

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: P196554

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196554
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-SL2-7030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 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: 28419.5 lumens
Efficiency: N/A
Efficacy: 85.3 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

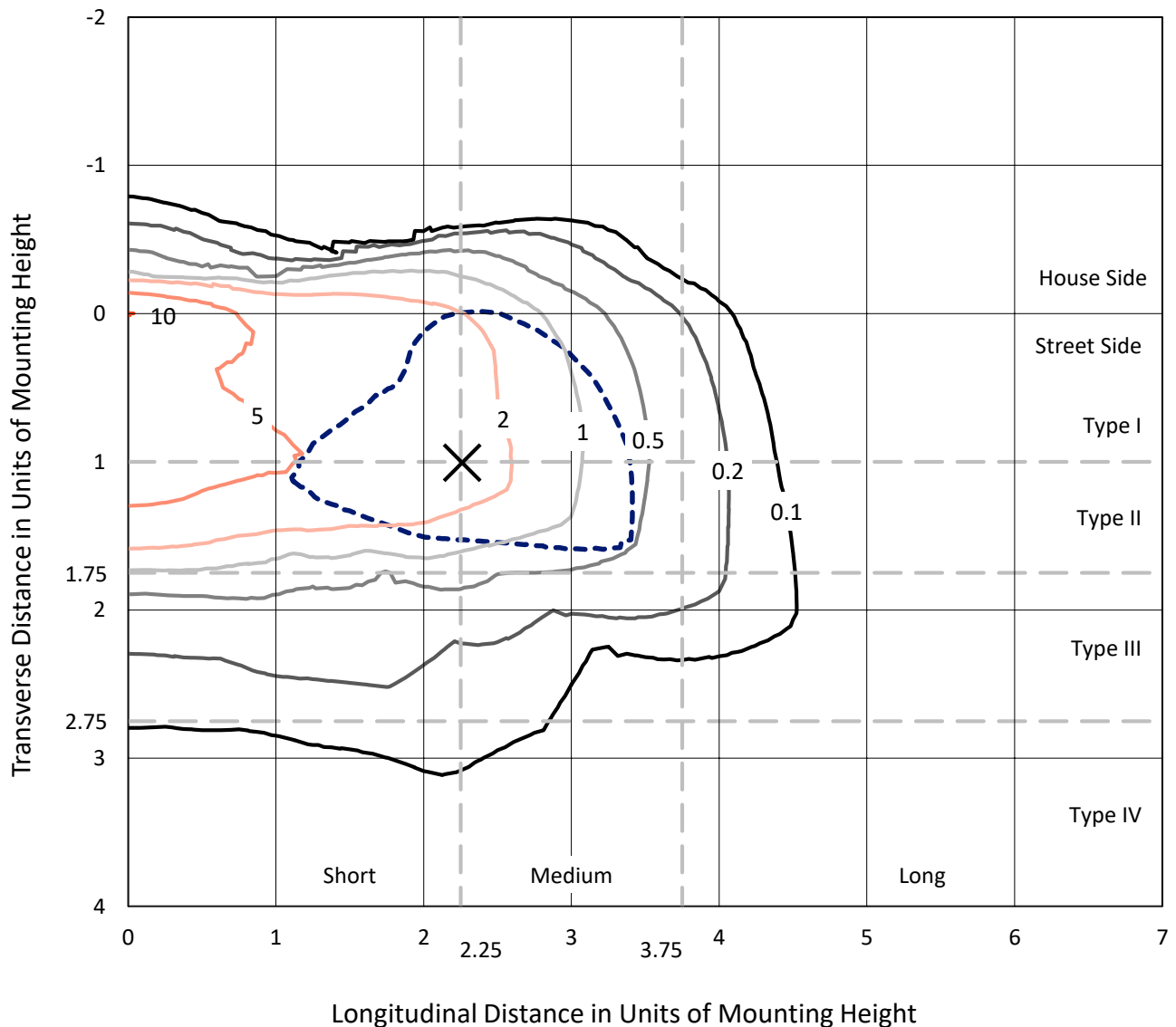


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Iso-Footcandle Lines of Horizontal Illumination

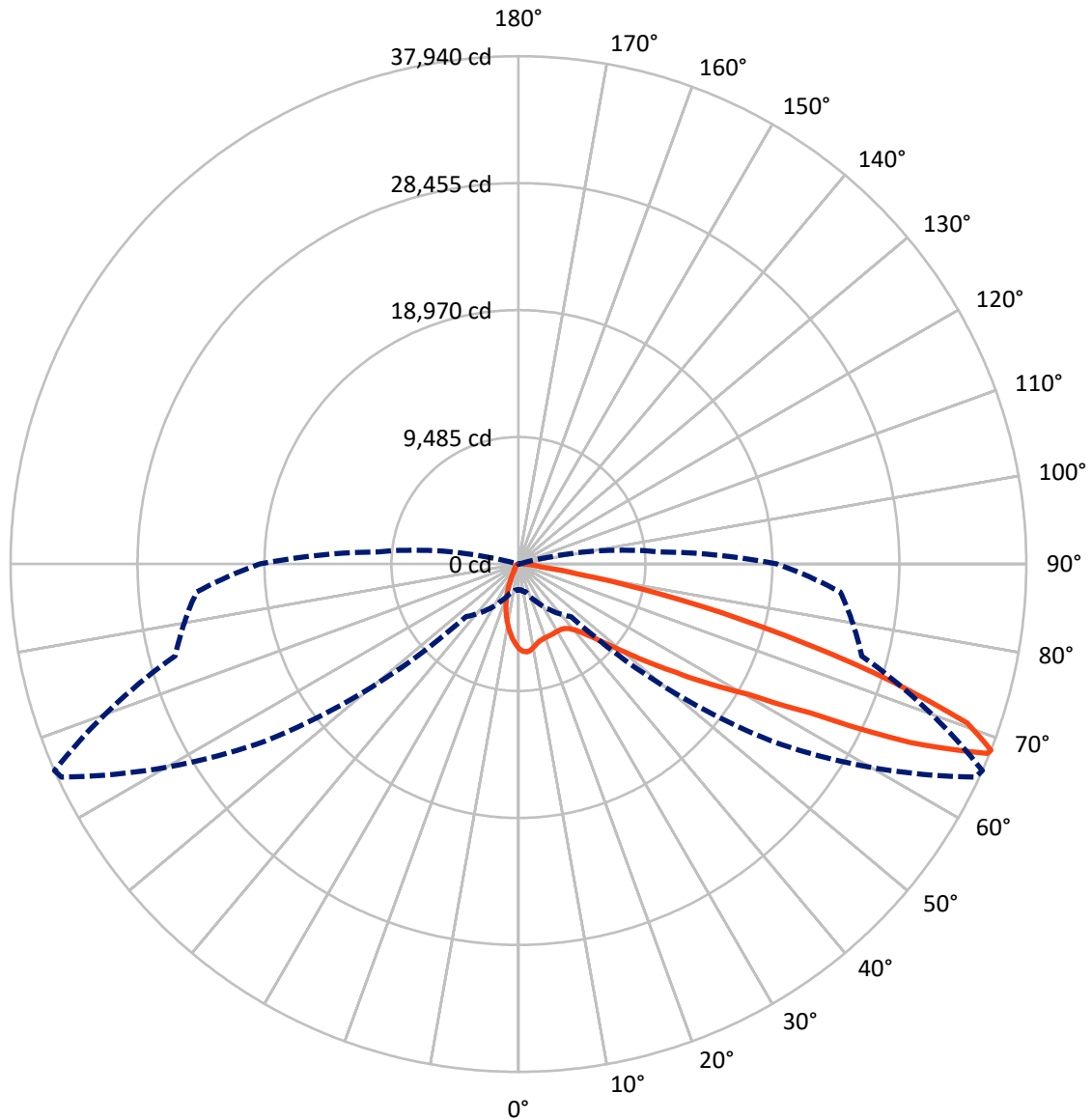
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 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
House Side	Lumens	2878.6	0.0	2878.6
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	25540.9	0.0	25540.9
	% Fixture	89.9	0.0	89.9
Total	Lumens	28419.5	0.0	28419.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.1	1.8
10°-20°	1116.8	3.9
20°-30°	1618.4	5.7
30°-40°	2477.4	8.7
40°-50°	4237.4	14.9
50°-60°	6628.5	23.3
60°-70°	7632.5	26.9
70°-80°	3819.4	13.4
80°-90°	369.9	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°	28419.5	100.0
0°-180°	28419.5	100.0

Coefficient of Utilization



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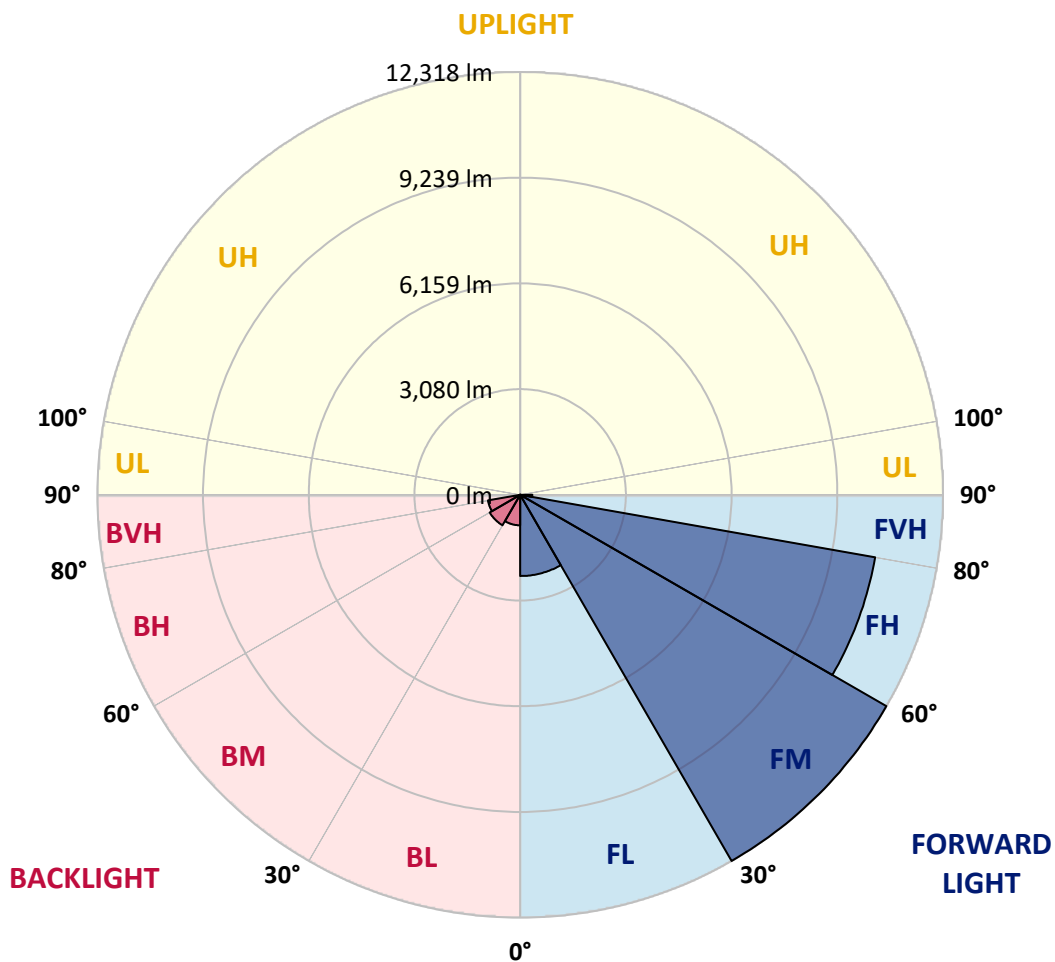
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2365.8	8.3			
FM (30°-60°)	12318.3	43.3			
FH (60°-80°)	10500.9	36.9			G4/12000
FVH (80°-90°)	355.9	1.3			G3/500
BL (0°-30°)	888.5	3.1	B2/1000		
