

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: P196624

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196624  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-SL3-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23565 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G4

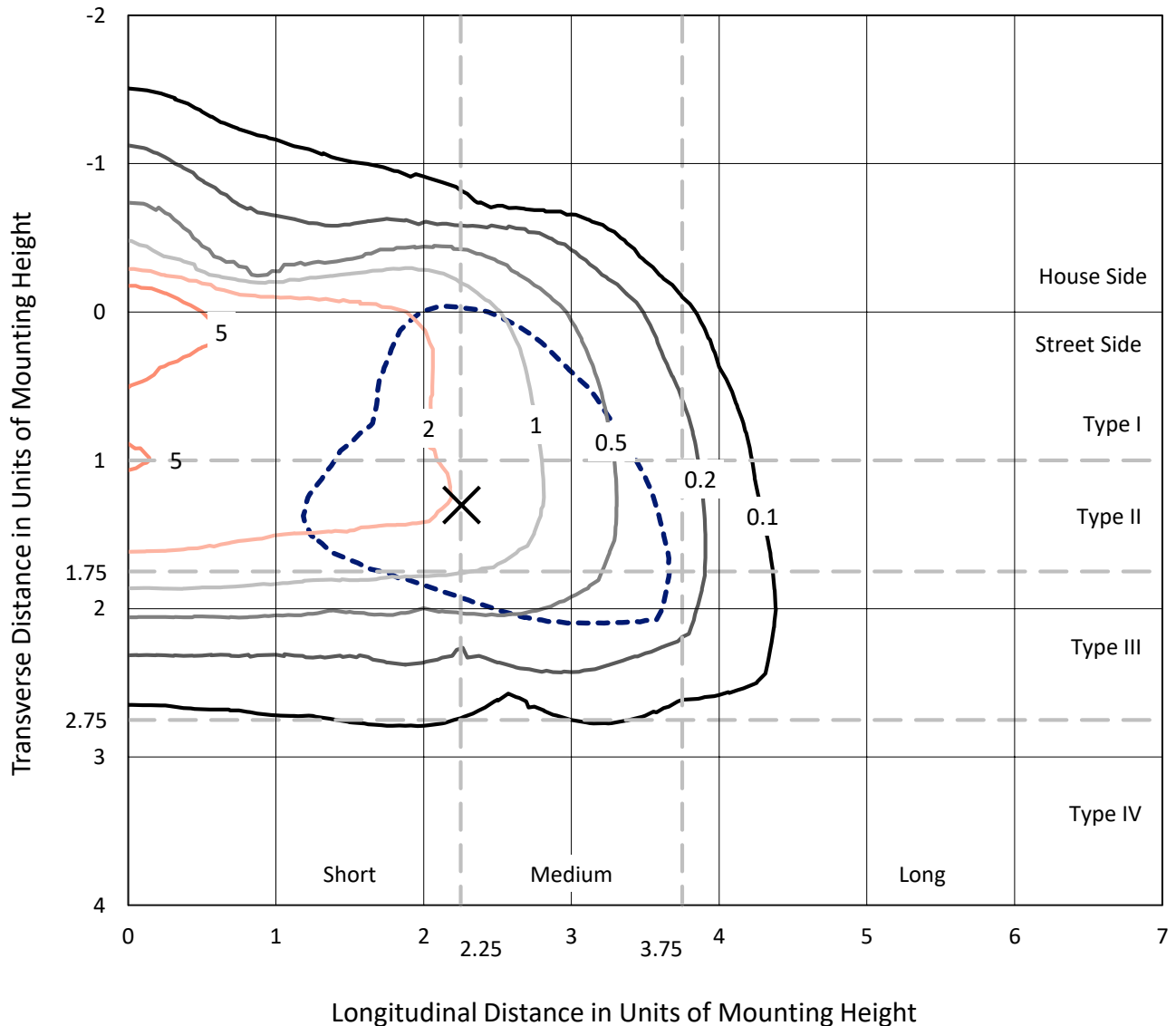
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

