

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: P195119

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7060-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195119
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-05-D-UNV-SL2-7060-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 1200mA 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: 26907 lumens
Efficiency: N/A
Efficacy: 84.1 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): 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

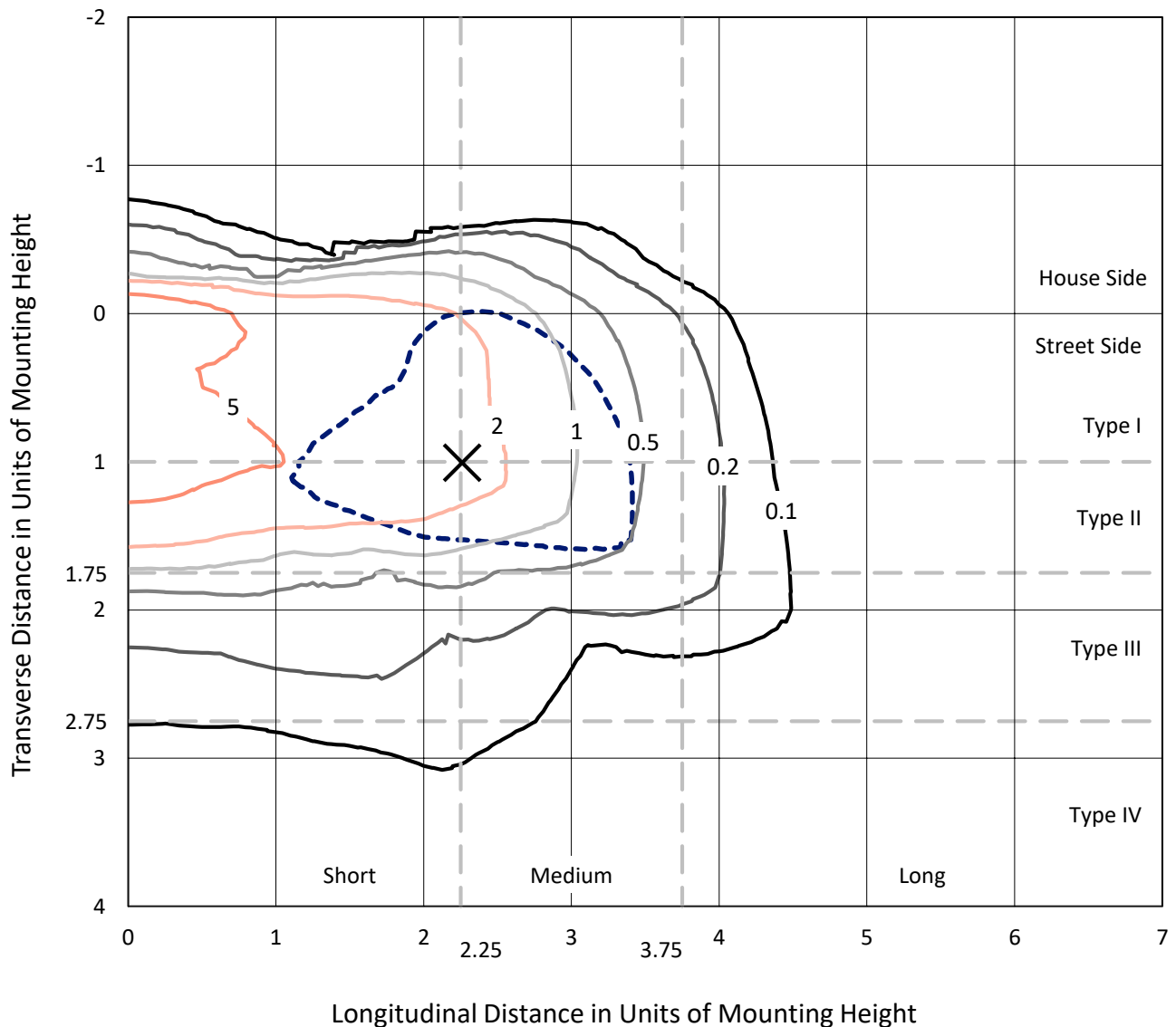


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

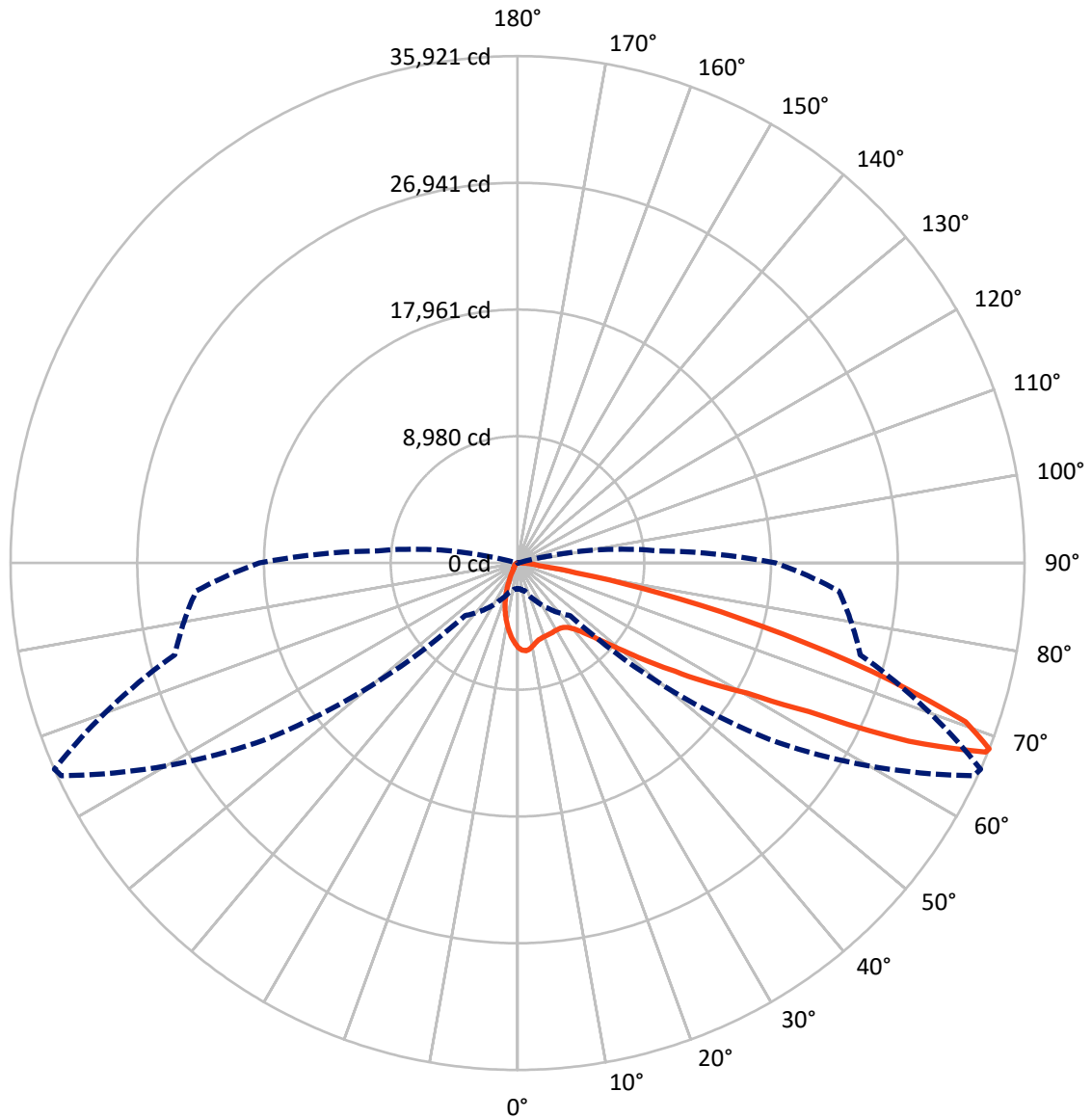


Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
 Type II - Medium - Semi-Cutoff

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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	2725.4	0.0	2725.4
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	24181.6	0.0	24181.6
	% Fixture	89.9	0.0	89.9
Total	Lumens	26907.0	0.0	26907.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	491.4	1.8
10°-20°	1057.4	3.9
20°-30°	1532.2	5.7
30°-40°	2345.6	8.7
40°-50°	4011.9	14.9
50°-60°	6275.8	23.3
60°-70°	7226.3	26.9
70°-80°	3616.2	13.4
80°-90°	350.2	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°	26907.0	100.0
0°-180°	26907.0	100.0



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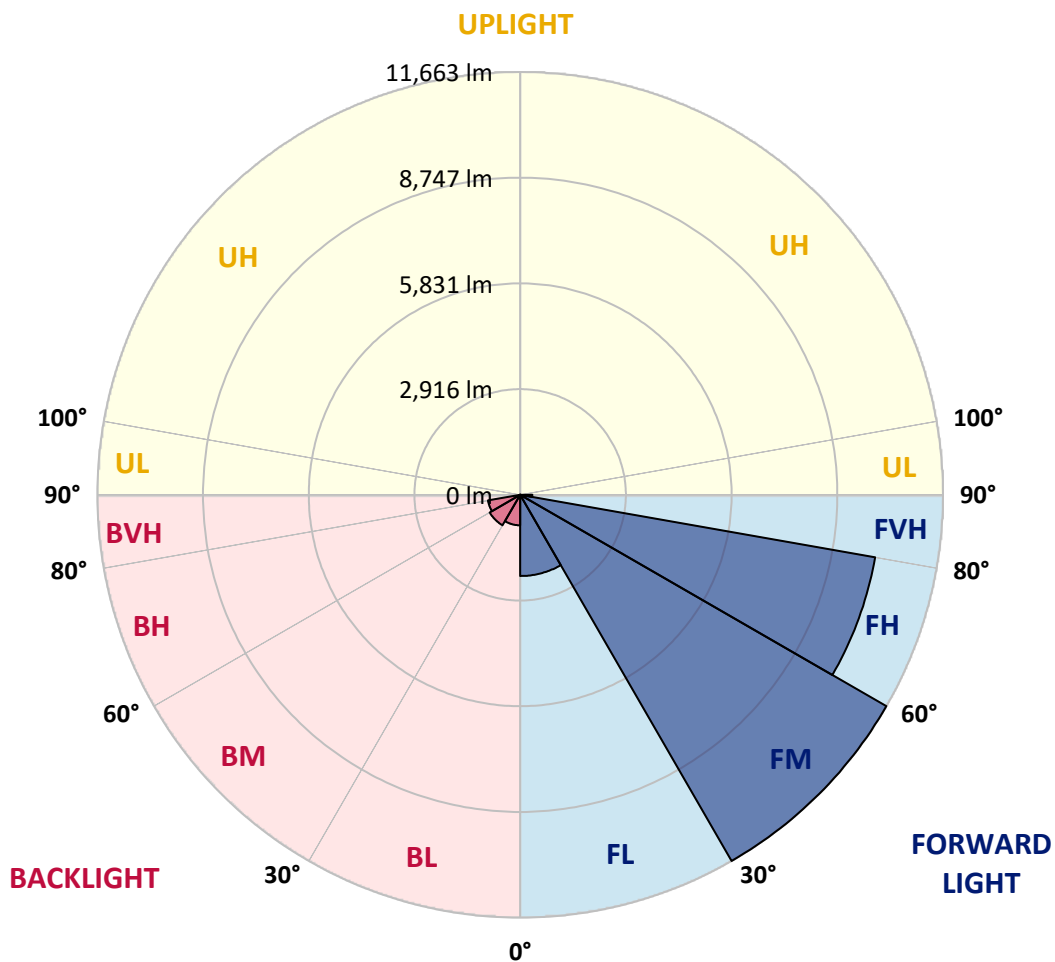
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2239.9	8.3			