BM (30°-60°)	1025.0	3.6	B2/2500		
BH (60°-80°)	951.1	3.3	B2/1000		G2/1000
BVH (80°-90°)	14.0	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°	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6
2.5°	6659.6	6664.0	6661.7	6668.4	6664.0	6630.5	6594.9	6519.0	6525.7	6427.5	6318.3
5°	6191.0	6229.0	6266.9	6304.8	6396.2	6476.6	6572.5	6594.9	6594.9	6510.1	6349.4
7.5°	5713.6	5715.8	5758.2	5809.6	5932.2	6079.5	6302.6	6503.3	6507.8	6530.1	6353.9
10°	5354.4	5365.5	5394.5	5450.3	5573.0	5718.1	5968.0	6282.5	6307.0	6472.1	6309.2
12.5°	5075.5	5088.9	5120.1	5184.9	5296.4	5445.9	5709.2	6068.4	6101.8	6416.4	6295.8
15°	4861.4	4879.2	4903.8	4968.4	5088.9	5247.2	5535.1	5925.5	5965.7	6394.1	6338.2
17.5°	4772.1	4772.1	4769.9	4814.5	4935.0	5095.7	5396.8	5849.6	5901.0	6411.9	6409.7
20°	4810.0	4803.4	4756.5	4745.3	4819.0	4979.6	5287.5	5800.6	5858.6	6445.3	6496.7
22.5°	5010.8	4997.4	4892.6	4805.6	4783.3	4890.3	5213.9	5767.1	5836.3	6514.5	6612.7
25°	5437.0	5396.8	5251.8	5055.4	4879.2	4868.0	5162.5	5749.3	5822.9	6594.9	6739.8
27.5°	5990.2	5979.1	5747.0	5483.8	5144.7	4941.7	5146.8	5735.9	5809.6	6652.8	6842.5
30°	6677.4	6681.9	6414.2	6070.6	5557.5	5149.2	5196.1	5729.2	5805.1	6657.2	6887.0
32.5°	7386.8	7391.3	7168.2	6800.1	6121.9	5506.1	5334.4	5760.4	5829.6	6639.4	6884.9
35°	8069.6	8076.2	7942.4	7645.6	6875.9	6001.4	5595.3	5867.6	5916.6	6650.6	6880.4
37.5°	8932.9	8959.7	8794.6	8518.0	7821.9	6728.7	6021.5	6084.0	6124.1	6742.1	6913.8
40°	10405.5	10369.7	9896.7	9428.2	8848.2	7614.4	6637.2	6456.5	6469.9	6978.6	7041.0
