

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: P197081

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197081
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-SL3-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1050mA 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: 20829 lumens
Efficiency: N/A
Efficacy: 74.7 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

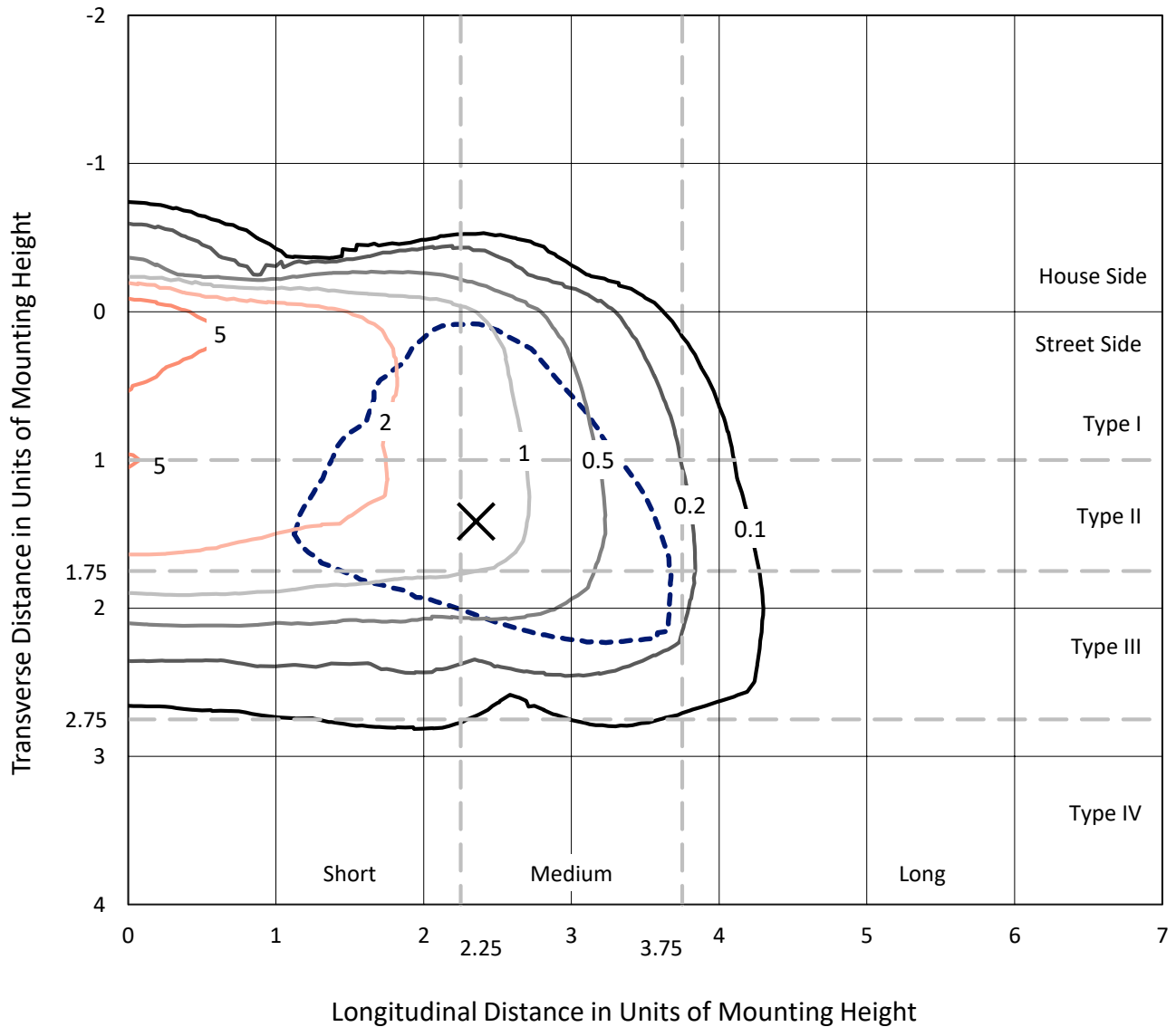
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

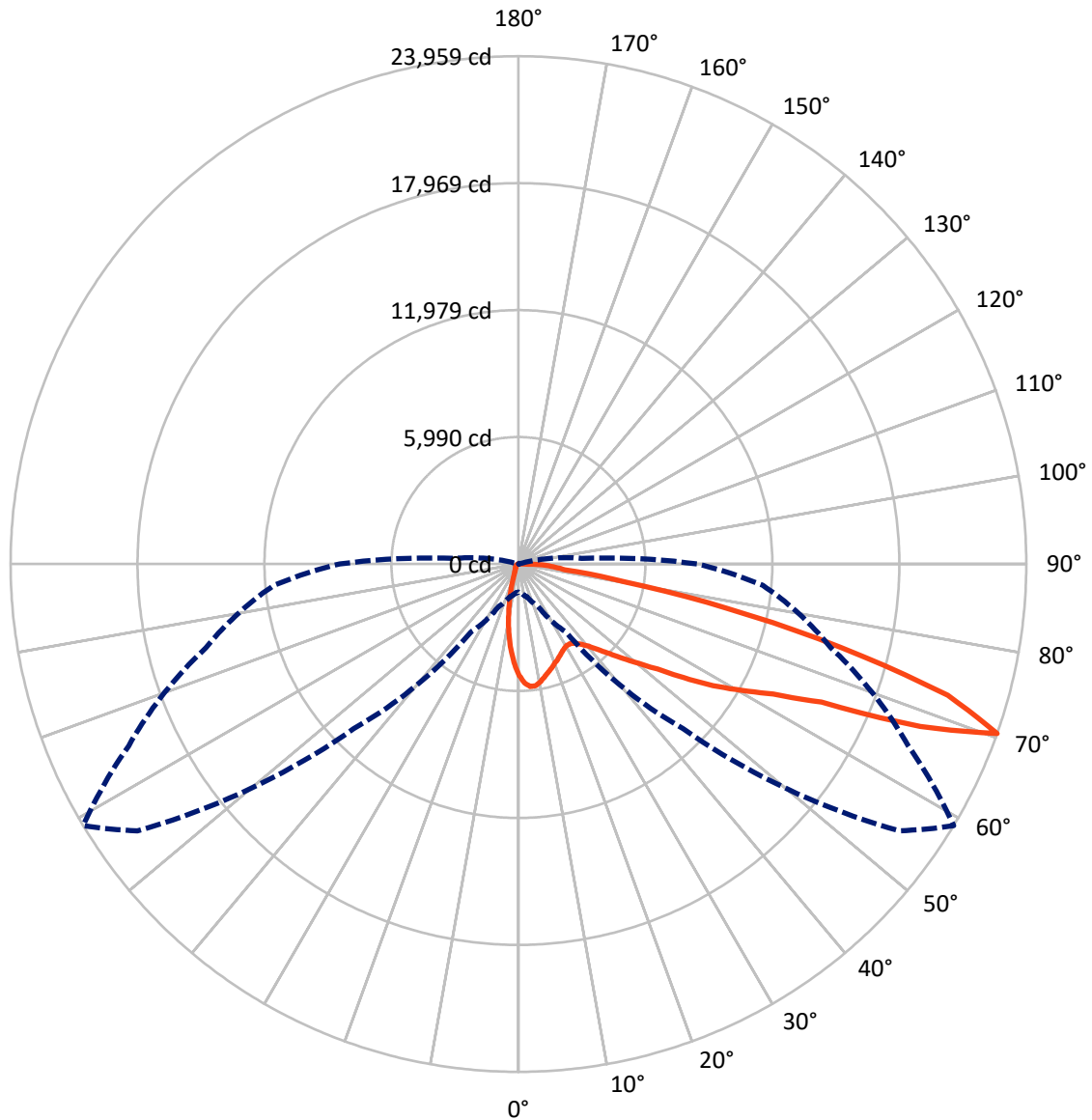


Based on 25 foot mounting height. Maximum calculated value = 9 fc
 Type III - Medium - Non-Cutoff

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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	1601.2	0.0	1601.2
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	19227.8	0.0	19227.8
	% Fixture	92.3	0.0	92.3
Total	Lumens	20829.0	0.0	20829.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	433.1	2.1
10°-20°	908.4	4.4
20°-30°	1229.7	5.9
30°-40°	1774.6	8.5
40°-50°	2947.2	14.1
50°-60°	4508.1	21.6
60°-70°	5607.0	26.9
70°-80°	3099.5	14.9
80°-90°	321.4	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°	20829.0	100.0
0°-180°	20829.0	100.0

Coefficient of Utilization



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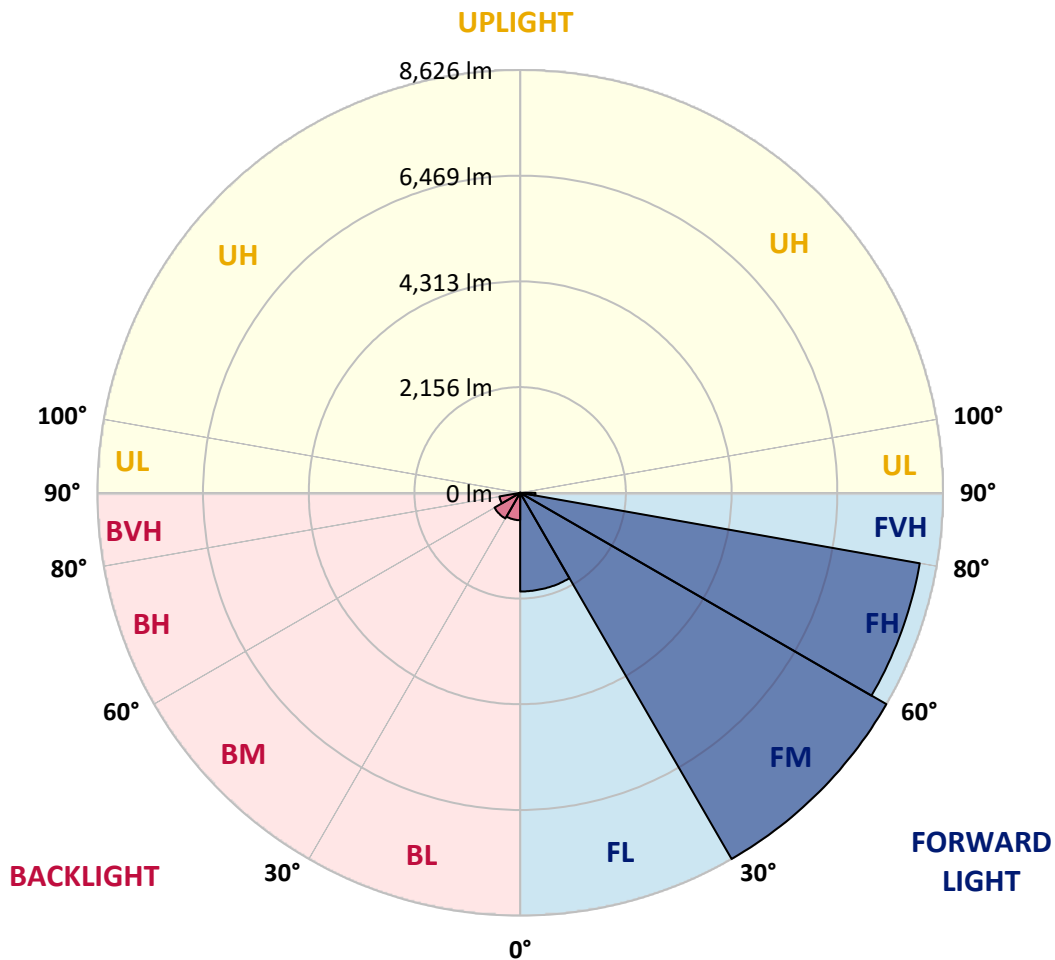
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2013.2	9.7			
FM	(30°-60°)	8625.5	41.4			
