

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: P196116

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196116
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-SL3-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 800mA 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: 25273 lumens
Efficiency: N/A
Efficacy: 101.5 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 - G4

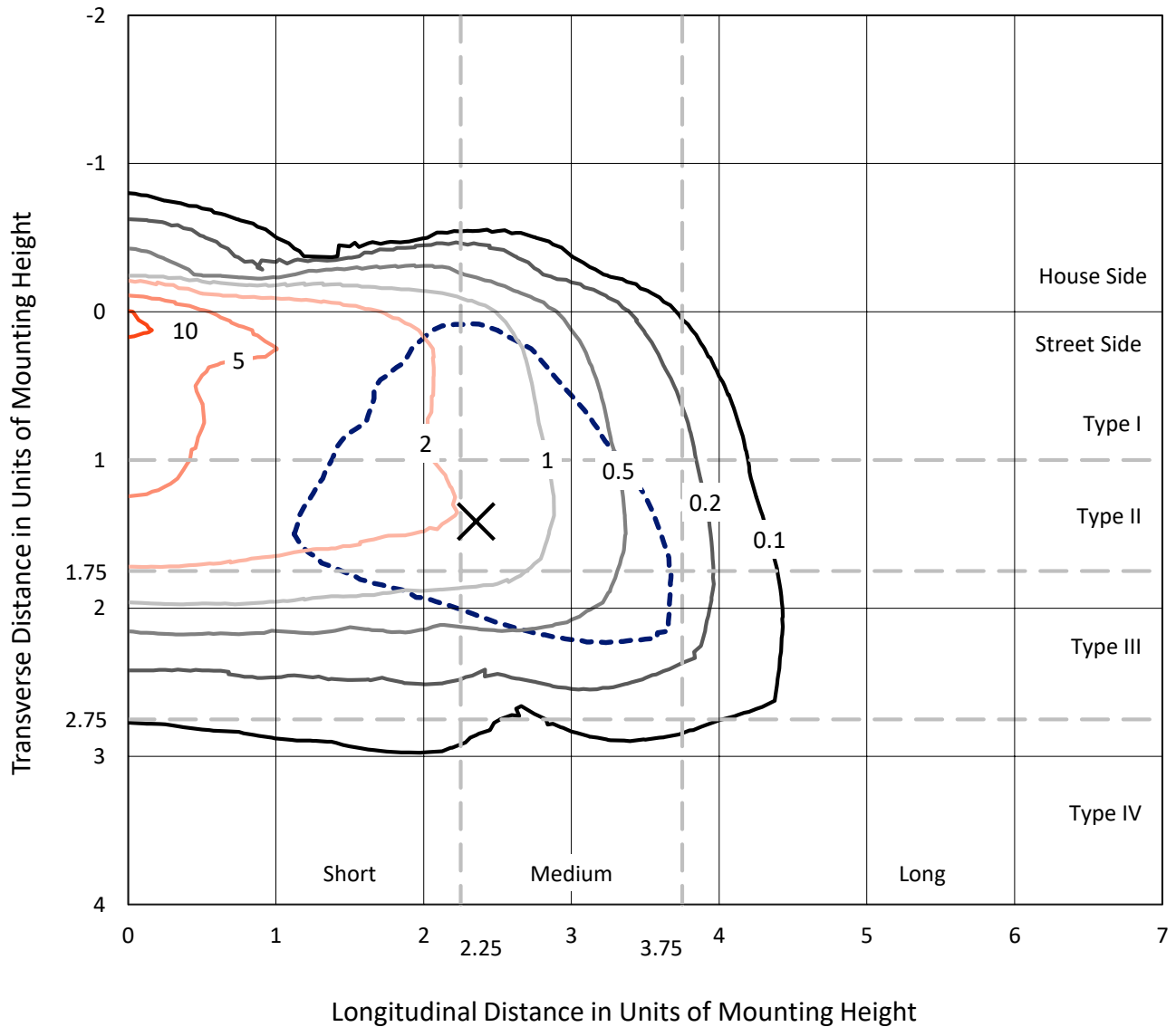
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

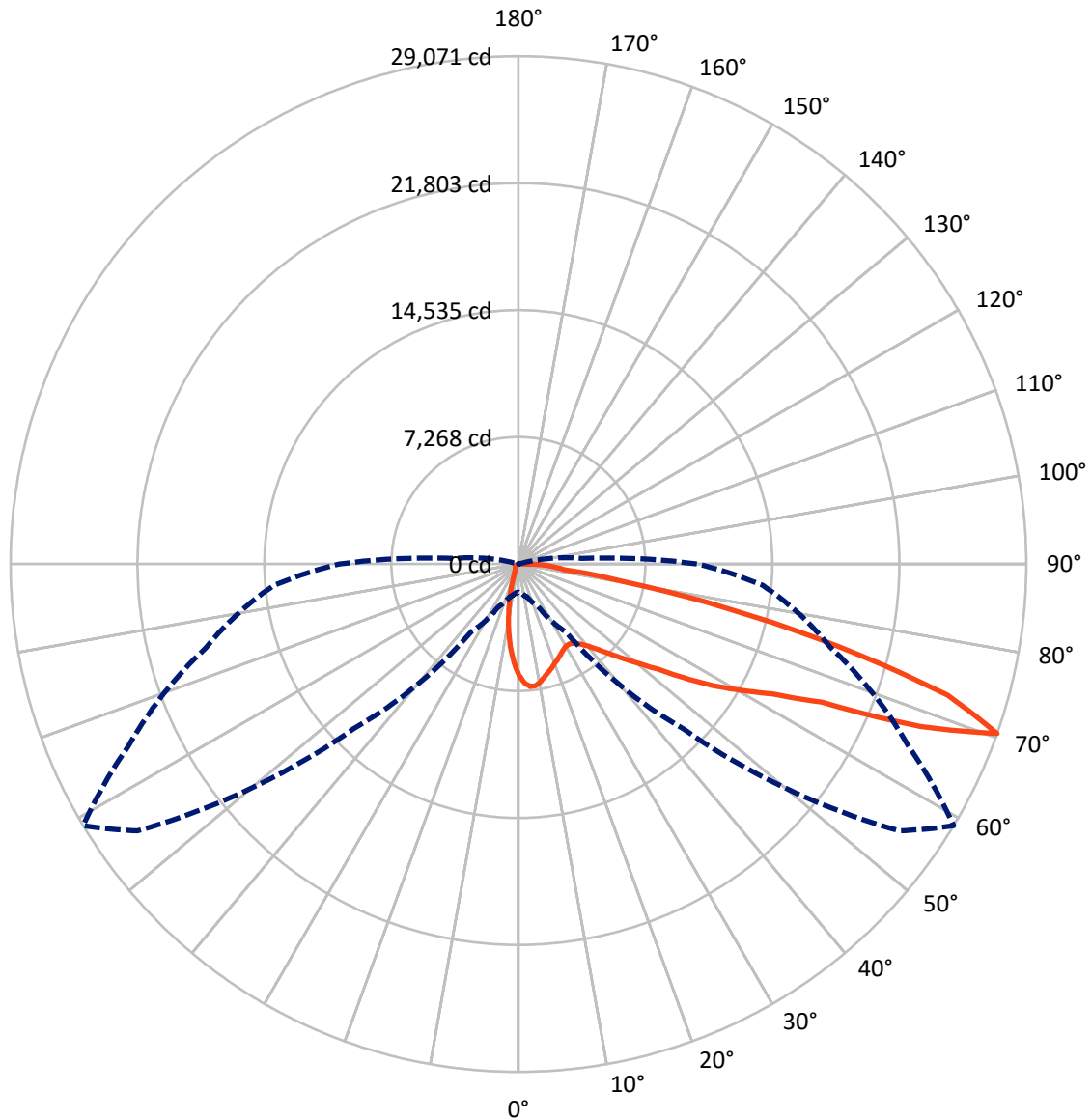
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.9 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
House Side	Lumens	1942.8	0.0	1942.8
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	23330.2	0.0	23330.2
	% Fixture	92.3	0.0	92.3
Total	Lumens	25273.0	0.0	25273.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	525.5	2.1
10°-20°	1102.2	4.4
20°-30°	1492.0	5.9
30°-40°	2153.2	8.5
40°-50°	3576.0	14.1
50°-60°	5469.9	21.6
60°-70°	6803.3	26.9
70°-80°	3760.8	14.9
80°-90°	390.0	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°	25273.0	100.0
0°-180°	25273.0	100.0

Coefficient of Utilization



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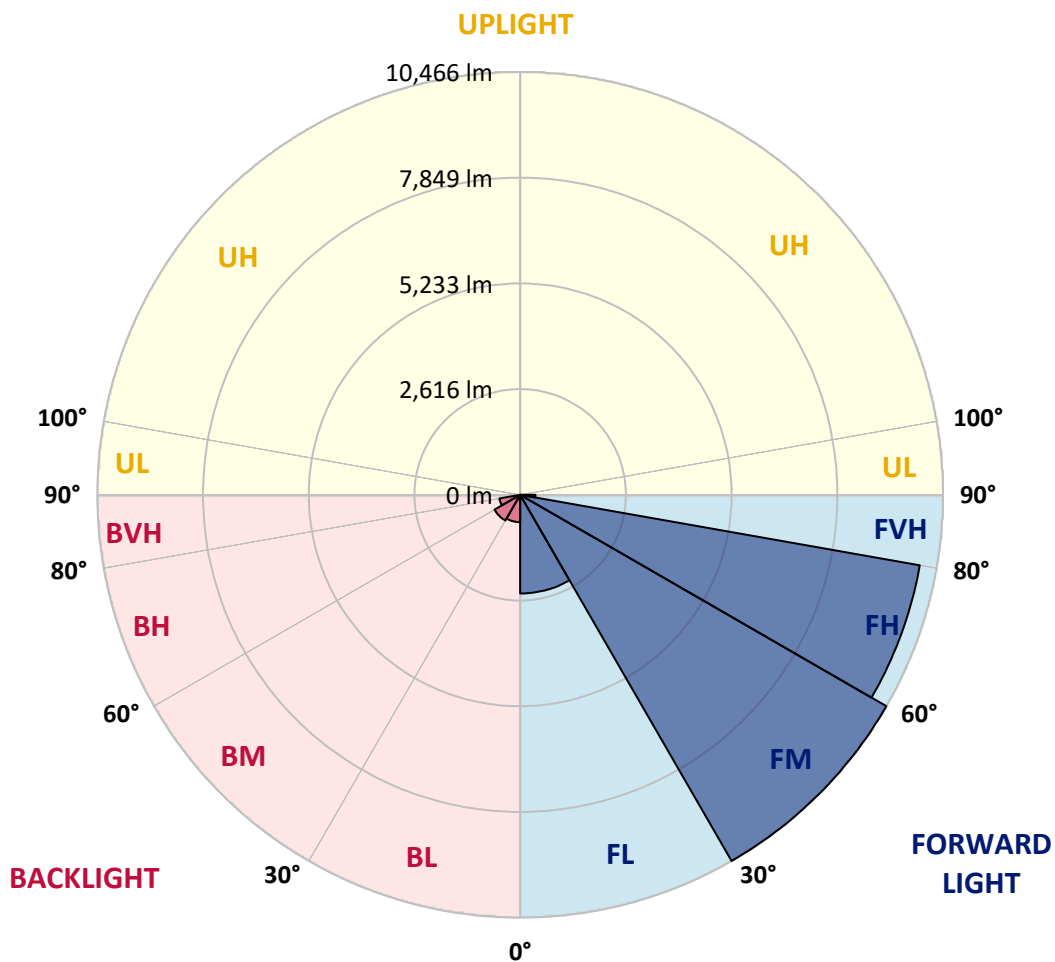
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2442.7	9.7			
FM	(30°-60°)	10465.8	41.4			
FH	(60°-80°)	10043.0	39.7			G4/12000
FVH	(80°-90°)	378.7	1.5			G3/500
BL	(0°-30°)	677.0	2.7	B2/1000		