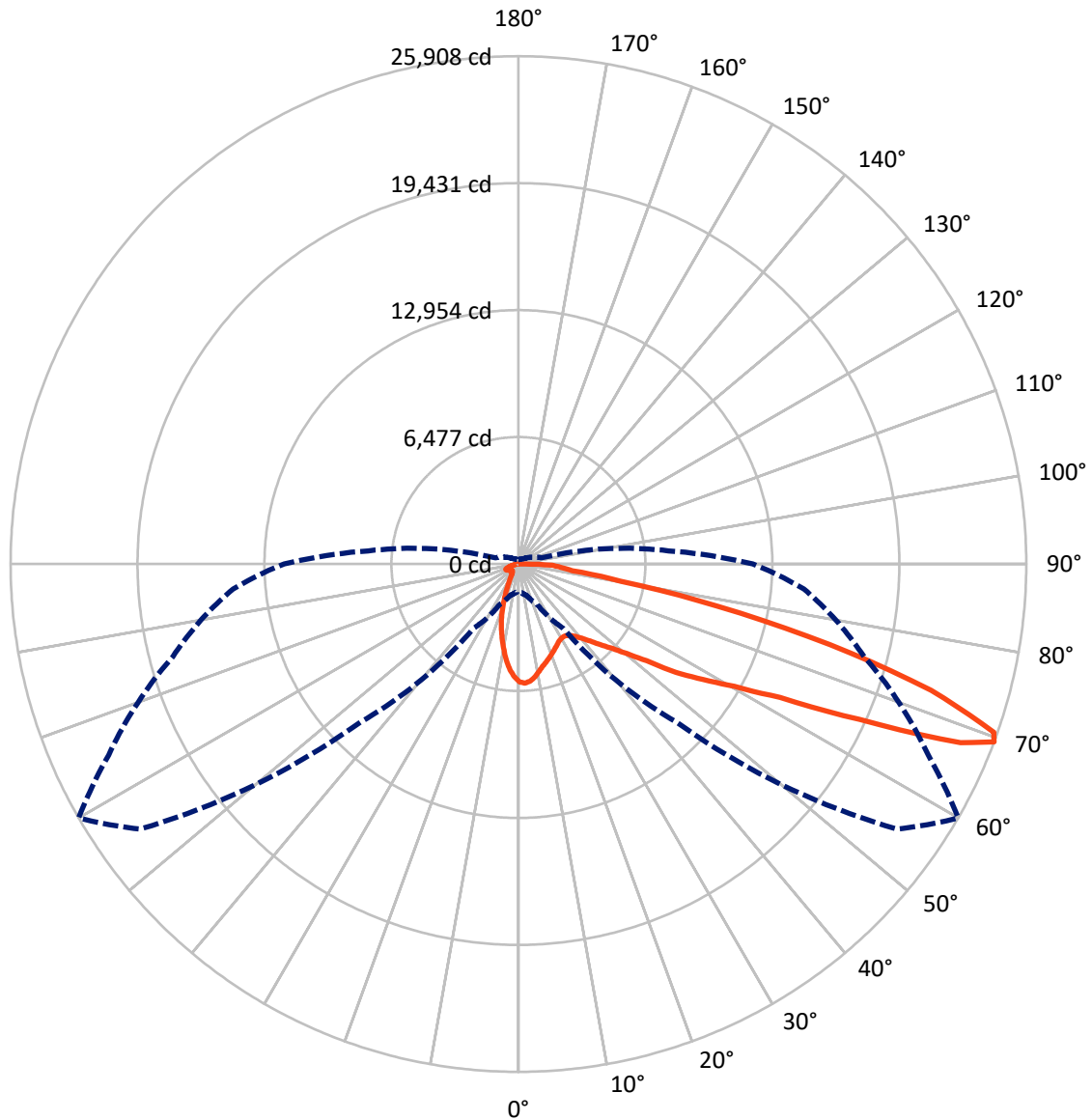
× Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3361.1	0.0	3361.1
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	20203.9	0.0	20203.9
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	23565.0	0.0	23565.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	510.1	2.2
10°-20°	1092.1	4.6
20°-30°	1393.2	5.9
30°-40°	1917.2	8.1
40°-50°	3105.5	13.2
50°-60°	4874.0	20.7
60°-70°	6497.9	27.6
70°-80°	3614.3	15.3
80°-90°	560.6	2.4
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°	23565.0	100.0
0°-180°	23565.0	100.0



