

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: P195630

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195630
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-SL3-7050-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 615mA 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: 20147 lumens
Efficiency: N/A
Efficacy: 104.4 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): 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

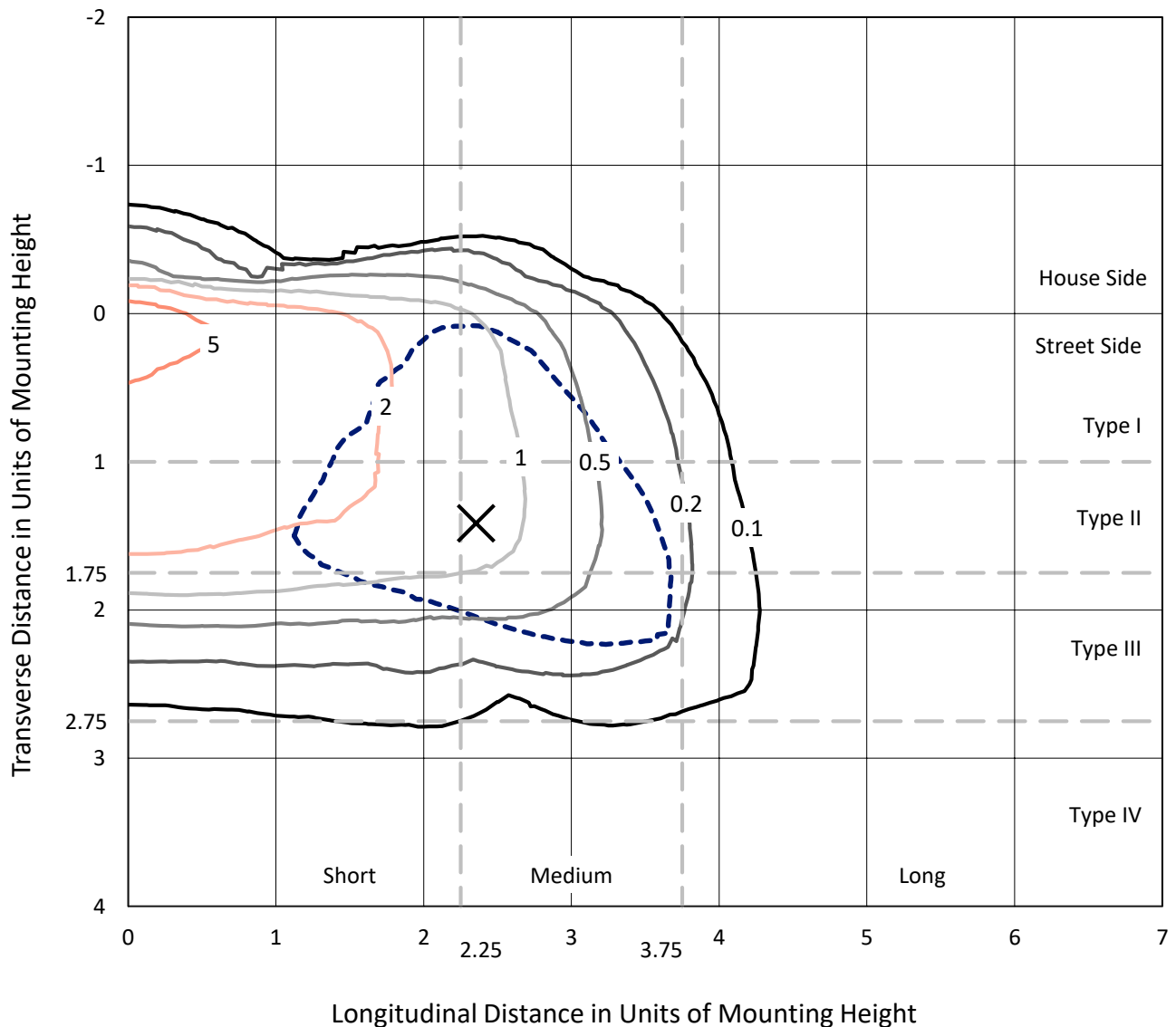


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Iso-Footcandle Lines of Horizontal Illumination

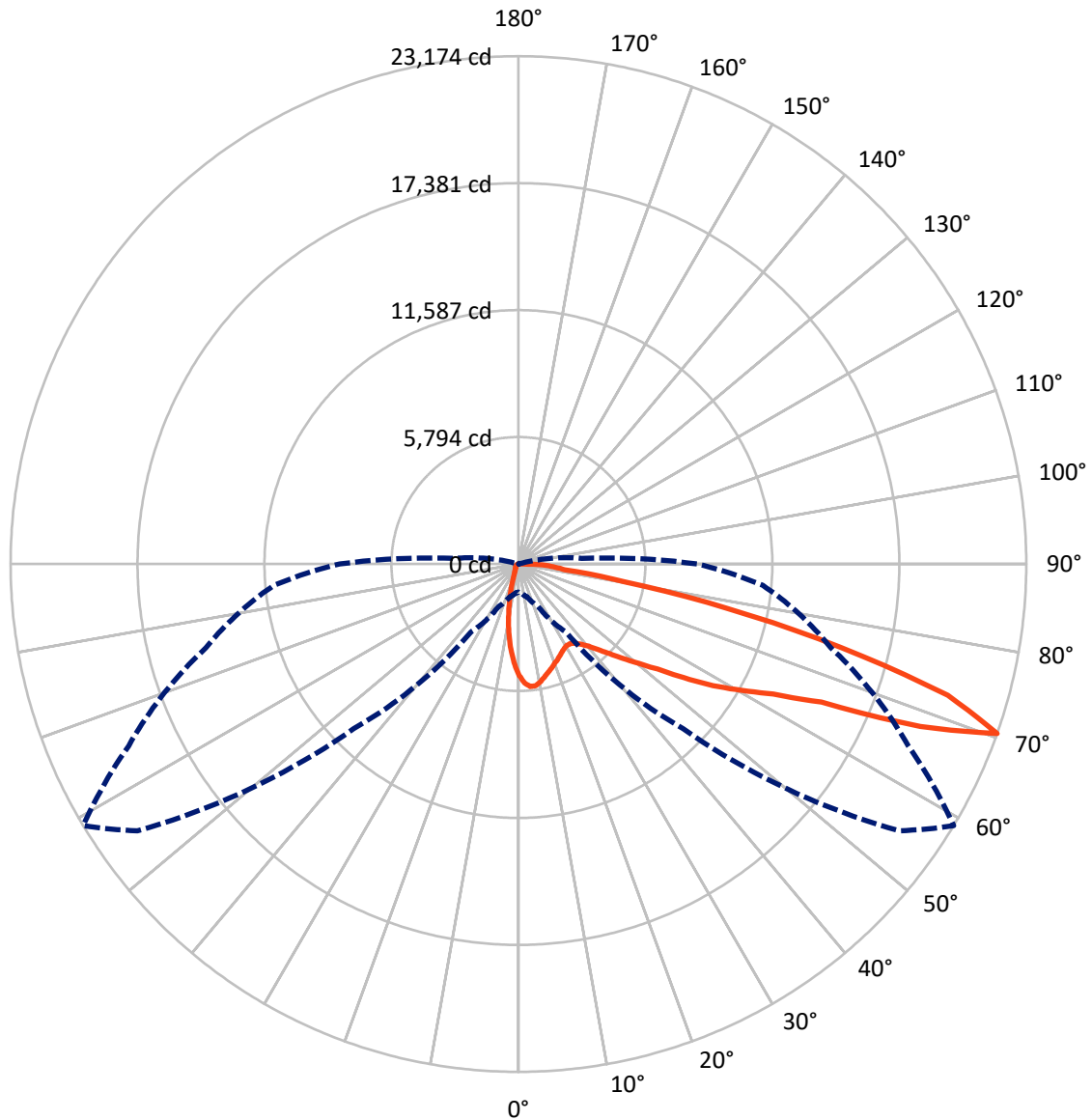
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.7 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	1548.8	0.0	1548.8
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	18598.2	0.0	18598.2
	% Fixture	92.3	0.0	92.3
Total	Lumens	20147.0	0.0	20147.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.9	2.1
10°-20°	878.7	4.4
20°-30°	1189.4	5.9
30°-40°	1716.5	8.5
40°-50°	2850.7	14.1
50°-60°	4360.5	21.6
60°-70°	5423.4	26.9
70°-80°	2998.0	14.9
80°-90°	310.9	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°	20147.0	100.0
0°-180°	20147.0	100.0



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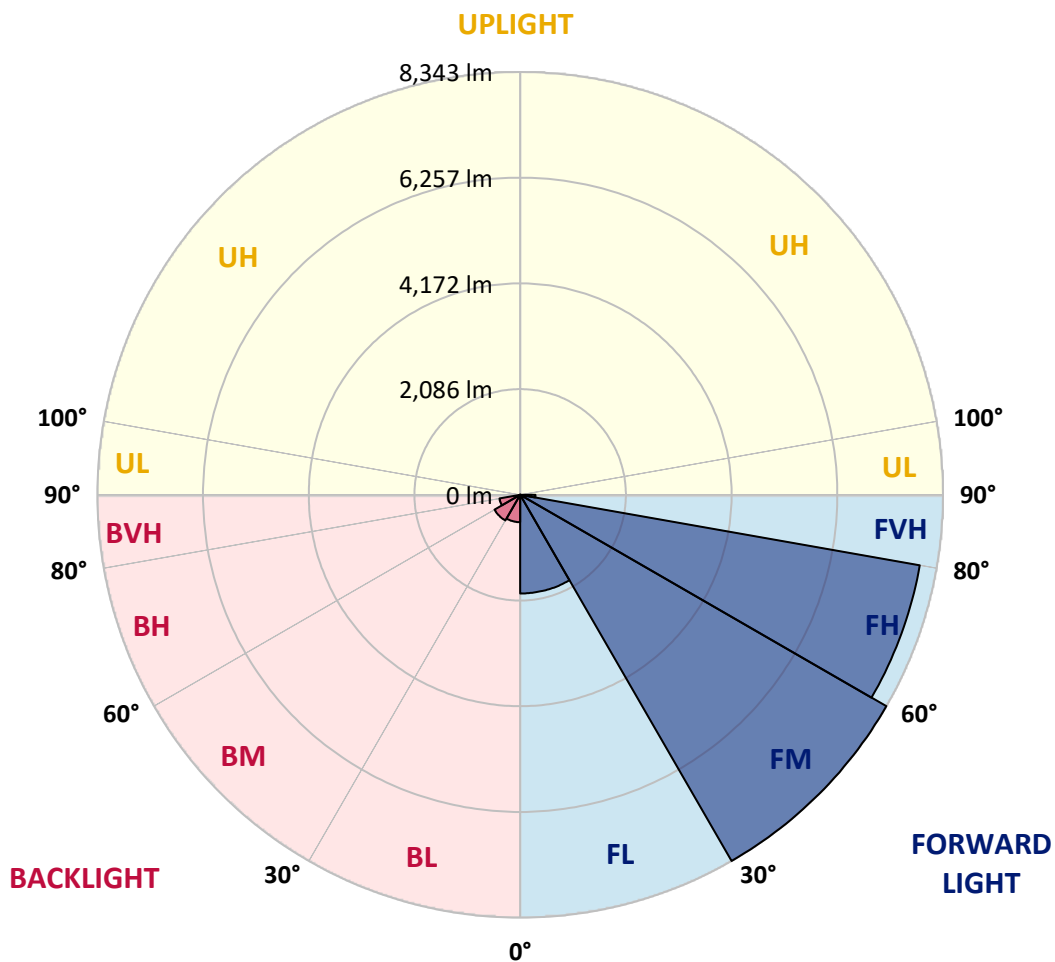
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1947.3	9.7			
FM	(30°-60°)	8343.1	41.4			
FH	(60°-80°)	8006.0	39.7			G4/12000
