

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: P196956

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196956
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-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 800mA 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: 19933 lumens
Efficiency: N/A
Efficacy: 80.1 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): 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

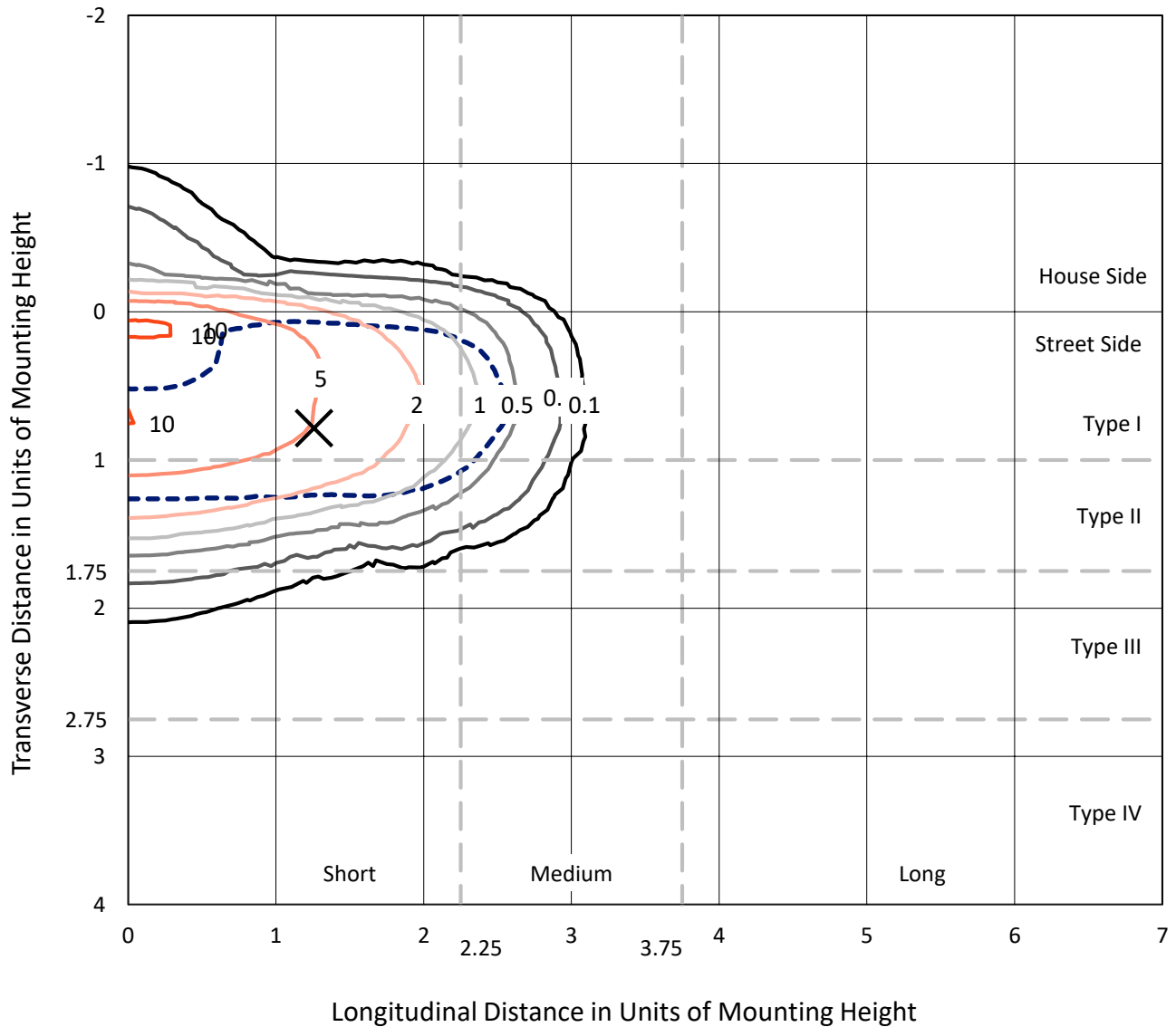


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

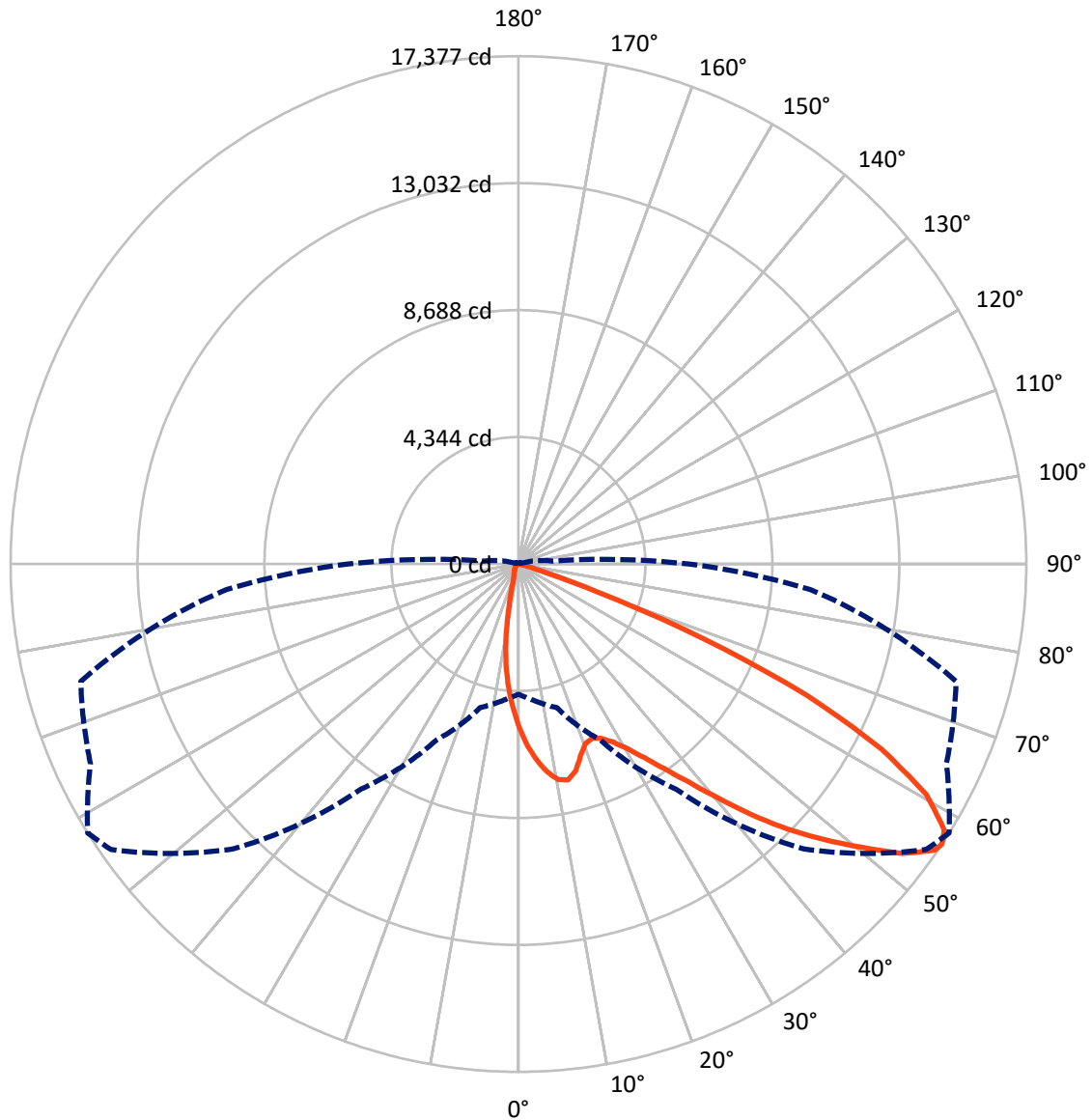


Based on 25 foot mounting height. Maximum calculated value = 11.2 fc
 Type II - Short - Full Cutoff

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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	1244.2	0.0	1244.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	18688.8	0.0	18688.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	19933.0	0.0	19933.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.4	2.4
10°-20°	1120.2	5.6
20°-30°	1885.0	9.5
30°-40°	3227.8	16.2
40°-50°	4870.8	24.4
50°-60°	5063.1	25.4
60°-70°	2842.3	14.3
70°-80°	389.5	2.0
80°-90°	52.8	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°	19933.0	100.0
0°-180°	19933.0	100.0



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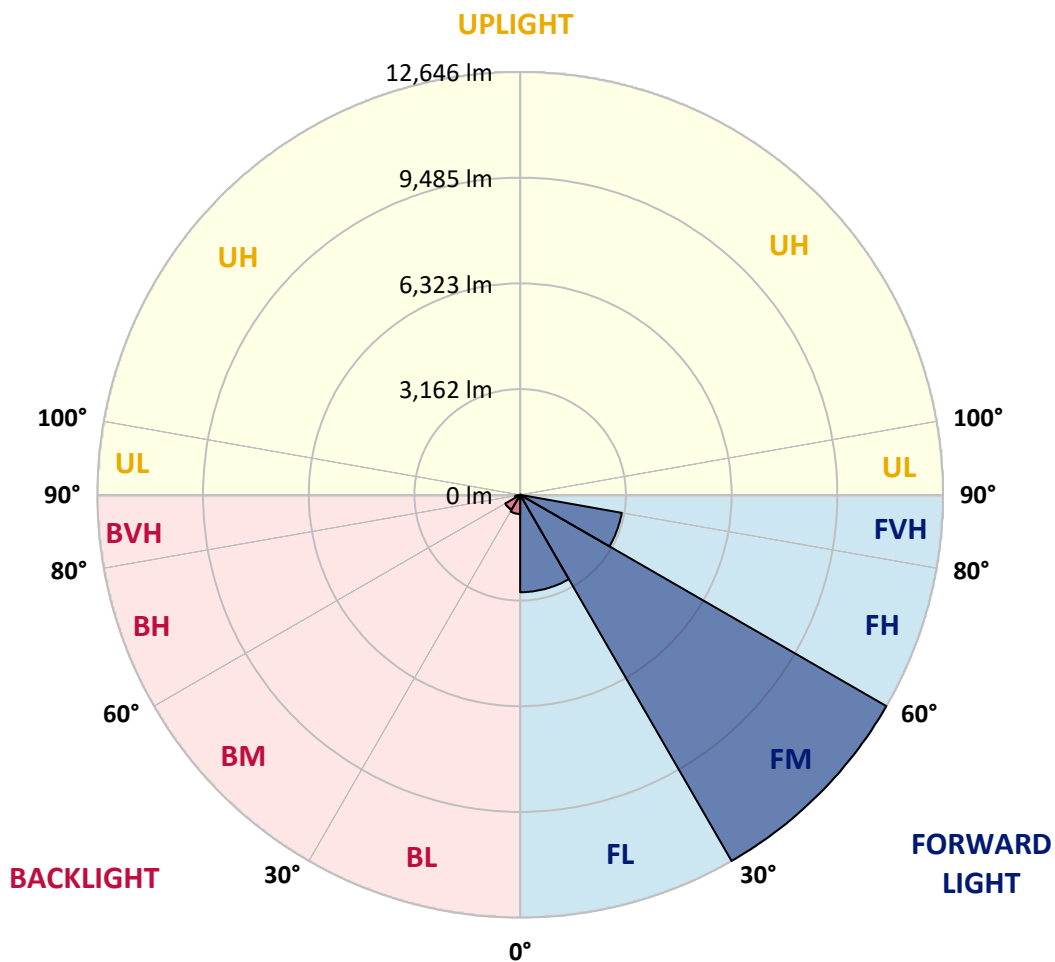
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2912.7	14.6			
FM	(30°-60°)	12646.3	63.4			
