

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: P196068

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196068  
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-06-D-UNV-SL2-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 800mA 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: 24285.9 lumens  
Efficiency: N/A  
Efficacy: 97.5 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

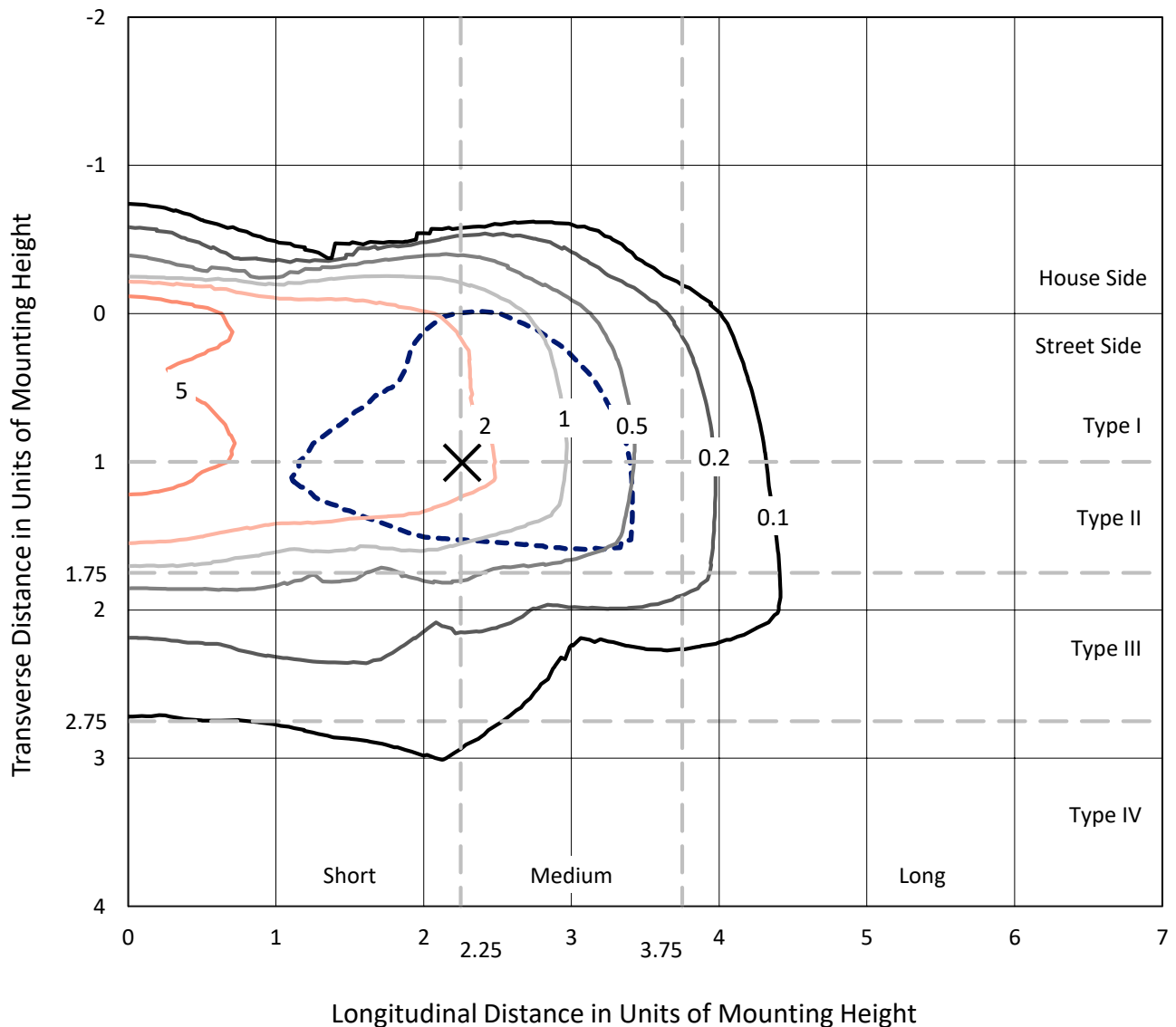
Input Watts (W): 249  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

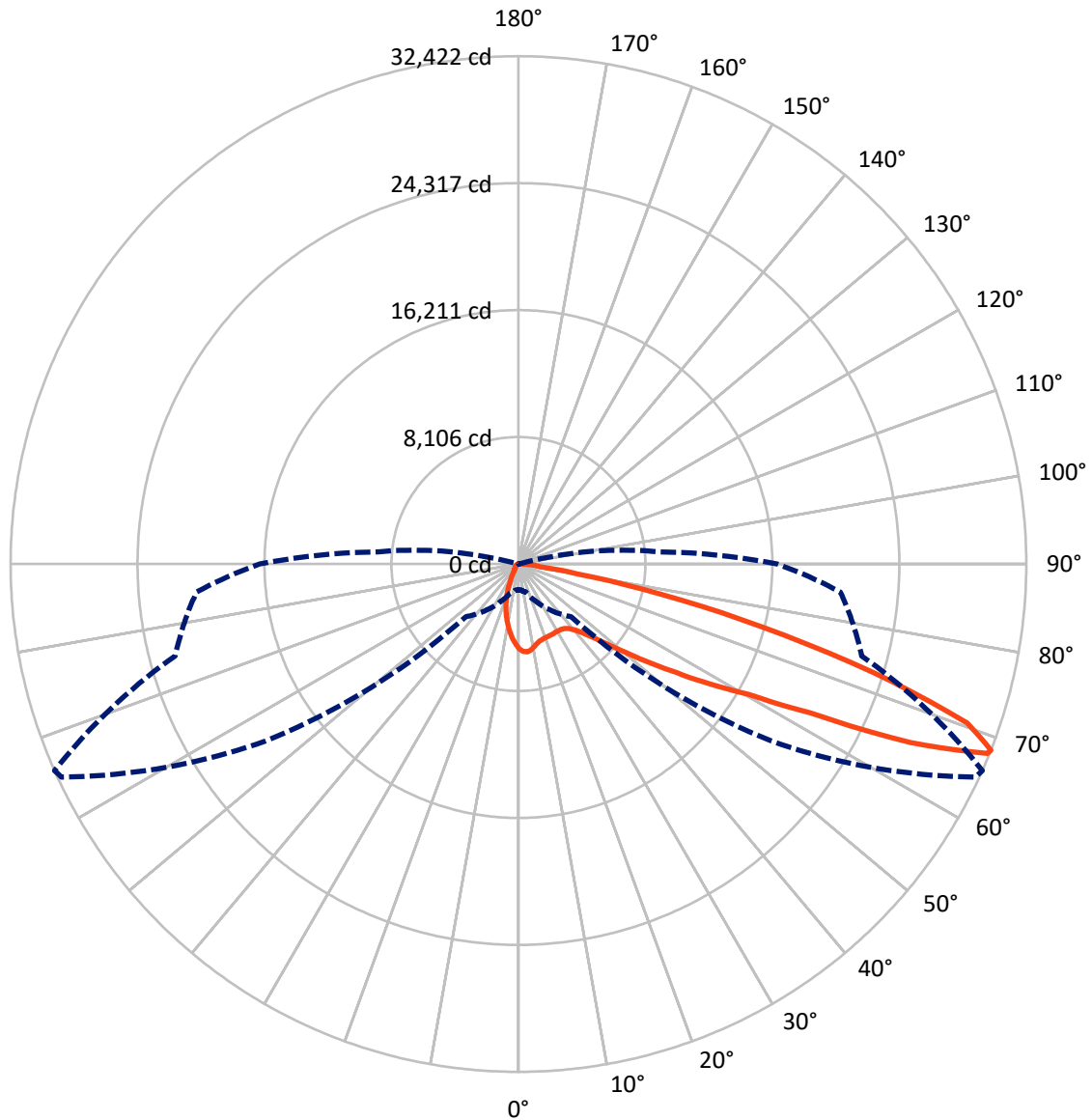
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.7 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
<b>House Side</b>	Lumens	2459.9	0.0	2459.9
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	21826.0	0.0	21826.0
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	24285.9	0.0	24285.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	443.6	1.8
10°-20°	954.4	3.9
20°-30°	1383.0	5.7
30°-40°	2117.1	8.7
40°-50°	3621.1	14.9
50°-60°	5664.4	23.3
60°-70°	6522.4	26.9
70°-80°	3263.9	13.4
80°-90°	316.1	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°	24285.9	100.0
0°-180°	24285.9	100.0

**Coefficient of Utilization**



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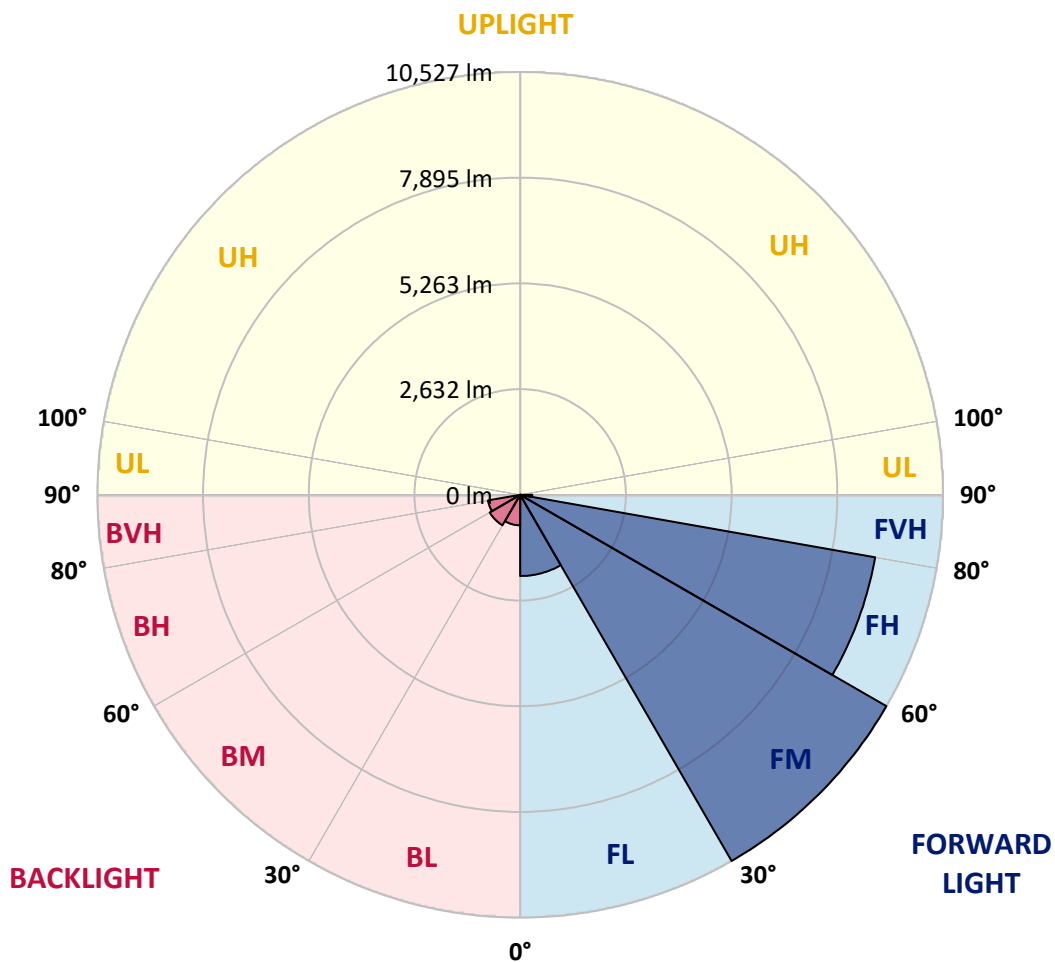
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2021.7	8.3			
FM (30°-60°)	10526.6	43.3			
FH (60°-80°)	8973.6	36.9			G4/12000
FVH (80°-90°)	304.1	1.3			G3/500