BM	(30°-60°)	733.4	2.9	B1/1000		
BH	(60°-80°)	521.2	2.1	B2/1000		G2/1000
BVH	(80°-90°)	11.3	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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7
2.5°	7223.8	7212.3	7164.6	7155.1	7101.7	6995.0	6871.1	6821.5	6720.5	6560.3	6383.0
5°	7343.9	7349.6	7353.4	7332.4	7324.8	7237.2	7099.9	7040.8	6905.4	6642.3	6318.2
7.5°	6894.0	6909.2	6956.9	6977.9	7069.4	7103.7	7075.0	7037.0	6930.2	6619.4	6163.8
10°	6419.2	6447.9	6499.3	6533.6	6646.1	6737.7	6853.9	6863.5	6840.6	6543.2	5990.3
12.5°	6011.3	6038.0	6095.2	6163.8	6278.2	6396.3	6569.8	6630.9	6707.1	6493.6	5866.3
15°	5660.4	5668.1	5723.3	5809.1	5959.8	6121.8	6327.8	6417.4	6566.0	6474.6	5771.0
17.5°	5353.5	5355.4	5391.7	5469.8	5652.8	5866.3	6106.6	6224.8	6413.5	6447.9	5687.1
20°	5151.4	5149.5	5151.4	5193.3	5355.4	5608.9	5900.7	6024.6	6266.7	6415.4	5601.4
22.5°	5082.7	5073.2	5029.3	5014.1	5117.1	5340.1	5689.0	5851.1	6135.1	6405.9	5538.5
25°	5166.6	5160.9	5067.5	4979.8	4989.3	5128.6	5473.6	5671.9	6032.2	6440.2	5523.2
27.5°	5437.4	5425.9	5282.9	5111.4	5002.7	5027.5	5313.4	5521.3	5950.2	6524.1	5544.2
30°	5791.9	5793.9	5641.4	5433.6	5178.1	5037.0	5227.7	5424.0	5895.0	6649.9	5589.9
32.5°	6186.6	6184.8	6076.0	5835.8	5509.8	5212.4	5265.8	5431.7	5902.5	6834.8	5677.6
35°	6594.7	6573.7	6537.5	6325.8	5944.5	5519.3	5439.3	5561.3	5982.6	7078.9	5826.3
37.5°	7065.5	7058.0	7094.2	6871.1	6482.1	5971.2	5744.4	5826.3	6184.8	7439.2	6066.5
