

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: P196607

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196607
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-05-D-UNV-SL3-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1200mA 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: 27081 lumens
Efficiency: N/A
Efficacy: 84.6 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): 320
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

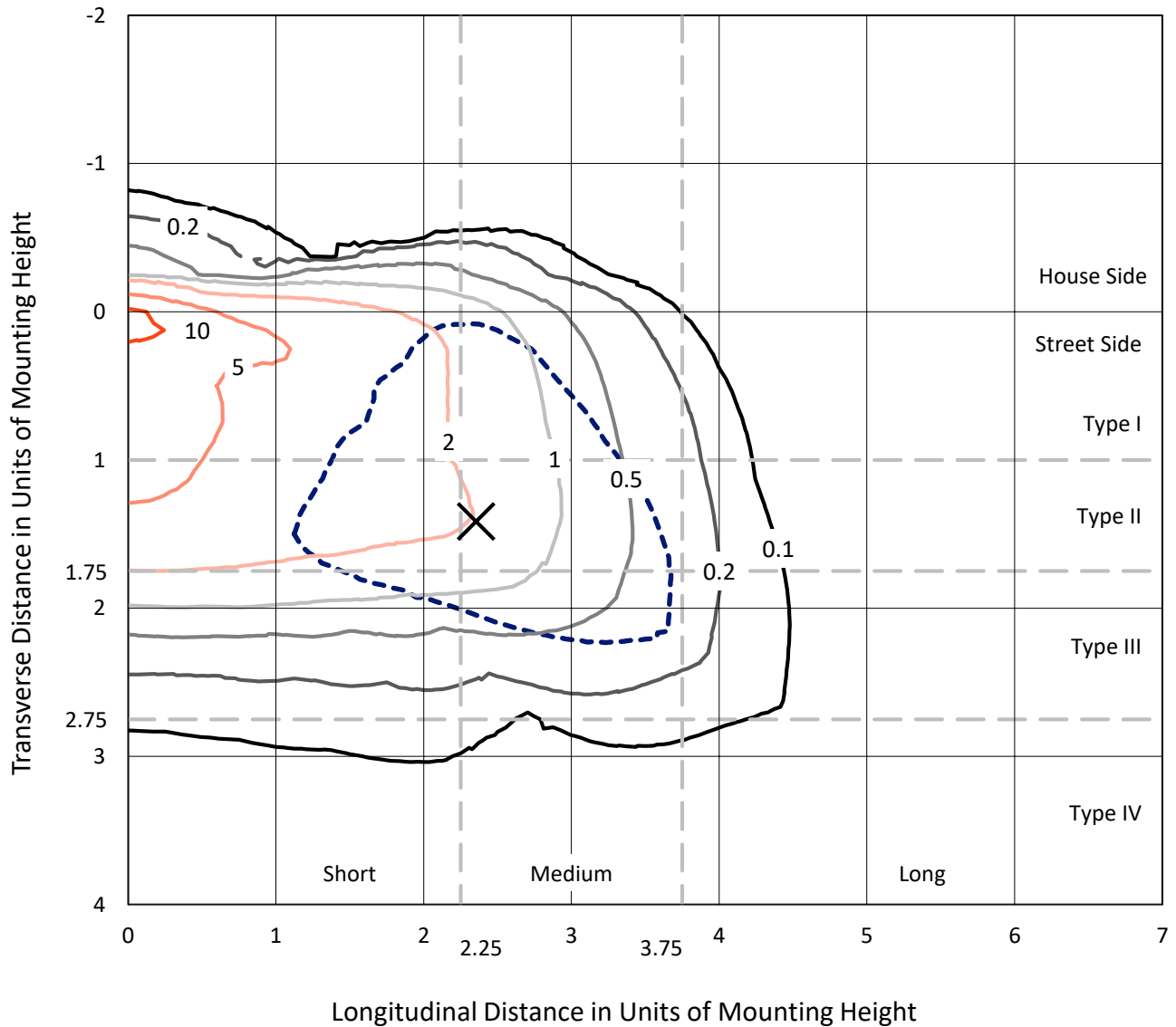


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

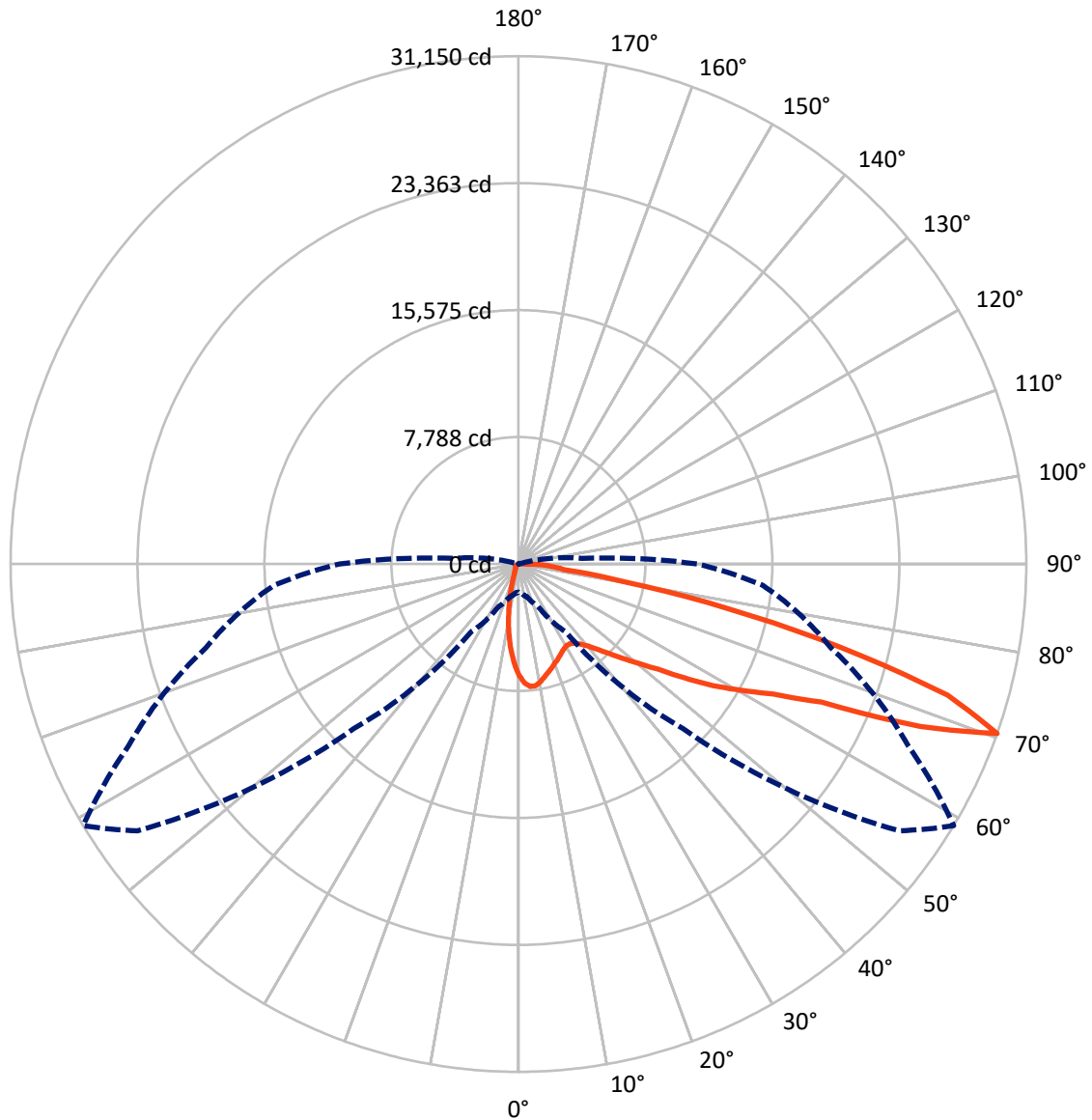


Based on 25 foot mounting height. Maximum calculated value = 11.7 fc
 Type III - Medium - Non-Cutoff

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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	2081.8	0.0	2081.8
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	24999.2	0.0	24999.2
	% Fixture	92.3	0.0	92.3
Total	Lumens	27081.0	0.0	27081.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	563.1	2.1
10°-20°	1181.1	4.4
20°-30°	1598.8	5.9
30°-40°	2307.3	8.5
40°-50°	3831.8	14.1
50°-60°	5861.2	21.6
60°-70°	7290.0	26.9
70°-80°	4029.9	14.9
80°-90°	417.8	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°	27081.0	100.0
0°-180°	27081.0	100.0



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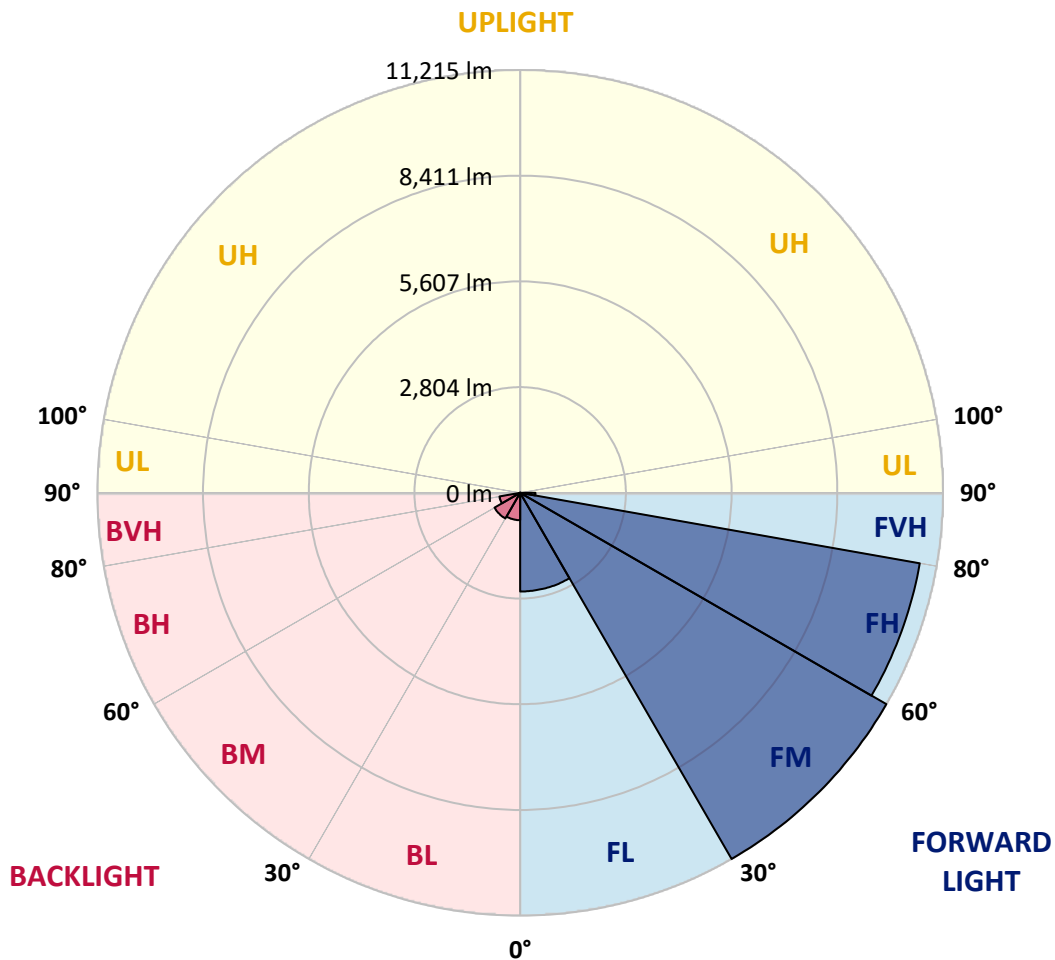
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2617.5	9.7			
FM	(30°-60°)	11214.5	41.4			