FVH	(80°-90°)	301.9	1.5			G3/500
BL	(0°-30°)	539.7	2.7	B2/1000		
BM	(30°-60°)	584.6	2.9	B1/1000		
BH	(60°-80°)	415.5	2.1	B1/500		G1/500
BVH	(80°-90°)	9.0	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5
2.5°	5758.6	5749.5	5711.5	5703.9	5661.3	5576.2	5477.4	5437.9	5357.4	5229.7	5088.4
5°	5854.4	5858.9	5862.0	5845.2	5839.2	5769.3	5659.8	5612.7	5504.8	5295.1	5036.7
7.5°	5495.7	5507.8	5545.8	5562.6	5635.5	5662.9	5640.1	5609.7	5524.6	5276.8	4913.6
10°	5117.2	5140.0	5181.1	5208.4	5298.1	5371.1	5463.8	5471.4	5453.1	5216.0	4775.3
12.5°	4792.0	4813.3	4858.9	4913.6	5004.8	5099.0	5237.3	5285.9	5346.7	5176.5	4676.5
15°	4512.4	4518.4	4562.5	4630.9	4751.0	4880.2	5044.3	5115.7	5234.3	5161.3	4600.5
17.5°	4267.7	4269.2	4298.1	4360.4	4506.3	4676.5	4868.0	4962.2	5112.7	5140.0	4533.6
20°	4106.6	4105.0	4106.6	4140.0	4269.2	4471.3	4703.9	4802.6	4995.7	5114.2	4465.2
22.5°	4051.9	4044.3	4009.3	3997.1	4079.2	4257.0	4535.2	4664.3	4890.8	5106.6	4415.1
25°	4118.7	4114.2	4039.7	3969.8	3977.4	4088.3	4363.4	4521.5	4808.7	5134.0	4402.9
27.5°	4334.5	4325.4	4211.4	4074.6	3988.0	4007.8	4235.8	4401.4	4743.4	5200.8	4419.6
30°	4617.2	4618.7	4497.2	4331.5	4127.8	4015.4	4167.4	4323.9	4699.3	5301.1	4456.1
32.5°	4931.8	4930.3	4843.7	4652.2	4392.3	4155.2	4197.8	4330.0	4705.4	5448.6	4526.0
35°	5257.1	5240.4	5211.5	5042.8	4738.8	4399.9	4336.1	4433.3	4769.2	5643.1	4644.6
37.5°	5632.5	5626.4	5655.3	5477.4	5167.4	4760.1	4579.2	4644.6	4930.3	5930.4	4836.1