40°	7814.8	7772.9	7790.0	7486.9	7088.4	6579.4	6171.4	6192.3	6506.9	7915.9	6445.9
42.5°	9242.8	9073.1	8754.7	8186.6	7755.7	7254.3	6730.0	6693.8	6962.6	8493.6	6945.4
45°	10949.2	10754.7	9952.0	8958.7	8423.0	7978.8	7420.2	7322.9	7523.1	9181.8	7589.9
47.5°	12373.3	12163.6	11099.7	9765.2	9101.7	8726.1	8184.6	8070.3	8194.2	9980.6	8363.9
50°	12859.4	12743.1	11808.9	10436.2	9786.2	9565.0	9143.6	8953.0	8983.5	10842.4	9267.5
52.5°	12636.4	12596.3	11971.0	10895.8	10419.1	10491.6	10194.1	9993.9	9959.7	11784.2	10266.5
55°	12165.4	12146.4	11841.4	11151.2	10977.7	11339.9	11667.9	11494.4	11170.3	12785.0	11092.1
57.5°	11492.4	11565.0	11784.2	11643.1	11664.1	12236.0	13036.8	13126.4	12642.1	13582.0	11704.1
60°	9694.6	9889.1	10893.8	12171.2	13149.2	13726.9	14502.9	14670.6	13888.9	14127.3	12411.5
62.5°	7166.6	7444.9	8876.8	11223.6	13967.2	16561.9	16453.2	16378.9	15078.6	14857.4	13698.3
65°	4209.5	4535.6	5746.2	8770.0	12733.6	18384.6	20094.6	19065.1	16891.7	16375.1	15747.8
67.5°	2097.2	2099.1	2646.3	4629.1	9410.5	17112.8	25410.0	24815.2	20746.7	18611.4	16556.2
70°	1612.9	1656.8	1958.0	2690.1	4758.7	13328.4	26628.3	29070.5	24620.7	18512.2	14047.2
72.5°	1367.0	1395.6	1742.6	2341.2	3557.5	7317.2	23051.7	25696.0	23494.0	15641.0	10354.3
75°	983.8	1006.7	1542.4	2123.9	3275.4	3630.0	15812.7	19057.6	17627.6	11002.4	5698.6
77.5°	244.1	242.1	537.7	1723.5	2930.3	3023.7	9073.1	12220.8	10114.0	4505.1	1464.3