FM (30°-60°)	11662.7	43.3			
FH (60°-80°)	9942.1	36.9			G4/12000
FVH (80°-90°)	337.0	1.3			G3/500
BL (0°-30°)	841.2	3.1	B2/1000		
BM (30°-60°)	970.5	3.6	B1/1000		
BH (60°-80°)	900.5	3.3	B2/1000		G2/1000
BVH (80°-90°)	13.3	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6
2.5°	6305.1	6309.4	6307.2	6313.6	6309.4	6277.7	6243.9	6172.1	6178.4	6085.5	5982.0
5°	5861.6	5897.5	5933.4	5969.3	6055.9	6131.9	6222.8	6243.9	6243.9	6163.6	6011.5
7.5°	5409.5	5411.6	5451.8	5500.4	5616.5	5755.9	5967.2	6157.3	6161.5	6182.6	6015.7
10°	5069.5	5080.0	5107.5	5160.3	5276.5	5413.8	5650.3	5948.2	5971.4	6127.7	5973.5
12.5°	4805.4	4818.1	4847.7	4908.9	5014.5	5156.1	5405.3	5745.4	5777.1	6074.9	5960.8
15°	4602.6	4619.5	4642.8	4704.0	4818.1	4968.1	5240.5	5610.2	5648.2	6053.8	6001.0
17.5°	4518.1	4518.1	4516.0	4558.3	4672.3	4824.4	5109.6	5538.4	5587.0	6070.7	6068.6
20°	4554.1	4547.7	4503.4	4492.8	4562.5	4714.6	5006.1	5491.9	5546.8	6102.4	6150.9
22.5°	4744.2	4731.5	4632.2	4549.8	4528.7	4630.1	4936.4	5460.2	5525.7	6167.8	6260.8
25°	5147.6	5109.6	4972.3	4786.4	4619.5	4609.0	4887.8	5443.3	5513.0	6243.9	6381.2
27.5°	5671.4	5660.9	5441.2	5192.0	4870.9	4678.7	4873.0	5430.6	5500.4	6298.8	6478.3
30°	6322.0	6326.3	6072.8	5747.5	5261.7	4875.1	4919.5	5424.3	5496.1	6303.0	6520.6
32.5°	6993.7	6998.0	6786.7	6438.2	5796.1	5213.1	5050.4	5453.9	5519.4	6286.1	6518.5
35°	7640.1	7646.4	7519.7	7238.8	6510.0	5682.0	5297.6	5555.3	5601.7	6296.7	6514.2
37.5°	8457.5	8482.9	8326.6	8064.7	7405.6	6370.6	5701.0	5760.2	5798.2	6383.3	6545.9
