	5962.9	6034.4	6735.6	6837.1
25°	5621.5	5580.0	5430.0	5227.0	5044.8	5033.3	5337.8	5944.4	6020.5	6818.7	6968.6
27.5°	6193.5	6182.0	5942.1	5669.9	5319.3	5109.4	5321.6	5930.6	6006.7	6878.6	7074.7
30°	6904.0	6908.6	6631.8	6276.6	5746.0	5323.9	5372.4	5923.7	6002.1	6883.3	7120.9
32.5°	7637.6	7642.2	7411.5	7030.9	6329.6	5693.0	5515.4	5956.0	6027.5	6864.8	7118.5
35°	8343.4	8350.3	8211.9	7905.1	7109.3	6205.1	5785.3	6066.7	6117.4	6876.3	7113.9
37.5°	9236.1	9263.8	9093.1	8807.1	8087.4	6957.1	6225.8	6290.4	6332.0	6970.9	7148.5
40°	10758.6	10721.6	10232.6	9748.2	9148.5	7872.8	6862.5	6675.7	6689.5	7215.4	7280.0
42.5°	12532.4	12486.3	11648.9	10813.9	10239.5	8977.8	7676.8	7266.2	7263.9	7626.0	7566.0
45°	14059.5	14031.8	13150.6	12036.5	11448.3	10198.0	8680.2	8117.4	8089.7	8336.5	8087.4
47.5°	15143.6	15120.6	14453.9	13337.5	12846.1	11540.5	9932.7	9277.6	9220.0	9266.1	8933.9
50°	15249.7	15224.4	14991.4	14274.0	14479.3	13510.5	11480.6	10797.8	10724.0	10652.4	10214.2
52.5°	14257.8	14255.5	14377.8	14331.7	15623.4	16045.6	13379.0	12677.7	12590.1	12407.9	11971.9
55°	12230.2	12218.7	12682.4	13355.9	15598.1	18661.4	16273.9	14915.3	14799.9	14435.5	13863.4
57.5°	8936.2	8876.3	9845.1	11273.0	14502.4	19805.5	20871.2	17694.9	17503.4	16347.7	15466.6
60°	4934.1	4957.1	6202.8	7893.6	11907.3	19579.5	25101.8	20935.8	20432.9	17997.0	17109.0
62.5°	2765.8	2823.4	3750.7	5130.2	7591.4	17745.6	27371.6	26513.5	25302.4	19920.9	19185.0
65°	2092.2	2126.8	2592.8	3958.3	4786.4	12400.9	27733.7	34312.5	33267.5	22836.5	22490.5
67.5°	1969.9	1997.6	2226.0	3282.5	4359.7	6431.1	25007.2	38925.9	39057.4	26813.3	25051.0
68°	1983.8	2018.4	2246.7	3157.9	4352.8	5753.0	23844.6	38949.0	39228.1	27454.6	24963.3
70°	1822.3	1831.5	2375.9	3097.9	4219.0	4532.7	17249.7	36280.1	36780.7	28218.1	22661.2
72.5°	696.6	698.9	1065.7	2682.7	4419.7	4558.1	8689.4	28674.9	28700.2	24557.4	17667.2
75°	362.2	304.5	334.5	839.6	4221.3	4442.7	4359.7	19579.5	19457.2	16608.4	10825.4
77.5°	249.1	212.2	223.8	290.6	1755.4	4440.4	3148.7	11259.1	11233.7	7065.5	3088.7
80°	140.7	122.3	133.8	244.5	615.9	4168.2	2934.2	4839.5	4560.4	1241.0	500.6
82.5°	71.5	60.0	71.5	205.3	382.9	2622.7	2853.4	1898.4	1690.8	295.3	325.2
85°	18.5	18.5	34.6	143.0	237.6	860.4	2558.2	1370.2	1231.8	129.2	230.7
87.5°	4.6	2.3	13.8	53.1	85.3	186.8	1418.6	763.5	657.4	66.9	133.8
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°	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5	6546.5
2.5°	6486.5	6421.9	6295.0	6152.0	6050.5	5939.8	5875.2	5796.8	5736.8	5683.8	5723.0