BL (0°-30°)	759.2	3.1	B2/1000		
BM (30°-60°)	876.0	3.6	B1/1000		
BH (60°-80°)	812.7	3.3	B2/1000		G2/1000
BVH (80°-90°)	12.0	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°	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7
2.5°	5690.9	5694.8	5692.8	5698.6	5694.8	5666.1	5635.6	5570.8	5576.5	5492.6	5399.2
5°	5290.6	5322.9	5355.4	5387.8	5465.9	5534.6	5616.6	5635.6	5635.6	5563.2	5425.9
7.5°	4882.5	4884.5	4920.7	4964.6	5069.4	5195.3	5385.8	5557.5	5561.3	5580.3	5429.7
10°	4575.7	4585.2	4609.9	4657.6	4762.4	4886.3	5099.9	5368.8	5389.7	5530.8	5391.6
12.5°	4337.3	4348.8	4375.5	4430.7	4526.0	4653.8	4878.8	5185.7	5214.3	5483.1	5380.2
15°	4154.3	4169.5	4190.5	4245.8	4348.8	4484.1	4730.0	5063.7	5098.0	5464.1	5416.4
17.5°	4078.0	4078.0	4076.2	4114.2	4217.2	4354.5	4611.9	4998.9	5042.7	5479.3	5477.4
20°	4110.4	4104.7	4064.7	4055.2	4118.1	4255.3	4518.4	4956.9	5006.5	5507.9	5551.8
22.5°	4282.0	4270.6	4181.0	4106.6	4087.5	4179.1	4455.5	4928.3	4987.4	5567.0	5650.9
25°	4646.1	4611.9	4487.9	4320.1	4169.5	4160.0	4411.7	4913.0	4975.9	5635.6	5759.5
27.5°	5118.9	5109.4	4911.2	4686.2	4396.4	4222.9	4398.3	4901.7	4964.6	5685.2	5847.3
30°	5706.1	5710.0	5481.2	5187.6	4749.2	4400.2	4440.2	4895.9	4960.7	5689.0	5885.3
32.5°	6312.4	6316.2	6125.6	5811.1	5231.5	4705.3	4558.5	4922.6	4981.7	5673.8	5883.5
35°	6895.8	6901.5	6787.2	6533.6	5875.8	5128.5	4781.5	5014.1	5056.0	5683.3	5879.6
37.5°	7633.7	7656.5	7515.4	7279.0	6684.2	5750.0	5145.6	5199.0	5233.3	5761.5	5908.3