40°	9851.6	9817.8	9370.0	8926.5	8377.3	7209.2	6284.0	6112.9	6125.6	6607.2	6666.3
42.5°	11476.0	11433.7	10667.0	9902.3	9376.4	8221.0	7029.6	6653.7	6651.5	6983.2	6928.2
45°	12874.3	12848.9	12042.1	11021.8	10483.2	9338.4	7948.5	7433.1	7407.7	7633.7	7405.6
47.5°	13867.1	13845.9	13235.5	12213.2	11763.2	10567.7	9095.4	8495.6	8442.7	8485.0	8180.8
50°	13964.2	13941.0	13727.6	13070.7	13258.7	12371.6	10512.8	9887.5	9819.9	9754.5	9353.1
52.5°	13055.9	13053.8	13165.8	13123.5	14306.4	14693.0	12251.2	11609.0	11528.8	11361.9	10962.7
55°	11199.3	11188.7	11613.3	12230.0	14283.2	17088.3	14902.1	13657.9	13552.3	13218.6	12694.7
57.5°	8182.9	8128.0	9015.2	10322.7	13279.8	18136.0	19111.8	16203.2	16027.9	14969.7	14162.8
60°	4518.1	4539.3	5679.9	7228.2	10903.5	17929.0	22985.7	19171.0	18710.5	16479.9	15666.7
62.5°	2532.6	2585.4	3434.6	4697.7	6951.5	16249.7	25064.2	24278.4	23169.5	18241.6	17567.8
65°	1915.8	1947.5	2374.2	3624.7	4383.0	11355.6	25395.8	31420.0	30463.2	20911.5	20594.6
67.5°	1803.9	1829.2	2038.3	3005.8	3992.2	5889.0	22899.1	35644.6	35765.0	24553.0	22939.3
68°	1816.6	1848.2	2057.4	2891.7	3985.9	5268.0	21834.5	35665.7	35921.3	25140.3	22859.0
70°	1668.7	1677.1	2175.6	2836.8	3863.3	4150.6	15795.6	33221.8	33680.2	25839.4	20751.0
72.5°	637.9	640.0	975.9	2456.6	4047.1	4173.8	7956.9	26257.6	26280.9	22487.2	16177.9
75°	331.6	278.8	306.3	768.9	3865.5	4068.2	3992.2	17929.0	17817.0	15208.4	9912.9
77.5°	228.1	194.3	204.9	266.1	1607.4	4066.1	2883.2	10310.0	10286.8	6469.9	2828.3