FH	(60°-80°)	3084.3	15.5			G2/5000
FVH	(80°-90°)	45.5	0.2			G1/100
BL	(0°-30°)	574.0	2.9	B2/1000		
BM	(30°-60°)	515.4	2.6	B1/1000		
BH	(60°-80°)	147.6	0.7	B1/500		G1/500
BVH	(80°-90°)	7.3	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°	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6
2.5°	6790.3	6749.2	6706.7	6627.6	6554.6	6442.0	6286.9	6248.9	6127.2	5926.5	5739.4
5°	7375.8	7368.2	7339.3	7275.4	7196.4	7059.5	6884.6	6767.5	6578.9	6262.6	5902.2
7.5°	7029.1	7092.9	7197.9	7346.9	7447.3	7433.6	7299.8	7197.9	7010.8	6578.9	6061.9
10°	5925.0	5937.1	6081.6	6394.9	6890.7	7353.0	7527.9	7500.5	7328.7	6855.7	6201.8
12.5°	5535.7	5543.3	5576.7	5677.1	5999.5	6644.3	7436.6	7579.6	7565.9	7120.3	6350.8
15°	5566.1	5570.6	5579.8	5611.7	5702.9	6026.9	6974.3	7337.8	7718.0	7371.2	6496.8
17.5°	5806.4	5803.3	5774.4	5744.0	5772.9	5879.4	6502.9	6886.1	7686.1	7582.6	6616.9
20°	6274.8	6290.0	6192.6	6057.3	5987.3	5991.9	6270.2	6557.6	7506.6	7746.9	6706.7
22.5°	6933.3	6943.9	6784.2	6550.0	6344.7	6241.3	6318.9	6470.9	7299.8	7899.0	6779.7
25°	7719.5	7719.5	7496.0	7162.9	6845.1	6618.5	6551.5	6609.3	7220.7	8070.8	6852.7
27.5°	8568.1	8598.5	8306.5	7870.1	7450.3	7118.8	6908.9	6898.3	7281.5	8286.8	6934.8
30°	9491.2	9518.6	9171.9	8638.1	8140.8	7716.5	7394.1	7324.1	7514.2	8577.2	7054.9
32.5°	10409.8	10432.6	10049.4	9504.9	8925.5	8426.7	8002.4	7891.4	7932.4	9001.5	7231.3
35°	11577.7	11582.3	11097.2	10449.3	9830.4	9244.9	8708.0	8598.5	8552.9	9536.8	7485.3
