

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: P196470

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196470
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-AFL-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19266.8 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 193
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

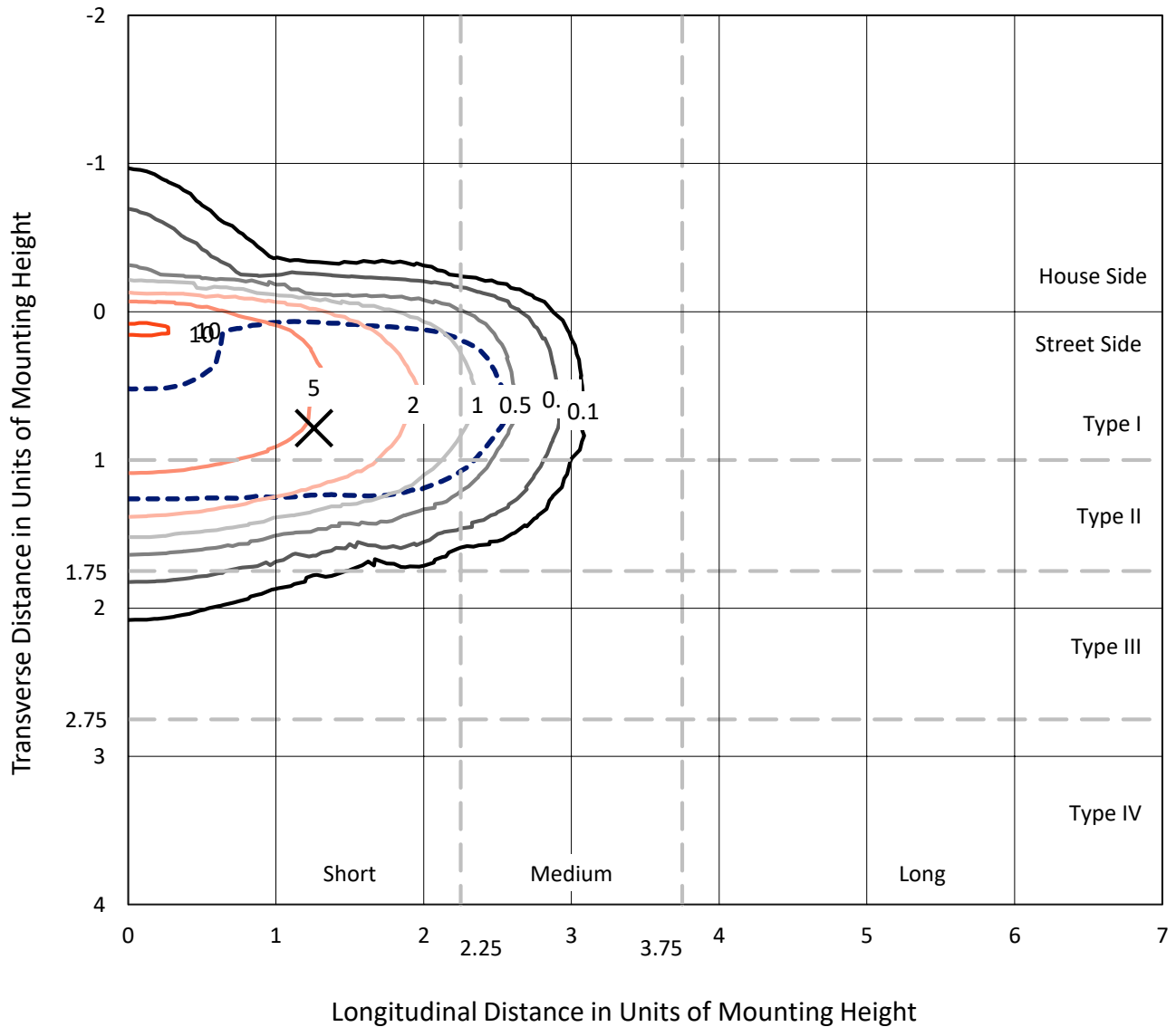


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

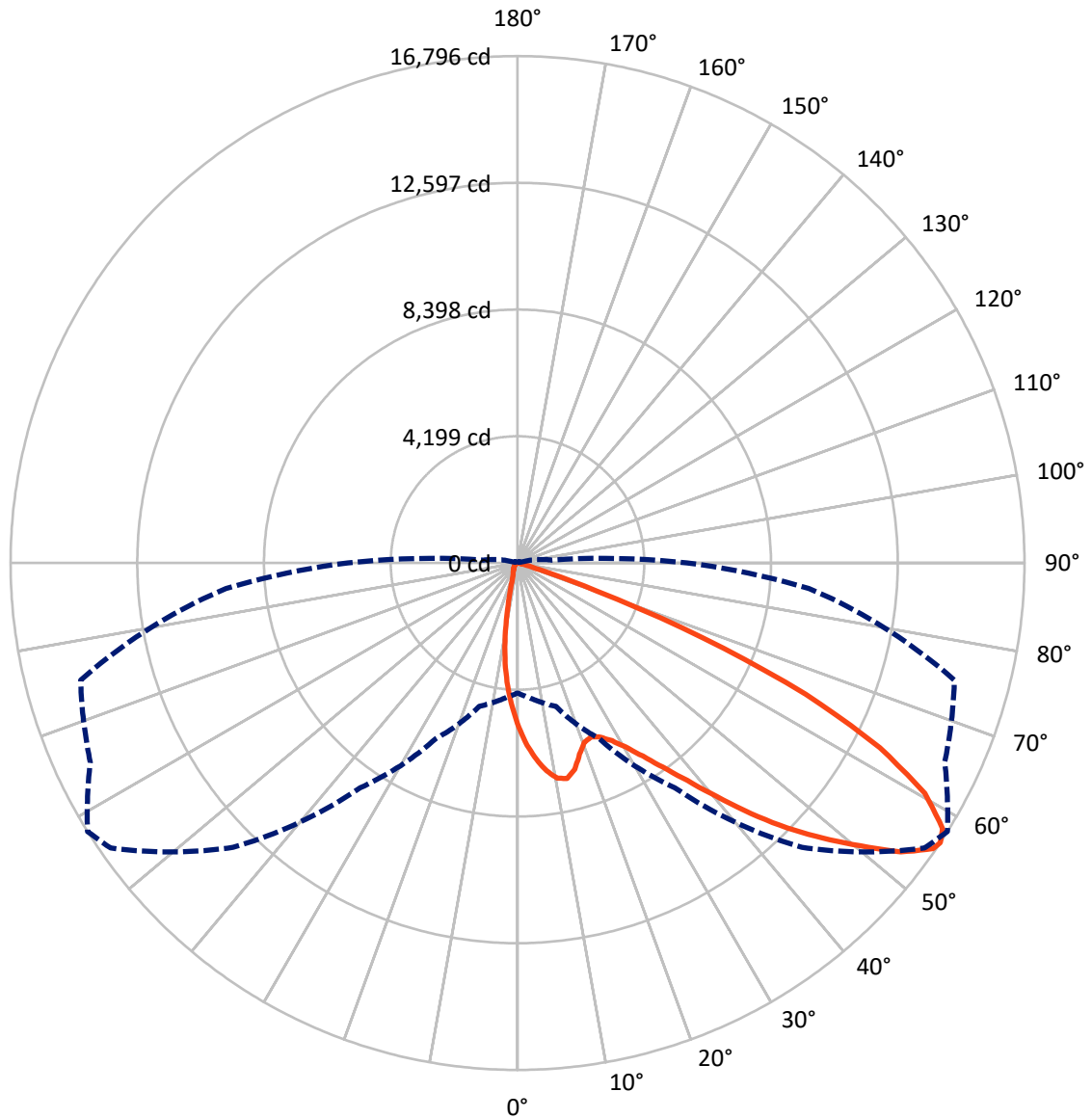


Based on 25 foot mounting height. Maximum calculated value = 10.8 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1202.6	0.0	1202.6
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	18064.1	0.0	18064.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	19266.8	0.0	19266.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	465.3	2.4
10°-20°	1082.8	5.6
20°-30°	1822.0	9.5
30°-40°	3119.9	16.2
40°-50°	4708.0	24.4
50°-60°	4893.9	25.4
60°-70°	2747.3	14.3
70°-80°	376.5	2.0
80°-90°	51.0	0.3
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°	19266.8	100.0
0°-180°	19266.8	100.0

Coefficient of Utilization



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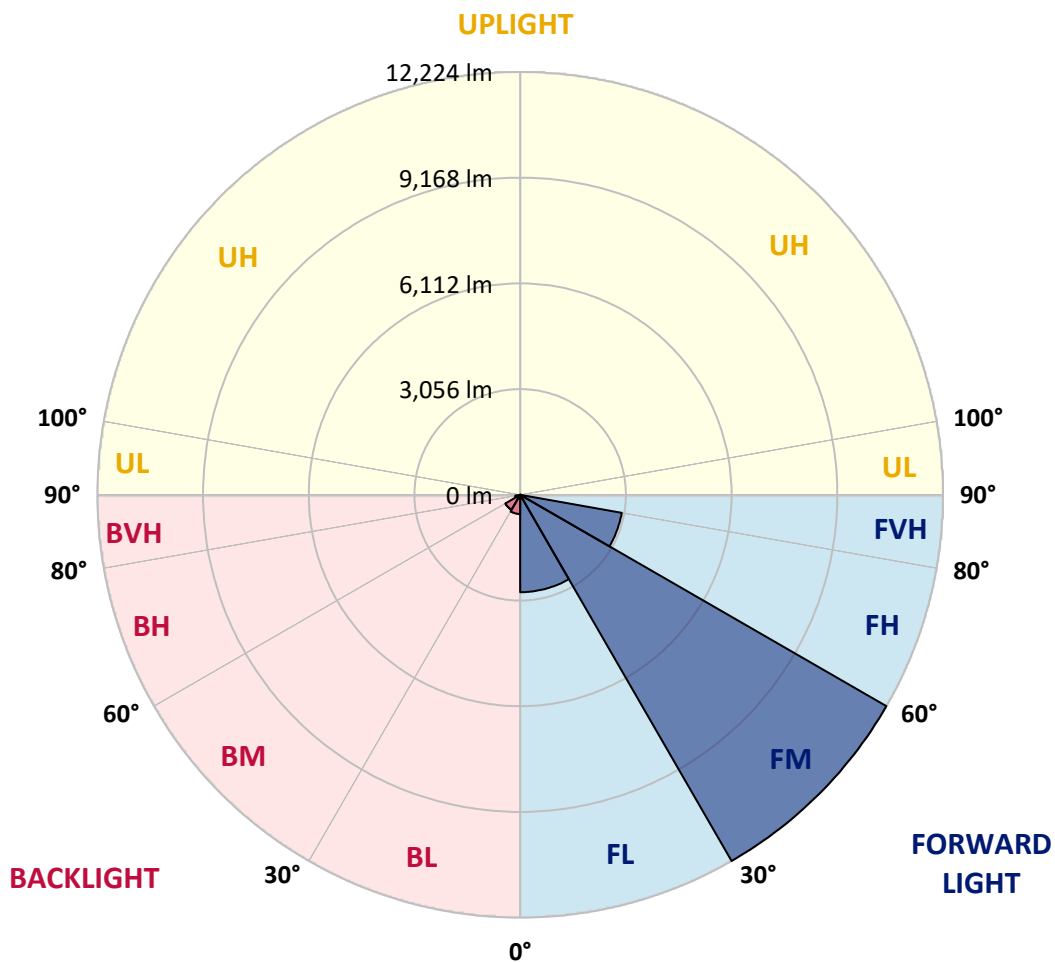
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2815.3	14.6			
FM	(30°-60°)	12223.6	63.4			
FH	(60°-80°)	2981.2	15.5			G2/5000
FVH	(80°-90°)	44.0	0.2			G1/100
BL	(0°-30°)	554.8	2.9	B2/1000		