80°	128.8	112.0	122.5	223.9	564.0	3816.9	2686.8	4431.5	4176.0	1136.4	458.4
82.5°	65.5	54.9	65.5	188.0	350.6	2401.7	2612.9	1738.4	1548.3	270.4	297.8
85°	16.9	16.9	31.7	131.0	217.6	787.9	2342.5	1254.7	1128.0	118.3	211.2
87.5°	4.2	2.1	12.7	48.6	78.2	171.1	1299.0	699.2	602.0	61.3	122.5
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°	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6	5994.6
2.5°	5939.7	5880.6	5764.4	5633.4	5540.5	5439.1	5380.0	5308.1	5253.2	5204.6	5240.5
5°	5918.6	5804.5	5546.8	5257.4	5014.5	4782.2	4609.0	4444.2	4319.6	4241.4	4273.1
7.5°	5863.7	5694.7	5276.5	4824.4	4427.3	4053.4	3749.3	3476.8	3265.6	3151.5	3187.4
10°	5770.7	5532.0	4970.2	4342.8	3787.3	3259.2	2807.2	2401.7	2095.4	1951.7	1985.5
12.5°	5703.1	5388.4	4653.3	3878.1	3147.3	2397.4	1797.5	1332.8	1094.2	950.5	963.2
15°	5673.6	5276.5	4357.6	3388.1	2448.1	1539.8	971.6	703.4	621.0	591.4	593.5
17.5°	5677.8	5187.7	4076.7	2879.0	1742.6	885.0	595.7	536.5	523.8	517.5	517.5
20°	5688.3	5099.0	3785.2	2348.8	1115.3	570.3	496.4	477.4	471.0	462.6	464.7
22.5°	5720.0	5031.4	3491.6	1816.6	686.5	464.7	439.4	422.5	411.9	399.2	401.3
25°	5768.6	4980.7	3202.2	1307.5	483.7	405.6	382.3	359.1	340.1	325.3	327.4
27.5°	5798.2	4908.9	2893.8	891.4	401.3	354.9	323.2	291.5	270.4	257.7	255.6
30°	5777.1	4792.7	2543.2	585.1	354.9	306.3	268.3	232.3	211.2	200.7	200.7
32.5°	5720.0	4642.8	2156.6	426.7	314.7	264.0	217.6	185.9	171.1	164.8	166.9
35°	5654.5	4486.5	1744.7	361.2	283.0	223.9	177.4	152.1	145.7	143.6	143.6