42.5°	12121.0	12076.4	11266.6	10459.0	9903.4	8683.1	7424.8	7027.7	7025.4	7375.6	7317.6
45°	13598.0	13571.2	12719.0	11641.3	11072.5	9863.3	8395.3	7851.0	7824.2	8062.8	7821.9
47.5°	14646.5	14624.3	13979.5	12899.7	12424.4	11161.7	9606.7	8973.1	8917.3	8961.9	8640.7
50°	14749.1	14724.7	14499.2	13805.5	14004.0	13067.0	11103.7	10443.3	10371.9	10302.7	9878.9
52.5°	13789.8	13787.5	13905.9	13861.1	15110.5	15518.8	12939.8	12261.6	12176.8	12000.6	11578.9
55°	11828.7	11817.6	12266.0	12917.5	15086.0	18048.7	15739.7	14425.6	14314.0	13961.5	13408.3
57.5°	8642.9	8584.9	9522.0	10902.9	14026.2	19155.4	20186.0	17114.1	16928.8	15811.1	14958.9
60°	4772.1	4794.4	5999.2	7634.5	11516.5	18936.7	24277.7	20248.6	19762.2	17406.3	16547.4
62.5°	2675.0	2730.7	3627.6	4961.8	7342.2	17163.1	26473.1	25643.1	24471.9	19266.9	18555.3
65°	2023.5	2057.1	2507.6	3828.5	4629.4	11993.8	26823.3	33186.1	32175.5	22086.9	21752.2
67.5°	1905.3	1932.0	2153.0	3174.7	4216.7	6220.0	24186.2	37648.1	37775.3	25933.1	24228.7
68°	1918.7	1952.1	2172.9	3054.3	4209.9	5564.1	23061.9	37670.4	37940.4	26553.4	24143.9
70°	1762.5	1771.4	2297.9	2996.2	4080.5	4383.9	16683.5	35089.1	35573.2	27291.9	21917.3
72.5°	673.8	676.0	1030.8	2594.7	4274.6	4408.5	8404.2	27733.6	27758.1	23751.3	17087.3
75°	350.2	294.5	323.5	812.2	4082.7	4296.9	4216.7	18936.7	18818.5	16063.2	10470.1
77.5°	240.9	205.3	216.5	281.2	1697.8	4294.7	3045.3	10889.6	10865.0	6833.5	2987.2