FH	(60°-80°)	8277.0	39.7			G4/12000
FVH	(80°-90°)	312.1	1.5			G3/500
BL	(0°-30°)	558.0	2.7	B2/1000		
BM	(30°-60°)	604.4	2.9	B1/1000		
BH	(60°-80°)	429.5	2.1	B1/500		G1/500
BVH	(80°-90°)	9.3	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9
2.5°	5953.6	5944.1	5904.8	5897.0	5853.0	5765.0	5662.9	5622.0	5538.7	5406.7	5260.6
5°	6052.5	6057.3	6060.4	6043.1	6036.8	5964.5	5851.4	5802.7	5691.1	5474.3	5207.2
7.5°	5681.7	5694.3	5733.6	5750.9	5826.3	5854.6	5831.0	5799.6	5711.6	5455.5	5079.9
10°	5290.5	5314.0	5356.5	5384.7	5477.5	5552.9	5648.7	5656.6	5637.7	5392.6	4936.9
12.5°	4954.2	4976.2	5023.4	5079.9	5174.2	5271.6	5414.6	5464.9	5527.7	5351.8	4834.8
15°	4665.1	4671.4	4717.0	4787.7	4911.8	5045.4	5215.1	5288.9	5411.5	5336.0	4756.2
17.5°	4412.1	4413.7	4443.6	4508.0	4658.8	4834.8	5032.8	5130.2	5285.8	5314.0	4687.1
20°	4245.6	4244.0	4245.6	4280.1	4413.7	4622.7	4863.1	4965.2	5164.8	5287.3	4616.4
22.5°	4189.0	4181.2	4145.0	4132.4	4217.3	4401.1	4688.7	4822.2	5056.4	5279.5	4564.5
25°	4258.1	4253.4	4176.4	4104.2	4112.0	4226.7	4511.1	4674.5	4971.5	5307.8	4552.0
27.5°	4481.3	4471.8	4354.0	4212.6	4123.0	4143.4	4379.1	4550.4	4903.9	5376.9	4569.3
30°	4773.5	4775.1	4649.4	4478.1	4267.6	4151.3	4308.4	4470.3	4858.4	5480.6	4607.0
32.5°	5098.8	5097.2	5007.6	4809.7	4541.0	4295.9	4339.9	4476.6	4864.7	5633.0	4679.2
35°	5435.0	5417.7	5387.9	5213.5	4899.2	4548.8	4482.8	4583.4	4930.7	5834.1	4801.8
37.5°	5823.1	5816.8	5846.7	5662.9	5342.3	4921.2	4734.2	4801.8	5097.2	6131.1	4999.8