FH	(60°-80°)	10761.4	39.7			G4/12000
FVH	(80°-90°)	405.8	1.5			G3/500
BL	(0°-30°)	725.5	2.7	B2/1000		
BM	(30°-60°)	785.8	2.9	B1/1000		
BH	(60°-80°)	558.5	2.1	B2/1000		G2/1000
BVH	(80°-90°)	12.1	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°	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9
2.5°	7740.6	7728.4	7677.2	7667.0	7609.8	7495.4	7362.7	7309.6	7201.3	7029.6	6839.6
5°	7869.3	7875.4	7879.4	7857.1	7848.8	7754.9	7607.7	7544.5	7399.4	7117.4	6770.1
7.5°	7387.1	7403.5	7454.5	7477.0	7575.1	7611.9	7581.2	7540.3	7426.0	7093.0	6604.7
10°	6878.4	6909.1	6964.3	7001.0	7121.5	7219.7	7344.2	7354.5	7329.9	7011.2	6418.8
12.5°	6441.3	6469.9	6531.2	6604.7	6727.3	6854.0	7039.8	7105.2	7187.0	6958.1	6286.0
15°	6065.4	6073.5	6132.8	6224.7	6386.1	6559.7	6780.4	6876.4	7035.7	6937.8	6183.8
17.5°	5736.4	5738.6	5777.3	5861.1	6057.3	6286.0	6543.4	6670.1	6872.3	6909.1	6093.9
20°	5519.9	5517.9	5519.9	5564.9	5738.6	6010.3	6322.9	6455.6	6715.1	6874.4	6002.0
22.5°	5446.3	5436.2	5389.2	5372.9	5483.1	5722.1	6096.0	6269.7	6574.0	6864.1	5934.6
25°	5536.2	5530.1	5430.0	5336.1	5346.3	5495.4	5865.1	6077.6	6463.8	6901.0	5918.2
27.5°	5826.4	5814.1	5660.8	5477.0	5360.6	5387.1	5693.6	5916.3	6376.0	6990.9	5940.8
30°	6206.4	6208.3	6045.0	5822.3	5548.5	5397.3	5601.6	5812.0	6316.6	7125.7	5989.8
32.5°	6629.2	6627.2	6510.8	6253.4	5904.1	5585.4	5642.4	5820.2	6324.8	7323.7	6083.8
35°	7066.5	7044.0	7005.1	6778.3	6369.9	5914.2	5828.4	5959.1	6410.7	7585.4	6243.1