37.5°	12506.9	12470.4	12163.2	11550.4	10840.2	10228.8	9597.7	9454.7	9345.2	10289.6	7879.2
40°	12725.9	12725.9	12680.3	12496.3	11932.1	11343.5	10732.2	10519.3	10277.5	11176.3	8408.4
42.5°	12155.6	12192.1	12493.3	12893.2	12897.8	12520.6	11923.0	11743.5	11317.7	12186.1	8986.3
45°	10879.7	10890.3	11612.7	12692.5	13425.5	13641.4	13200.4	12952.5	12362.5	13235.4	9515.6
47.5°	10420.4	10453.9	10761.1	12081.1	13465.0	14549.4	14426.2	14085.5	13329.7	14193.5	10009.8
50°	9714.8	9755.8	10131.5	11180.8	13109.2	15131.8	15598.7	15233.7	14210.2	14991.9	10254.7
52.5°	8026.7	8090.6	8621.3	9990.0	12219.5	15156.1	16672.4	16453.4	15112.0	15419.2	10225.8
55°	5523.5	5570.6	6189.6	7798.6	10425.0	14412.5	17134.7	17285.2	15916.5	15515.1	10085.8
56°	4455.9	4632.3	5085.5	6644.3	9403.0	13779.8	17028.2	17376.5	16155.3	15499.8	10025.0
57.5°	2945.8	2979.2	3473.5	4814.8	7550.7	12406.6	16547.7	17181.8	16462.5	15422.3	9980.9
60°	1385.4	1400.6	1578.6	2221.9	4086.4	9041.1	14985.8	16038.2	16575.0	15259.6	9979.4
62.5°	903.3	906.4	927.7	1060.0	1671.3	4924.3	12423.3	13938.0	15642.8	15241.3	9950.5
65°	743.7	751.3	725.4	742.1	874.5	1856.9	8762.8	10866.0	13454.4	14812.5	9625.1
67.5°	655.5	657.0	622.0	602.2	640.3	815.1	4414.8	6854.2	10063.0	12586.0	7927.9
70°	597.7	596.1	556.6	511.0	512.5	541.4	1438.7	2846.9	5567.6	7473.1	4551.7
72.5°	530.8	533.8	511.0	447.1	425.8	383.2	541.4	768.0	1894.9	2399.8	1199.9
75°	465.4	459.3	436.5	395.4	355.9	257.0	272.2	327.0	494.3	489.7	258.5
77.5°	352.8	346.7	357.4	337.6	278.3	179.5	149.0	170.3	223.6	208.3	104.9