40°	6440.6	6406.1	6420.2	6170.4	5842.0	5422.5	5086.2	5103.5	5362.8	6523.9	5312.5
42.5°	7617.5	7477.7	7215.3	6747.0	6391.9	5978.7	5546.6	5516.7	5738.3	7000.0	5724.1
45°	9023.8	8863.5	8202.0	7383.4	6941.9	6575.8	6115.4	6035.3	6200.2	7567.2	6255.2
47.5°	10197.6	10024.7	9147.9	8048.1	7501.3	7191.7	6745.5	6651.2	6753.3	8225.6	6893.2
50°	10598.2	10502.4	9732.5	8601.1	8065.3	7883.1	7535.8	7378.7	7403.8	8935.8	7638.0
52.5°	10414.4	10381.4	9866.0	8979.8	8587.0	8646.7	8401.6	8236.6	8208.3	9712.0	8461.3
55°	10026.3	10010.6	9759.2	9190.4	9047.4	9345.9	9616.2	9473.2	9206.1	10537.0	9141.7
57.5°	9471.6	9531.3	9712.0	9595.8	9613.0	10084.4	10744.4	10818.2	10419.1	11193.7	9646.0
60°	7989.9	8150.2	8978.2	10031.0	10837.1	11313.2	11952.7	12090.9	11446.7	11643.1	10229.0
62.5°	5906.4	6135.8	7315.8	9250.1	11511.1	13649.6	13560.1	13498.8	12427.2	12244.9	11289.6
65°	3469.4	3738.1	4735.8	7227.9	10494.5	15151.8	16561.2	15712.7	13921.5	13495.7	12978.7
67.5°	1728.4	1730.0	2180.9	3815.0	7755.8	14103.7	20941.9	20451.7	17098.6	15338.8	13644.9
70°	1329.3	1365.4	1613.7	2217.1	3921.9	10984.8	21946.0	23958.8	20291.4	15257.1	11577.1
72.5°	1126.6	1150.2	1436.1	1929.5	2932.0	6030.5	18998.3	21177.6	19362.8	12890.7	8533.6
75°	810.8	829.6	1271.2	1750.4	2699.4	2991.7	13032.1	15706.4	14528.0	9067.8	4696.5
77.5°	201.1	199.6	443.1	1420.4	2415.0	2492.0	7477.7	10071.9	8335.6	3712.9	1206.7