40°	8891.9	8861.4	8457.2	8056.9	7561.2	6506.9	5671.9	5517.4	5528.8	5963.6	6016.9
42.5°	10358.1	10319.9	9627.8	8937.7	8463.0	7420.1	6344.9	6005.5	6003.6	6302.9	6253.3
45°	11620.1	11597.3	10869.0	9948.2	9462.0	8428.7	7174.2	6709.0	6686.1	6890.1	6684.2
47.5°	12516.2	12497.2	11946.1	11023.4	10617.3	9538.2	8209.4	7667.9	7620.3	7658.4	7383.9
50°	12603.9	12582.9	12390.4	11797.5	11967.1	11166.4	9488.7	8924.3	8863.4	8804.2	8442.0
52.5°	11784.1	11782.2	11883.2	11845.2	12912.8	13261.6	11057.7	10478.2	10405.7	10255.1	9894.8
55°	10108.3	10098.8	10482.0	11038.7	12891.8	15423.6	13450.4	12327.5	12232.1	11930.9	11458.1
57.5°	7385.8	7336.2	8137.0	9317.1	11986.2	16369.3	17250.0	14624.8	14466.6	13511.4	12783.1
60°	4078.0	4097.1	5126.6	6524.1	9841.4	16182.5	20746.6	17303.4	16887.8	14874.5	14140.6
62.5°	2285.9	2333.6	3100.0	4240.0	6274.3	14666.8	22622.6	21913.3	20912.5	16464.6	15856.5
65°	1729.2	1757.8	2142.9	3271.6	3956.0	10249.4	22921.9	28359.3	27495.6	18874.4	18588.4
67.5°	1628.1	1651.0	1839.8	2713.0	3603.3	5315.4	20668.4	32172.3	32281.0	22161.2	20704.6
68°	1639.6	1668.2	1857.0	2610.0	3597.6	4754.8	19707.6	32191.3	32422.0	22691.2	20632.2
70°	1506.1	1513.8	1963.7	2560.4	3487.0	3746.3	14256.9	29985.6	30399.2	23322.3	18729.5
72.5°	575.7	577.7	880.8	2217.2	3652.9	3767.2	7181.8	23699.7	23720.7	20296.7	14601.9
75°	299.3	251.6	276.4	694.0	3488.9	3671.9	3603.3	16182.5	16081.4	13726.9	8947.2
77.5°	205.9	175.4	184.9	240.2	1450.9	3670.0	2602.4	9305.7	9284.7	5839.6	2552.8