37.5°	5618.6	4351.3	1349.7	327.4	253.5	185.9	145.7	131.0	124.6	124.6	124.6
40°	5658.8	4247.8	999.1	302.1	223.9	154.2	122.5	112.0	109.8	109.8	109.8
42.5°	5829.9	4211.9	730.8	280.9	194.3	128.8	105.6	97.2	95.1	97.2	97.2
45°	6163.6	4290.0	553.4	259.8	166.9	105.6	90.8	84.5	84.5	86.6	86.6
47.5°	6729.7	4490.7	454.1	238.7	139.4	88.7	78.2	73.9	73.9	76.0	76.0
50°	7608.4	4862.4	407.7	215.5	116.2	76.0	65.5	63.4	63.4	65.5	67.6
52.5°	8943.4	5570.1	384.4	192.2	95.1	63.4	54.9	52.8	54.9	57.0	57.0
55°	10428.3	6476.2	357.0	169.0	80.3	52.8	44.4	44.4	46.5	50.7	50.7
57.5°	11811.8	7350.7	331.6	139.4	69.7	42.2	35.9	35.9	40.1	44.4	44.4
60°	13273.5	8208.3	297.8	112.0	59.1	33.8	29.6	29.6	35.9	40.1	42.2
62.5°	15079.5	9205.3	253.5	88.7	46.5	25.3	21.1	27.5	33.8	40.1	40.1
65°	17690.3	10445.2	198.6	69.7	35.9	19.0	16.9	25.3	31.7	38.0	40.1
67.5°	18638.7	10286.8	150.0	57.0	27.5	14.8	14.8	23.2	31.7	38.0	38.0
68°	18292.3	9940.3	143.6	54.9	25.3	14.8	14.8	23.2	31.7	38.0	38.0
70°	15939.2	8125.9	118.3	42.2	21.1	12.7	12.7	21.1	31.7	35.9	38.0
72.5°	11934.3	5399.0	101.4	27.5	19.0	12.7	10.6	21.1	29.6	35.9	35.9
75°	6845.9	2241.1	86.6	21.1	16.9	10.6	10.6	19.0	29.6	35.9	35.9
77.5°	1934.8	523.8	69.7	16.9	14.8	10.6	8.4	19.0	27.5	33.8	33.8
80°	354.9	156.3	54.9	14.8	12.7	10.6	8.4	19.0	27.5	33.8	33.8
82.5°	234.5	73.9	40.1	14.8	12.7	10.6	8.4	16.9	25.3	31.7	31.7
85°	175.3	52.8	25.3	14.8	12.7	10.6	8.4	16.9	25.3	31.7	31.7
87.5°	97.2	23.2	19.0	16.9	14.8	10.6	8.4	14.8	23.2	29.6	29.6
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)