5°	6463.4	6338.9	6057.5	5741.4	5476.2	5222.4	5033.3	4853.3	4717.2	4631.9	4666.5
7.5°	6403.5	6218.9	5762.2	5268.6	4834.9	4426.6	4094.4	3796.9	3566.2	3441.6	3480.8
10°	6302.0	6041.3	5427.7	4742.6	4136.0	3559.3	3065.6	2622.7	2288.3	2131.4	2168.3
12.5°	6228.1	5884.4	5081.7	4235.1	3437.0	2618.1	1963.0	1455.5	1194.9	1038.0	1051.9
15°	6195.9	5762.2	4758.8	3700.0	2673.5	1681.6	1061.1	768.1	678.2	645.9	648.2
17.5°	6200.5	5665.3	4452.0	3144.1	1903.0	966.5	650.5	585.9	572.1	565.1	565.1
20°	6212.0	5568.4	4133.6	2565.1	1217.9	622.8	542.1	521.3	514.4	505.2	507.5
22.5°	6246.6	5494.6	3813.0	1983.8	749.7	507.5	479.8	461.3	449.8	436.0	438.3
25°	6299.7	5439.3	3497.0	1427.9	528.2	442.9	417.5	392.1	371.4	355.2	357.5
27.5°	6332.0	5360.8	3160.2	973.4	438.3	387.5	352.9	318.3	295.3	281.4	279.1
30°	6308.9	5234.0	2777.3	639.0	387.5	334.5	293.0	253.7	230.7	219.1	219.1
32.5°	6246.6	5070.2	2355.2	466.0	343.7	288.3	237.6	203.0	186.8	179.9	182.2
35°	6175.1	4899.5	1905.4	394.4	309.1	244.5	193.8	166.1	159.2	156.9	156.9
37.5°	6135.9	4751.8	1474.0	357.5	276.8	203.0	159.2	143.0	136.1	136.1	136.1
40°	6179.7	4638.8	1091.1	329.9	244.5	168.4	133.8	122.3	119.9	119.9	119.9
42.5°	6366.6	4599.6	798.1	306.8	212.2	140.7	115.3	106.1	103.8	106.1	106.1
45°	6731.0	4685.0	604.4	283.7	182.2	115.3	99.2	92.3	92.3	94.6	94.6
47.5°	7349.2	4904.1	495.9	260.7	152.2	96.9	85.3	80.7	80.7	83.0	83.0
50°	8308.8	5310.1	445.2	235.3	126.9	83.0	71.5	69.2	69.2	71.5	73.8
52.5°	9766.7	6082.8	419.8	209.9	103.8	69.2	60.0	57.7	60.0	62.3	62.3
55°	11388.3	7072.4	389.8	184.5	87.7	57.7	48.4	48.4	50.7	55.4	55.4
57.5°	12899.2	8027.4	362.2	152.2	76.1	46.1	39.2	39.2	43.8	48.4	48.4
60°	14495.4	8963.9	325.2	122.3	64.6	36.9	32.3	32.3	39.2	43.8	46.1
62.5°	16467.7	10052.7	276.8	96.9	50.7	27.7	23.1	30.0	36.9	43.8	43.8
65°	19318.8	11406.7	216.8	76.1	39.2	20.8	18.5	27.7	34.6	41.5	43.8
67.5°	20354.5	11233.7	163.8	62.3	30.0	16.1	16.1	25.4	34.6	41.5	41.5
68°	19976.2	10855.4	156.9	60.0	27.7	16.1	16.1	25.4	34.6	41.5	41.5
70°	17406.5	8874.0	129.2	46.1	23.1	13.8	13.8	23.1	34.6	39.2	41.5
72.5°	13033.0	5896.0	110.7	30.0	20.8	13.8	11.5	23.1	32.3	39.2	39.2
75°	7476.1	2447.4	94.6	23.1	18.5	11.5	11.5	20.8	32.3	39.2	39.2
77.5°	2113.0	572.1	76.1	18.5	16.1	11.5	9.2	20.8	30.0	36.9	36.9
80°	387.5	170.7	60.0	16.1	13.8	11.5	9.2	20.8	30.0	36.9	36.9
82.5°	256.0	80.7	43.8	16.1	13.8	11.5	9.2	18.5	27.7	34.6	34.6
85°	191.5	57.7	27.7	16.1	13.8	11.5	9.2	18.5	27.7	34.6	34.6
87.5°	106.1	25.4	20.8	18.5	16.1	11.5	9.2	16.1	25.4	32.3	32.3
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)