80°	116.3	101.1	110.6	202.1	509.0	3445.1	2425.1	3999.8	3769.2	1025.7	413.7
82.5°	59.1	49.6	59.1	169.7	316.5	2167.7	2358.3	1569.1	1397.5	244.1	268.8
85°	15.2	15.2	28.6	118.3	196.4	711.2	2114.3	1132.5	1018.0	106.8	190.7
87.5°	3.8	1.9	11.5	43.9	70.6	154.5	1172.5	631.1	543.4	55.2	110.6
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°	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7	5410.7
2.5°	5361.1	5307.7	5202.8	5084.7	5000.8	4909.2	4855.8	4791.1	4741.5	4697.6	4730.0
5°	5342.1	5239.0	5006.5	4745.3	4526.0	4316.3	4160.0	4011.3	3898.8	3828.3	3856.8
7.5°	5292.4	5139.9	4762.4	4354.5	3996.1	3658.6	3384.0	3138.1	2947.4	2844.5	2876.9
10°	5208.6	4993.1	4486.0	3919.7	3418.4	2941.7	2533.7	2167.7	1891.2	1761.6	1792.1
12.5°	5147.6	4863.5	4200.0	3500.3	2840.7	2163.8	1622.4	1203.0	987.6	857.9	869.4
15°	5120.9	4762.4	3933.1	3058.0	2209.7	1389.9	877.0	634.8	560.5	533.8	535.7
17.5°	5124.7	4682.4	3679.6	2598.6	1572.9	798.8	537.7	484.3	472.8	467.1	467.1
20°	5134.2	4602.3	3416.5	2120.1	1006.7	514.7	448.1	430.9	425.1	417.6	419.4
22.5°	5162.8	4541.3	3151.4	1639.6	619.6	419.4	396.6	381.3	371.7	360.3	362.2
25°	5206.7	4495.6	2890.2	1180.1	436.6	366.0	345.0	324.1	307.0	293.6	295.5
27.5°	5233.3	4430.7	2611.9	804.6	362.2	320.3	291.7	263.1	244.1	232.6	230.7
30°	5214.3	4325.9	2295.4	528.1	320.3	276.4	242.1	209.7	190.7	181.2	181.2
32.5°	5162.8	4190.5	1946.6	385.1	284.1	238.3	196.4	167.8	154.5	148.7	150.6
35°	5103.7	4049.5	1574.7	326.0	255.4	202.1	160.2	137.3	131.6	129.6	129.6