80°	136.1	118.2	129.4	236.4	595.7	4031.4	2837.8	4680.6	4410.7	1200.3	484.1
82.5°	69.2	58.0	69.2	198.6	370.4	2536.7	2759.8	1836.1	1635.3	285.6	314.5
85°	17.8	17.8	33.5	138.3	229.8	832.1	2474.1	1325.2	1191.4	124.9	223.1
87.5°	4.5	2.1	13.4	51.4	82.6	180.8	1372.1	738.5	635.9	64.7	129.4
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°	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6	6331.6
2.5°	6273.5	6211.1	6088.4	5950.0	5851.9	5744.9	5682.3	5606.5	5548.5	5497.2	5535.1
5°	6251.3	6130.7	5858.6	5553.0	5296.4	5050.9	4868.0	4694.0	4562.4	4479.8	4513.3
7.5°	6193.3	6014.8	5573.0	5095.7	4676.2	4281.4	3960.0	3672.2	3449.1	3328.7	3366.6
10°	6095.1	5842.9	5249.6	4586.9	4000.2	3442.4	2965.0	2536.7	2213.1	2061.4	2097.1
12.5°	6023.7	5691.4	4914.9	4096.1	3324.2	2532.2	1898.6	1407.8	1155.6	1004.0	1017.3
15°	5992.5	5573.0	4602.5	3578.6	2585.7	1626.5	1026.3	743.0	655.9	624.6	626.9
17.5°	5996.9	5479.4	4305.8	3040.9	1840.6	934.8	629.2	566.7	553.3	546.7	546.7
20°	6008.0	5385.6	3997.9	2480.8	1178.0	602.3	524.3	504.2	497.5	488.6	490.8
22.5°	6041.6	5314.3	3687.8	1918.7	725.1	490.8	464.1	446.3	435.1	421.6	423.9
25°	6092.9	5260.8	3382.2	1381.0	510.9	428.4	403.8	379.2	359.3	343.6	345.8
27.5°	6124.1	5184.9	3056.4	941.5	423.9	374.8	341.3	307.9	285.6	272.2	270.0
30°	6101.8	5062.1	2686.1	618.0	374.8	323.5	283.3	245.4	223.1	212.0	212.0
32.5°	6041.6	4903.8	2277.8	450.7	332.3	278.8	229.8	196.3	180.8	174.0	176.2
35°	5972.4	4738.7	1842.7	381.6	299.0	236.4	187.4	160.6	153.9	151.8	151.8