BM	(30°-60°)	498.2	2.6	B1/1000		
BH	(60°-80°)	142.7	0.7	B1/500		G1/500
BVH	(80°-90°)	7.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0
2.5°	6563.3	6523.7	6482.5	6406.1	6335.5	6226.6	6076.8	6040.1	5922.5	5728.5	5547.6
5°	7129.2	7121.9	7093.9	7032.3	6955.9	6823.6	6654.6	6541.4	6359.0	6053.3	5704.9
7.5°	6794.2	6855.9	6957.3	7101.3	7198.3	7185.1	7055.8	6957.3	6776.5	6359.0	5859.2
10°	5727.0	5738.8	5878.3	6181.2	6660.3	7107.2	7276.2	7249.8	7083.8	6626.6	5994.5
12.5°	5350.7	5358.0	5390.3	5487.3	5798.9	6422.3	7188.0	7326.3	7313.0	6882.4	6138.5
15°	5380.0	5384.4	5393.2	5424.1	5512.3	5825.4	6741.2	7092.6	7460.0	7124.9	6279.6
17.5°	5612.3	5609.4	5581.4	5552.0	5580.0	5682.9	6285.5	6656.0	7429.2	7329.2	6395.8
20°	6065.1	6079.7	5985.7	5854.8	5787.3	5791.7	6060.6	6338.4	7255.7	7488.0	6482.5
22.5°	6701.5	6711.8	6557.5	6331.1	6132.6	6032.8	6107.7	6254.6	7055.8	7634.9	6553.1
25°	7461.6	7461.6	7245.4	6923.5	6616.3	6397.2	6332.5	6388.4	6979.4	7801.1	6623.7
27.5°	8281.8	8311.2	8028.9	7607.0	7201.3	6880.8	6678.0	6667.8	7038.2	8009.8	6702.9
30°	9174.0	9200.5	8865.3	8349.4	7868.7	7458.6	7146.9	7079.4	7263.0	8290.6	6819.1
32.5°	10061.9	10083.9	9713.4	9187.2	8627.2	8145.1	7734.9	7627.6	7667.3	8700.7	6989.7
35°	11190.8	11195.1	10726.3	10100.0	9501.8	8935.9	8417.0	8311.2	8267.0	9218.1	7235.1
37.5°	12088.9	12053.6	11756.8	11164.3	10477.9	9887.0	9276.8	9138.8	9032.9	9945.8	7615.8
40°	12300.6	12300.6	12256.4	12078.6	11533.3	10964.3	10373.5	10167.6	9934.0	10802.7	8127.4