37.5°	5071.3	3927.4	1218.2	295.5	228.7	167.8	131.6	118.3	112.5	112.5	112.5
40°	5107.5	3834.0	901.7	272.6	202.1	139.2	110.6	101.1	99.1	99.1	99.1
42.5°	5262.0	3801.6	659.7	253.6	175.4	116.3	95.3	87.7	85.8	87.7	87.7
45°	5563.2	3872.1	499.5	234.5	150.6	95.3	81.9	76.2	76.2	78.2	78.2
47.5°	6074.1	4053.2	409.9	215.4	125.8	80.1	70.6	66.7	66.7	68.6	68.6
50°	6867.3	4388.8	368.0	194.5	104.9	68.6	59.1	57.2	57.2	59.1	61.0
52.5°	8072.1	5027.5	347.0	173.5	85.8	57.2	49.6	47.7	49.6	51.5	51.5
55°	9412.4	5845.3	322.2	152.5	72.4	47.7	40.0	40.0	41.9	45.7	45.7
57.5°	10661.2	6634.7	299.3	125.8	62.9	38.2	32.4	32.4	36.2	40.0	40.0
60°	11980.5	7408.7	268.8	101.1	53.4	30.5	26.7	26.7	32.4	36.2	38.2
62.5°	13610.6	8308.5	228.7	80.1	41.9	22.9	19.0	24.8	30.5	36.2	36.2
65°	15967.0	9427.7	179.2	62.9	32.4	17.2	15.2	22.9	28.6	34.3	36.2
67.5°	16823.0	9284.7	135.3	51.5	24.8	13.3	13.3	21.0	28.6	34.3	34.3
68°	16510.3	8972.0	129.6	49.6	22.9	13.3	13.3	21.0	28.6	34.3	34.3
70°	14386.5	7334.4	106.8	38.2	19.0	11.5	11.5	19.0	28.6	32.4	34.3
72.5°	10771.8	4873.0	91.6	24.8	17.2	11.5	9.5	19.0	26.7	32.4	32.4
75°	6179.0	2022.8	78.2	19.0	15.2	9.5	9.5	17.2	26.7	32.4	32.4
77.5°	1746.4	472.8	62.9	15.2	13.3	9.5	7.7	17.2	24.8	30.5	30.5
80°	320.3	141.1	49.6	13.3	11.5	9.5	7.7	17.2	24.8	30.5	30.5
82.5°	211.6	66.7	36.2	13.3	11.5	9.5	7.7	15.2	22.9	28.6	28.6
85°	158.3	47.7	22.9	13.3	11.5	9.5	7.7	15.2	22.9	28.6	28.6
87.5°	87.7	21.0	17.2	15.2	13.3	9.5	7.7	13.3	21.0	26.7	26.7
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)