40°	6229.8	6196.3	6210.0	5968.4	5650.7	5244.9	4919.7	4936.4	5187.2	6310.3	5138.5
42.5°	7368.1	7232.8	6979.0	6526.1	6182.6	5782.9	5365.0	5336.1	5550.4	6770.8	5536.7
45°	8728.4	8573.3	7933.5	7141.7	6714.6	6360.5	5915.2	5837.6	5997.2	7319.5	6050.4
47.5°	9863.7	9696.5	8848.4	7784.5	7255.6	6956.2	6524.6	6433.4	6532.2	7956.3	6667.5
50°	10251.2	10158.5	9413.8	8319.5	7801.3	7625.0	7289.1	7137.1	7161.4	8643.2	7387.9
52.5°	10073.4	10041.5	9543.0	8685.8	8305.8	8363.6	8126.5	7966.9	7939.6	9394.0	8184.3
55°	9698.0	9682.8	9439.6	8889.5	8751.1	9039.9	9301.3	9163.0	8904.7	10191.9	8842.3
57.5°	9161.5	9219.3	9394.0	9281.6	9298.3	9754.2	10392.6	10464.0	10078.0	10827.2	9330.2
60°	7728.3	7883.3	8684.3	9702.6	10482.2	10942.7	11561.3	11695.0	11071.9	11261.9	9894.1
62.5°	5713.0	5934.9	7076.3	8947.2	11134.2	13202.7	13116.1	13056.8	12020.3	11844.0	10919.9
65°	3355.8	3615.7	4580.8	6991.2	10150.9	14655.7	16018.9	15198.2	13465.6	13053.8	12553.7
67.5°	1671.8	1673.3	2109.5	3690.1	7501.9	13641.9	20256.2	19782.0	16538.7	14836.5	13198.2
70°	1285.8	1320.7	1560.9	2144.5	3793.5	10625.1	21227.4	23174.3	19627.0	14757.5	11198.1
72.5°	1089.7	1112.5	1389.1	1866.3	2836.0	5833.1	18376.2	20484.2	18728.8	12468.6	8254.2
75°	784.2	802.5	1229.5	1693.1	2611.1	2893.7	12605.4	15192.2	14052.3	8770.9	4542.8
77.5°	194.5	193.0	428.6	1373.9	2336.0	2410.4	7232.8	9742.1	8062.7	3591.3	1167.2
80°	86.6	83.6	97.3	288.8	2173.3	2275.2	3181.0	4919.7	3092.8	582.1	357.2