37.5°	7571.0	7562.8	7601.6	7362.7	6945.8	6398.3	6155.2	6243.1	6627.2	7971.4	6500.5
40°	8373.8	8329.0	8347.3	8022.5	7595.4	7050.1	6612.9	6635.4	6972.4	8482.2	6907.1
42.5°	9904.1	9722.2	9381.0	8772.2	8310.5	7773.2	7211.4	7172.7	7460.7	9101.1	7442.3
45°	11732.4	11524.0	10663.9	9599.6	9025.6	8549.5	7951.1	7846.8	8061.2	9838.6	8132.8
47.5°	13258.4	13033.7	11893.8	10463.8	9752.8	9350.4	8770.1	8647.7	8780.4	10694.7	8962.2
50°	13779.3	13654.7	12653.8	11182.9	10486.2	10249.3	9797.8	9593.5	9626.2	11618.0	9930.6
52.5°	13540.4	13497.5	12827.4	11675.2	11164.4	11242.1	10923.4	10708.9	10672.1	12627.2	11001.0
55°	13035.7	13015.3	12688.5	11948.9	11763.1	12151.2	12502.5	12316.7	11969.4	13699.7	11885.7
57.5°	12314.6	12392.3	12627.2	12476.0	12498.5	13111.3	13969.4	14065.4	13546.5	14553.7	12541.5
60°	10388.2	10596.5	11673.1	13041.8	14089.8	14708.9	15540.4	15720.1	14882.5	15137.9	13299.2
62.5°	7679.3	7977.6	9511.8	12026.6	14966.4	17746.7	17630.3	17550.6	16157.4	15920.3	14678.2
65°	4510.8	4860.1	6157.3	9397.4	13644.6	19699.7	21532.2	20429.1	18100.1	17546.5	16874.3
67.5°	2247.3	2249.2	2835.5	4960.2	10083.7	18337.1	27227.9	26590.4	22230.9	19942.8	17740.5
70°	1728.3	1775.3	2098.1	2882.6	5099.1	14282.0	28533.3	31150.2	26382.1	19836.6	15052.1
72.5°	1464.7	1495.4	1867.2	2508.7	3812.0	7840.7	24700.8	27534.2	25174.7	16760.0	11095.1
75°	1054.2	1078.6	1652.6	2275.8	3509.7	3889.7	16943.8	20420.9	18888.6	11789.6	6106.3
77.5°	261.4	259.5	576.2	1846.8	3139.9	3240.1	9722.2	13095.0	10837.7	4827.4	1569.0