80°	89.6	86.4	100.6	298.5	2246.9	2352.2	3288.7	5086.2	3197.5	601.8	369.2
82.5°	62.9	59.7	62.9	110.0	751.1	2182.5	1987.7	2204.5	1170.6	205.8	157.1
85°	20.4	18.9	34.6	92.7	210.6	1258.6	1938.9	1646.7	870.5	88.0	105.3
87.5°	3.1	3.1	12.6	50.3	61.3	419.5	1137.6	1140.7	391.2	51.9	47.1
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°	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9	5266.9
2.5°	5186.8	5094.1	4963.6	4833.2	4715.4	4594.4	4497.0	4451.4	4431.0	4402.7	4341.4
5°	5067.4	4899.2	4613.3	4332.0	4069.6	3818.2	3602.9	3480.4	3348.4	3342.1	3277.7
7.5°	4875.7	4636.8	4185.9	3749.1	3348.4	2965.0	2635.0	2421.3	2275.2	2184.1	2121.2
10°	4662.0	4355.6	3758.5	3144.1	2598.9	2086.6	1662.4	1385.9	1217.7	1132.9	1084.2
12.5°	4492.3	4107.3	3337.4	2564.3	1880.8	1293.2	898.8	697.6	608.1	573.5	557.8
15°	4346.1	3879.5	2943.0	2045.8	1255.4	743.2	520.1	454.1	440.0	440.0	438.4
17.5°	4198.4	3659.5	2559.6	1536.7	790.3	487.1	410.1	400.7	402.2	407.0	407.0
20°	4058.6	3450.5	2190.4	1095.2	518.5	389.7	372.4	369.2	374.0	380.2	378.7
22.5°	3945.5	3266.7	1844.7	752.6	399.1	353.5	342.5	337.8	341.0	345.7	344.1
25°	3865.3	3109.5	1527.3	524.8	347.3	322.1	309.5	303.3	300.1	303.3	301.7
27.5°	3816.6	2977.6	1228.7	394.4	311.1	290.7	275.0	262.4	254.5	254.5	251.4
30°	3785.2	2853.4	963.2	326.8	281.3	259.3	237.3	220.0	207.4	204.3	202.7
32.5°	3783.6	2746.6	719.6	289.1	253.0	227.8	201.1	179.1	165.0	161.8	160.3
35°	3822.9	2660.2	529.5	260.8	227.8	198.0	168.1	144.6	132.0	132.0	130.4