82.5°	60.8	57.8	60.8	106.4	726.5	2111.0	1922.6	2132.3	1132.3	199.1	152.0
85°	19.8	18.2	33.4	89.7	203.7	1217.4	1875.5	1592.8	842.0	85.1	101.8
87.5°	3.0	3.0	12.2	48.6	59.3	405.8	1100.4	1103.4	378.4	50.2	45.6
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°	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5	5094.5
2.5°	5016.9	4927.3	4801.1	4675.0	4561.0	4444.0	4349.7	4305.7	4285.9	4258.5	4199.3
5°	4901.4	4738.8	4462.2	4190.2	3936.3	3693.2	3485.0	3366.4	3238.7	3232.7	3170.4
7.5°	4716.0	4485.0	4048.8	3626.3	3238.7	2867.9	2548.7	2342.0	2200.7	2112.6	2051.8
10°	4509.3	4213.0	3635.4	3041.2	2513.8	2018.3	1608.0	1340.5	1177.9	1095.8	1048.7
12.5°	4345.2	3972.8	3228.1	2480.4	1819.2	1250.8	869.3	674.8	588.2	554.7	539.5
15°	4203.8	3752.4	2846.6	1978.8	1214.3	718.9	503.1	439.2	425.6	425.6	424.0
17.5°	4061.0	3539.7	2475.8	1486.4	764.5	471.1	396.7	387.6	389.1	393.6	393.6
20°	3925.7	3337.5	2118.6	1059.3	501.5	376.9	360.2	357.2	361.7	367.8	366.3
22.5°	3816.3	3159.7	1784.3	728.0	386.0	342.0	331.3	326.8	329.8	334.4	332.8
25°	3738.8	3007.7	1477.3	507.6	335.9	311.6	299.4	293.3	290.3	293.3	291.8
27.5°	3691.7	2880.1	1188.5	381.5	300.9	281.2	266.0	253.8	246.2	246.2	243.2
30°	3661.3	2760.0	931.7	316.1	272.0	250.8	229.5	212.8	200.6	197.6	196.1
32.5°	3659.7	2656.7	696.1	279.6	244.7	220.4	194.5	173.3	159.6	156.5	155.0
35°	3697.7	2573.1	512.2	252.3	220.4	191.5	162.6	139.8	127.7	127.7	126.1