42.5°	11749.4	11784.6	12075.7	12462.3	12466.7	12102.1	11524.4	11351.1	10939.4	11778.8	8686.0
45°	10516.1	10526.4	11224.5	12268.2	12976.7	13185.5	12759.2	12519.6	11949.2	12793.0	9197.6
47.5°	10072.2	10104.6	10401.4	11677.3	13015.0	14063.1	13944.0	13614.7	12884.2	13719.1	9675.2
50°	9390.1	9429.7	9792.8	10807.2	12671.1	14626.1	15077.3	14724.6	13735.3	14490.8	9911.9
52.5°	7758.4	7820.1	8333.2	9656.2	11811.2	14649.6	16115.0	15903.4	14607.0	14903.8	9884.0
55°	5338.9	5384.4	5982.7	7537.9	10076.6	13930.8	16561.9	16707.5	15384.6	14996.5	9748.7
56°	4307.0	4477.5	4915.6	6422.3	9088.7	13319.2	16459.2	16795.8	15615.4	14981.8	9689.9
57.5°	2847.3	2879.6	3357.4	4653.9	7298.3	11991.9	15994.6	16607.5	15912.3	14906.8	9647.4
60°	1339.1	1353.8	1525.8	2147.6	3949.7	8738.9	14484.9	15502.1	16021.0	14749.6	9645.9
62.5°	873.2	876.0	896.7	1024.6	1615.5	4759.8	12008.0	13472.1	15120.0	14731.9	9617.9
65°	718.8	726.1	701.1	717.3	845.2	1794.8	8469.9	10502.9	13004.7	14317.4	9303.3
67.5°	633.6	635.1	601.3	582.2	618.9	787.9	4267.2	6625.1	9726.7	12165.4	7662.9
70°	577.7	576.3	538.0	493.9	495.4	523.4	1390.6	2751.8	5381.4	7223.3	4399.6
72.5°	513.0	515.9	493.9	432.1	411.6	370.4	523.4	742.3	1831.5	2319.6	1159.8
75°	449.8	443.9	421.8	382.2	343.9	248.4	263.1	316.1	477.7	473.3	249.8
77.5°	341.0	335.1	345.5	326.3	269.0	173.5	144.0	164.7	216.2	201.4	101.4
80°	260.1	257.2	235.2	279.2	245.5	130.8	98.5	101.4	117.6	107.3	49.9