80°	269.2	266.1	243.3	288.9	254.0	135.3	101.9	104.9	121.7	111.0	51.7
82.5°	194.7	193.1	184.0	177.9	161.2	98.9	77.6	82.1	91.2	77.6	38.0
85°	74.5	74.5	144.5	121.7	111.0	66.9	54.7	59.3	70.0	56.3	25.9
87.5°	12.2	12.2	97.3	80.6	50.2	33.5	35.0	38.0	41.1	33.5	19.8
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°	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6	5643.6
2.5°	5628.4	5526.5	5303.0	5087.0	4898.5	4691.6	4586.7	4465.0	4419.4	4328.2	4337.3
5°	5686.2	5473.3	5024.7	4551.7	4118.3	3677.3	3364.0	3068.9	2904.7	2742.0	2742.0
7.5°	5745.5	5420.1	4726.6	3970.8	3240.8	2485.0	1949.6	1520.8	1282.0	1122.3	1117.8
10°	5786.6	5351.6	4387.5	3297.1	2220.3	1280.5	772.6	608.3	549.0	523.2	521.6
12.5°	5839.8	5283.2	4001.2	2503.2	1233.4	608.3	482.1	456.2	445.6	439.5	439.5
15°	5885.4	5185.9	3532.8	1683.5	647.9	456.2	415.2	406.0	404.5	403.0	404.5
17.5°	5896.1	5047.5	2971.6	985.5	469.9	398.4	380.2	372.6	372.6	371.1	371.1
20°	5871.8	4865.0	2351.1	608.3	406.0	366.5	346.7	337.6	336.1	336.1	336.1
22.5°	5821.6	4632.3	1738.3	460.8	369.6	337.6	311.8	302.6	302.6	304.2	305.7
25°	5759.2	4357.1	1193.8	396.9	342.2	307.2	281.3	272.2	275.3	278.3	279.8
27.5°	5680.1	4028.6	781.7	343.7	305.7	276.8	254.0	247.9	254.0	260.1	263.1
30°	5601.1	3668.1	529.2	298.1	264.6	243.3	229.6	228.1	237.2	250.9	252.5
32.5°	5549.3	3298.6	400.0	267.7	232.7	214.4	208.3	211.4	225.1	240.3	243.3
35°	5544.8	2938.2	340.7	243.3	211.4	194.7	191.6	200.7	216.0	228.1	231.2