37.5°	3796.5	2524.4	387.6	231.0	200.6	167.2	136.8	115.5	104.9	107.9	107.9
40°	3980.4	2515.3	316.1	214.3	183.9	145.9	110.9	94.2	89.7	94.2	94.2
42.5°	4261.6	2563.9	281.2	202.1	168.7	124.6	92.7	80.6	79.0	83.6	83.6
45°	4627.9	2659.7	261.4	191.5	152.0	103.3	77.5	69.9	68.4	74.5	74.5
47.5°	5071.7	2788.9	243.2	179.3	135.3	85.1	65.4	59.3	59.3	65.4	66.9
50°	5597.5	2963.7	224.9	167.2	121.6	71.4	54.7	50.2	51.7	57.8	59.3
52.5°	6202.4	3178.0	208.2	156.5	106.4	57.8	45.6	42.6	44.1	50.2	51.7
55°	6723.7	3364.9	188.5	145.9	86.6	47.1	38.0	36.5	38.0	45.6	45.6
57.5°	7178.1	3544.2	170.2	129.2	68.4	38.0	30.4	30.4	33.4	41.0	42.6
60°	7781.5	3826.9	155.0	109.4	51.7	28.9	24.3	25.8	30.4	36.5	38.0
62.5°	8849.9	4307.2	135.3	91.2	38.0	22.8	19.8	21.3	27.4	35.0	36.5
65°	10187.4	4761.6	112.5	76.0	28.9	16.7	15.2	19.8	27.4	35.0	36.5
67.5°	10050.6	4141.5	88.1	60.8	21.3	13.7	12.2	18.2	25.8	35.0	36.5
70°	8150.8	2902.9	65.4	41.0	16.7	12.2	12.2	18.2	25.8	33.4	35.0
72.5°	5653.7	1615.6	50.2	27.4	15.2	12.2	10.6	16.7	24.3	33.4	35.0
75°	2690.1	495.5	39.5	19.8	13.7	10.6	9.1	16.7	24.3	33.4	35.0
77.5°	516.7	126.1	31.9	16.7	12.2	10.6	9.1	15.2	24.3	31.9	33.4
80°	174.8	56.2	25.8	15.2	12.2	10.6	9.1	15.2	22.8	30.4	31.9
82.5°	95.7	31.9	22.8	13.7	12.2	9.1	7.6	13.7	21.3	30.4	31.9
85°	74.5	22.8	18.2	13.7	12.2	9.1	7.6	13.7	21.3	28.9	30.4
87.5°	38.0	16.7	15.2	13.7	12.2	9.1	7.6	12.2	19.8	27.4	30.4
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)