82.5°	188.2	186.8	177.9	172.0	155.8	95.5	75.0	79.4	88.2	75.0	36.7
85°	72.0	72.0	139.7	117.6	107.3	64.7	52.9	57.4	67.6	54.4	25.0
87.5°	11.8	11.8	94.1	77.9	48.5	32.3	33.8	36.7	39.7	32.3	19.1
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°	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0	5455.0
2.5°	5440.3	5341.8	5125.8	4917.0	4734.8	4534.8	4433.4	4315.7	4271.7	4183.5	4192.3
5°	5496.2	5290.4	4856.7	4399.6	3980.7	3554.3	3251.5	2966.4	2807.6	2650.3	2650.3
7.5°	5553.5	5238.9	4568.6	3838.1	3132.5	2401.9	1884.5	1470.0	1239.2	1084.8	1080.5
10°	5593.2	5172.8	4240.8	3186.9	2146.2	1237.7	746.8	588.1	530.7	505.7	504.2
12.5°	5644.7	5106.7	3867.4	2419.5	1192.1	588.1	466.0	441.0	430.7	424.8	424.8
15°	5688.7	5012.6	3414.7	1627.2	626.2	441.0	401.3	392.5	391.0	389.5	391.0
17.5°	5699.1	4878.8	2872.3	952.5	454.2	385.1	367.4	360.1	360.1	358.7	358.7
20°	5675.5	4702.4	2272.6	588.1	392.5	354.2	335.1	326.3	324.8	324.8	324.8
22.5°	5627.0	4477.5	1680.2	445.4	357.2	326.3	301.3	292.5	292.5	294.0	295.4
25°	5566.8	4211.4	1153.9	383.6	330.7	296.9	271.9	263.1	266.0	269.0	270.5
27.5°	5490.3	3893.9	755.5	332.2	295.4	267.5	245.5	239.6	245.5	251.4	254.3
30°	5413.8	3545.6	511.6	288.1	255.7	235.2	222.1	220.4	229.3	242.5	243.9
32.5°	5363.9	3188.3	386.6	258.7	224.8	207.3	201.4	204.4	217.5	232.2	235.2
35°	5359.5	2839.9	329.3	235.2	204.4	188.2	185.2	194.1	208.6	220.4	223.4
37.5°	5428.5	2513.6	298.4	217.5	188.2	172.0	167.6	183.8	197.0	208.6	211.6