80°	116.5	112.3	130.8	388.2	2921.4	3058.2	4275.8	6612.9	4157.4	782.4	480.0
82.5°	81.7	77.7	81.7	143.0	976.6	2837.6	2584.3	2866.2	1522.0	267.5	204.4
85°	26.6	24.5	44.9	120.5	273.7	1636.3	2520.9	2140.9	1131.8	114.4	136.9
87.5°	4.1	4.1	16.4	65.3	79.6	545.4	1479.1	1483.2	508.7	67.4	61.3
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°	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9	6847.9
2.5°	6743.6	6623.1	6453.5	6283.9	6130.7	5973.4	5846.8	5787.6	5761.0	5724.2	5644.6
5°	6588.4	6369.9	5998.0	5632.4	5291.1	4964.3	4684.4	4525.1	4353.4	4345.2	4261.5
7.5°	6339.1	6028.6	5442.3	4874.4	4353.4	3855.0	3426.0	3148.1	2958.0	2839.6	2757.9
10°	6061.2	5662.9	4886.6	4087.8	3379.0	2713.0	2161.3	1801.8	1583.2	1473.0	1409.6
12.5°	5840.7	5340.1	4339.1	3334.0	2445.3	1681.3	1168.5	907.1	790.6	745.7	725.3
15°	5650.7	5044.0	3826.4	2659.8	1632.4	966.3	676.2	590.4	572.0	572.0	570.0
17.5°	5458.6	4757.9	3327.9	1998.0	1027.6	633.2	533.1	520.9	523.1	529.2	529.2
20°	5276.7	4486.1	2847.9	1423.8	674.1	506.6	484.1	480.0	486.2	494.4	492.3
22.5°	5129.7	4247.2	2398.3	978.5	518.9	459.7	445.3	439.2	443.3	449.5	447.4
25°	5025.5	4042.9	1985.7	682.4	451.5	418.8	402.4	394.3	390.2	394.3	392.2
27.5°	4962.2	3871.3	1597.6	512.8	404.5	377.9	357.5	341.2	330.9	330.9	326.9
30°	4921.4	3709.9	1252.3	424.9	365.7	337.1	308.4	286.0	269.7	265.6	263.6
32.5°	4919.3	3571.0	935.7	375.9	328.9	296.2	261.4	232.9	214.4	210.5	208.3
35°	4970.4	3458.6	688.5	339.1	296.2	257.5	218.6	187.9	171.6	171.6	169.6