80°	108.6	104.9	122.0	362.2	2726.3	2854.0	3990.3	6171.4	3879.7	730.2	448.1
82.5°	76.2	72.4	76.2	133.5	911.3	2648.1	2411.7	2674.8	1420.4	249.8	190.7
85°	24.8	22.9	41.9	112.5	255.4	1527.2	2352.7	1998.0	1056.2	106.8	127.8
87.5°	3.8	3.8	15.2	61.0	74.4	509.0	1380.3	1384.2	474.8	62.9	57.2
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°	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7	6390.7
2.5°	6293.4	6180.9	6022.7	5864.5	5721.5	5574.7	5456.4	5401.2	5376.3	5342.1	5267.7
5°	6148.5	5944.5	5597.5	5256.2	4937.9	4632.8	4371.7	4222.9	4062.8	4055.2	3977.0
7.5°	5915.9	5626.1	5079.0	4549.0	4062.8	3597.6	3197.2	2937.9	2760.6	2650.1	2573.7
10°	5656.6	5284.9	4560.4	3814.9	3153.3	2531.8	2017.1	1681.5	1477.6	1374.6	1315.5
12.5°	5450.7	4983.6	4049.5	3111.4	2282.1	1569.1	1090.6	846.5	737.9	695.9	676.8
15°	5273.4	4707.2	3570.9	2482.3	1523.3	901.7	631.1	551.0	533.8	533.8	531.9
17.5°	5094.2	4440.3	3105.7	1864.5	959.0	591.1	497.6	486.2	488.0	493.8	493.8
20°	4924.5	4186.7	2657.7	1328.8	629.1	472.8	451.8	448.1	453.8	461.4	459.5
22.5°	4787.3	3963.6	2238.2	913.2	484.3	428.9	415.6	409.9	413.7	419.4	417.6
25°	4690.0	3772.9	1853.2	636.8	421.4	390.9	375.6	368.0	364.2	368.0	366.0
27.5°	4630.9	3612.9	1490.8	478.5	377.5	352.7	333.7	318.3	308.8	308.8	305.0
30°	4592.8	3462.3	1168.7	396.6	341.3	314.6	287.9	266.9	251.6	247.9	245.9
32.5°	4590.9	3332.6	873.2	350.8	307.0	276.4	244.1	217.4	200.2	196.4	194.5
35°	4638.6	3227.7	642.5	316.5	276.4	240.2	204.0	175.4	160.2	160.2	158.3