40°	5568.2	2221.1	277.8	201.4	175.0	155.8	152.9	166.1	179.3	192.6	197.0
42.5°	5743.1	1947.6	254.3	185.2	160.2	138.2	135.3	145.6	158.8	177.9	180.9
45°	5894.5	1693.4	229.3	167.6	144.0	119.1	117.6	129.4	139.7	157.4	160.2
47.5°	6022.4	1481.7	205.9	148.5	123.5	105.9	104.4	110.3	116.2	132.3	135.3
50°	5954.7	1302.4	182.3	122.1	100.0	91.1	89.7	89.7	97.0	113.2	116.2
52.5°	5788.7	1190.7	160.2	101.4	82.3	77.9	73.5	75.0	82.3	89.7	91.1
55°	5654.9	1137.7	141.2	89.7	69.1	64.7	60.3	58.8	60.3	57.4	54.4
56°	5622.6	1131.8	136.7	86.8	66.1	60.3	54.4	51.5	49.9	44.1	42.6
57.5°	5607.8	1131.8	129.4	80.9	61.7	54.4	47.1	41.2	35.3	30.9	30.9
60°	5596.2	1139.2	120.5	70.6	52.9	44.1	33.8	25.0	20.5	20.5	20.5
62.5°	5571.1	1136.3	110.3	58.8	45.6	33.8	20.5	16.2	14.7	16.2	17.6
65°	5290.4	1055.5	97.0	47.1	35.3	23.5	11.8	11.8	13.2	16.2	17.6
67.5°	4262.9	799.7	79.4	36.7	25.0	17.6	10.3	10.3	13.2	16.2	17.6
70°	2341.7	421.8	67.6	26.4	19.1	14.7	10.3	8.8	13.2	16.2	17.6
72.5°	571.9	176.4	61.7	20.5	17.6	13.2	8.8	8.8	13.2	16.2	17.6
75°	141.2	132.3	49.9	16.2	14.7	11.8	8.8	8.8	13.2	16.2	17.6
77.5°	66.1	175.0	33.8	14.7	13.2	10.3	8.8	8.8	13.2	16.2	16.2
80°	39.7	132.3	20.5	13.2	11.8	10.3	8.8	8.8	13.2	16.2	17.6
82.5°	23.5	38.2	14.7	13.2	11.8	8.8	8.8	8.8	13.2	16.2	17.6
85°	20.5	19.1	14.7	13.2	11.8	10.3	8.8	8.8	14.7	17.6	17.6
87.5°	16.2	14.7	13.2	11.8	11.8	10.3	8.8	8.8	13.2	16.2	17.6
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)