37.5°	5103.2	3393.3	520.9	310.6	269.7	224.7	183.9	155.2	141.0	145.1	145.1
40°	5350.3	3381.0	424.9	288.0	247.2	196.1	149.1	126.6	120.5	126.6	126.6
42.5°	5728.4	3446.4	377.9	271.7	226.7	167.5	124.7	108.2	106.2	112.3	112.3
45°	6220.6	3575.1	351.4	257.5	204.4	138.9	104.3	94.0	91.9	100.1	100.1
47.5°	6817.1	3748.6	326.9	241.0	181.8	114.4	87.9	79.6	79.6	87.9	89.9
50°	7524.0	3983.7	302.3	224.7	163.5	96.0	73.5	67.4	69.5	77.7	79.6
52.5°	8337.1	4271.7	279.9	210.5	143.0	77.7	61.3	57.3	59.2	67.4	69.5
55°	9037.8	4523.0	253.4	196.1	116.5	63.4	51.1	49.0	51.1	61.3	61.3
57.5°	9648.5	4764.0	228.8	173.6	91.9	51.1	40.9	40.9	44.9	55.1	57.3
60°	10459.7	5144.0	208.3	147.1	69.5	38.8	32.7	34.8	40.9	49.0	51.1
62.5°	11895.8	5789.5	181.8	122.6	51.1	30.6	26.6	28.6	36.8	47.0	49.0
65°	13693.6	6400.4	151.3	102.1	38.8	22.5	20.4	26.6	36.8	47.0	49.0
67.5°	13509.7	5566.9	118.4	81.7	28.6	18.3	16.4	24.5	34.8	47.0	49.0
70°	10956.1	3901.9	87.9	55.1	22.5	16.4	16.4	24.5	34.8	44.9	47.0
72.5°	7599.6	2171.6	67.4	36.8	20.4	16.4	14.3	22.5	32.7	44.9	47.0
75°	3615.9	665.9	53.1	26.6	18.3	14.3	12.2	22.5	32.7	44.9	47.0
77.5°	694.6	169.6	42.9	22.5	16.4	14.3	12.2	20.4	32.7	42.9	44.9
80°	234.9	75.6	34.8	20.4	16.4	14.3	12.2	20.4	30.6	40.9	42.9
82.5°	128.7	42.9	30.6	18.3	16.4	12.2	10.2	18.3	28.6	40.9	42.9
85°	100.1	30.6	24.5	18.3	16.4	12.2	10.2	18.3	28.6	38.8	40.9
87.5°	51.1	22.5	20.4	18.3	16.4	12.2	10.2	16.4	26.6	36.8	40.9
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)