37.5°	5934.4	4595.9	1425.7	345.8	267.6	196.3	153.9	138.3	131.6	131.6	131.6
40°	5976.8	4486.5	1055.2	319.0	236.4	162.9	129.4	118.2	116.1	116.1	116.1
42.5°	6157.6	4448.6	771.9	296.7	205.3	136.1	111.6	102.6	100.4	102.6	102.6
45°	6510.1	4531.2	584.5	274.5	176.2	111.6	95.9	89.3	89.3	91.4	91.4
47.5°	7108.0	4743.1	479.6	252.1	147.3	93.8	82.6	78.1	78.1	80.3	80.3
50°	8036.0	5135.7	430.6	227.6	122.7	80.3	69.2	66.9	66.9	69.2	71.3
52.5°	9446.0	5883.2	406.0	203.0	100.4	66.9	58.0	55.7	58.0	60.2	60.2
55°	11014.4	6840.2	377.1	178.5	84.7	55.7	46.9	46.9	49.0	53.5	53.5
57.5°	12475.8	7763.9	350.2	147.3	73.6	44.6	37.9	37.9	42.4	46.9	46.9
60°	14019.6	8669.7	314.5	118.2	62.5	35.7	31.2	31.2	37.9	42.4	44.6
62.5°	15927.2	9722.7	267.6	93.8	49.0	26.8	22.3	29.0	35.7	42.4	42.4
65°	18684.7	11032.4	209.7	73.6	37.9	20.1	17.8	26.8	33.5	40.2	42.4
67.5°	19686.4	10865.0	158.4	60.2	29.0	15.7	15.7	24.6	33.5	40.2	40.2
68°	19320.5	10499.0	151.8	58.0	26.8	15.7	15.7	24.6	33.5	40.2	40.2
70°	16835.1	8582.7	124.9	44.6	22.3	13.4	13.4	22.3	33.5	37.9	40.2
72.5°	12605.1	5702.5	107.1	29.0	20.1	13.4	11.2	22.3	31.2	37.9	37.9
75°	7230.7	2367.1	91.4	22.3	17.8	11.2	11.2	20.1	31.2	37.9	37.9
77.5°	2043.5	553.3	73.6	17.8	15.7	11.2	9.0	20.1	29.0	35.7	35.7
80°	374.8	165.1	58.0	15.7	13.4	11.2	9.0	20.1	29.0	35.7	35.7
82.5°	247.7	78.1	42.4	15.7	13.4	11.2	9.0	17.8	26.8	33.5	33.5
85°	185.2	55.7	26.8	15.7	13.4	11.2	9.0	17.8	26.8	33.5	33.5
87.5°	102.6	24.6	20.1	17.8	15.7	11.2	9.0	15.7	24.6	31.2	31.2
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)