37.5°	4762.4	3166.7	486.2	289.8	251.6	209.7	171.5	144.8	131.6	135.3	135.3
40°	4993.1	3155.3	396.6	268.8	230.7	183.0	139.2	118.3	112.5	118.3	118.3
42.5°	5345.8	3216.3	352.7	253.6	211.6	156.3	116.3	101.1	99.1	104.9	104.9
45°	5805.3	3336.4	328.0	240.2	190.7	129.6	97.3	87.7	85.8	93.4	93.4
47.5°	6362.0	3498.5	305.0	224.9	169.7	106.8	81.9	74.4	74.4	81.9	83.9
50°	7021.7	3717.7	282.1	209.7	152.5	89.6	68.6	62.9	64.9	72.4	74.4
52.5°	7780.5	3986.5	261.2	196.4	133.5	72.4	57.2	53.4	55.2	62.9	64.9
55°	8434.4	4221.0	236.4	183.0	108.6	59.1	47.7	45.7	47.7	57.2	57.2
57.5°	9004.4	4445.9	213.5	162.0	85.8	47.7	38.2	38.2	41.9	51.5	53.4
60°	9761.4	4800.6	194.5	137.3	64.9	36.2	30.5	32.4	38.2	45.7	47.7
62.5°	11101.7	5403.0	169.7	114.4	47.7	28.6	24.8	26.7	34.3	43.9	45.7
65°	12779.4	5973.1	141.1	95.3	36.2	21.0	19.0	24.8	34.3	43.9	45.7
67.5°	12607.8	5195.3	110.6	76.2	26.7	17.2	15.2	22.9	32.4	43.9	45.7
70°	10224.6	3641.4	81.9	51.5	21.0	15.2	15.2	22.9	32.4	41.9	43.9
72.5°	7092.2	2026.7	62.9	34.3	19.0	15.2	13.3	21.0	30.5	41.9	43.9
75°	3374.5	621.5	49.6	24.8	17.2	13.3	11.5	21.0	30.5	41.9	43.9
77.5°	648.2	158.3	40.0	21.0	15.2	13.3	11.5	19.0	30.5	40.0	41.9
80°	219.2	70.6	32.4	19.0	15.2	13.3	11.5	19.0	28.6	38.2	40.0
82.5°	120.1	40.0	28.6	17.2	15.2	11.5	9.5	17.2	26.7	38.2	40.0
85°	93.4	28.6	22.9	17.2	15.2	11.5	9.5	17.2	26.7	36.2	38.2
87.5°	47.7	21.0	19.0	17.2	15.2	11.5	9.5	15.2	24.8	34.3	38.2
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)