37.5°	5616.3	2600.5	308.7	225.1	194.7	177.9	173.4	190.1	203.8	216.0	219.0
40°	5760.7	2297.9	287.4	208.3	181.0	161.2	158.2	171.8	185.5	199.2	203.8
42.5°	5941.7	2015.0	263.1	191.6	165.8	143.0	139.9	150.6	164.2	184.0	187.1
45°	6098.4	1751.9	237.2	173.4	149.0	123.2	121.7	133.8	144.5	162.7	165.8
47.5°	6230.7	1533.0	212.9	153.6	127.7	109.5	108.0	114.1	120.1	136.9	139.9
50°	6160.7	1347.4	188.6	126.2	103.4	94.3	92.8	92.8	100.4	117.1	120.1
52.5°	5988.9	1231.8	165.8	104.9	85.2	80.6	76.0	77.6	85.2	92.8	94.3
55°	5850.5	1177.1	146.0	92.8	71.5	66.9	62.4	60.8	62.4	59.3	56.3
56°	5817.0	1171.0	141.4	89.7	68.4	62.4	56.3	53.2	51.7	45.6	44.1
57.5°	5801.8	1171.0	133.8	83.6	63.9	56.3	48.7	42.6	36.5	31.9	31.9
60°	5789.6	1178.6	124.7	73.0	54.7	45.6	35.0	25.9	21.3	21.3	21.3
62.5°	5763.8	1175.6	114.1	60.8	47.1	35.0	21.3	16.7	15.2	16.7	18.2
65°	5473.3	1091.9	100.4	48.7	36.5	24.3	12.2	12.2	13.7	16.7	18.2
67.5°	4410.3	827.3	82.1	38.0	25.9	18.2	10.6	10.6	13.7	16.7	18.2
70°	2422.6	436.5	70.0	27.4	19.8	15.2	10.6	9.1	13.7	16.7	18.2
72.5°	591.6	182.5	63.9	21.3	18.2	13.7	9.1	9.1	13.7	16.7	18.2
75°	146.0	136.9	51.7	16.7	15.2	12.2	9.1	9.1	13.7	16.7	18.2
77.5°	68.4	181.0	35.0	15.2	13.7	10.6	9.1	9.1	13.7	16.7	16.7
80°	41.1	136.9	21.3	13.7	12.2	10.6	9.1	9.1	13.7	16.7	18.2
82.5°	24.3	39.5	15.2	13.7	12.2	9.1	9.1	9.1	13.7	16.7	18.2
85°	21.3	19.8	15.2	13.7	12.2	10.6	9.1	9.1	15.2	18.2	18.2
87.5°	16.7	15.2	13.7	12.2	12.2	10.6	9.1	9.1	13.7	16.7	18.2
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)