37.5°	3925.0	2609.9	400.7	238.8	207.4	172.8	141.4	119.4	108.4	111.6	111.6
40°	4115.2	2600.5	326.8	221.5	190.1	150.8	114.7	97.4	92.7	97.4	97.4
42.5°	4405.8	2650.7	290.7	209.0	174.4	128.8	95.8	83.3	81.7	86.4	86.4
45°	4784.5	2749.7	270.3	198.0	157.1	106.8	80.1	72.3	70.7	77.0	77.0
47.5°	5243.3	2883.3	251.4	185.4	139.8	88.0	67.6	61.3	61.3	67.6	69.1
50°	5787.0	3064.0	232.5	172.8	125.7	73.8	56.6	51.9	53.4	59.7	61.3
52.5°	6412.4	3285.5	215.3	161.8	110.0	59.7	47.1	44.0	45.6	51.9	53.4
55°	6951.3	3478.8	194.8	150.8	89.6	48.7	39.3	37.7	39.3	47.1	47.1
57.5°	7421.1	3664.2	176.0	133.6	70.7	39.3	31.4	31.4	34.6	42.4	44.0
60°	8044.9	3956.5	160.3	113.1	53.4	29.9	25.1	26.7	31.4	37.7	39.3
62.5°	9149.5	4453.0	139.8	94.3	39.3	23.6	20.4	22.0	28.3	36.1	37.7
65°	10532.2	4922.8	116.3	78.6	29.9	17.3	15.7	20.4	28.3	36.1	37.7
67.5°	10390.8	4281.7	91.1	62.9	22.0	14.1	12.6	18.9	26.7	36.1	37.7
70°	8426.7	3001.1	67.6	42.4	17.3	12.6	12.6	18.9	26.7	34.6	36.1
72.5°	5845.1	1670.3	51.9	28.3	15.7	12.6	11.0	17.3	25.1	34.6	36.1
75°	2781.2	512.2	40.9	20.4	14.1	11.0	9.4	17.3	25.1	34.6	36.1
77.5°	534.2	130.4	33.0	17.3	12.6	11.0	9.4	15.7	25.1	33.0	34.6
80°	180.7	58.1	26.7	15.7	12.6	11.0	9.4	15.7	23.6	31.4	33.0
82.5°	99.0	33.0	23.6	14.1	12.6	9.4	7.9	14.1	22.0	31.4	33.0
85°	77.0	23.6	18.9	14.1	12.6	9.4	7.9	14.1	22.0	29.9	31.4
87.5°	39.3	17.3	15.7	14.1	12.6	9.4	7.9	12.6	20.4	28.3	31.4
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)