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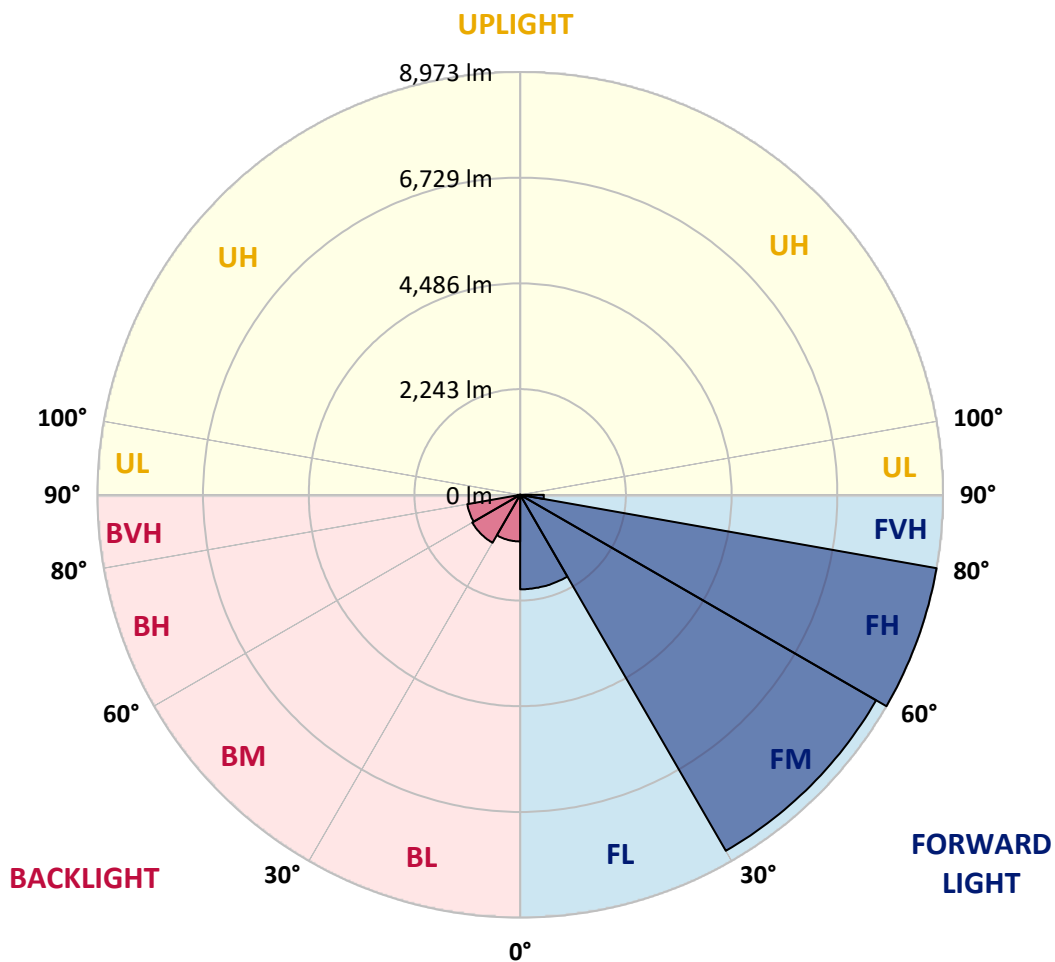
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2004.9	8.5			
FM	(30°-60°)	8722.5	37.0			
FH	(60°-80°)	8972.7	38.1			G4/12000
FVH	(80°-90°)	503.8	2.1			G4/750
BL	(0°-30°)	990.5	4.2	B2/1000		
BM	(30°-60°)	1174.2	5.0	B2/2500		
BH	(60°-80°)	1139.6	4.8	B3/2500		G3/2500
BVH	(80°-90°)	56.8	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6
2.5°	6172.8	6189.5	6189.5	6175.9	6168.3	6124.5	6098.9	6080.8	6048.9	5990.0	5937.1
5°	5952.2	5984.0	5997.6	6003.6	6042.9	6029.4	6030.8	6018.8	5991.6	5928.1	5842.0
7.5°	5547.3	5553.3	5577.4	5618.3	5713.5	5780.1	5834.3	5845.0	5839.0	5792.1	5671.2
10°	5148.3	5158.9	5187.6	5257.1	5347.8	5443.0	5560.9	5609.3	5645.5	5630.3	5477.7
12.5°	4817.5	4818.9	4850.7	4930.8	5031.9	5151.3	5311.5	5387.1	5473.3	5508.0	5337.2
15°	4498.5	4519.7	4550.0	4646.7	4772.1	4923.2	5107.6	5211.7	5325.2	5424.8	5228.4
17.5°	4256.7	4273.4	4291.6	4371.7	4516.7	4705.6	4933.7	5045.6	5195.2	5347.8	5116.6
20°	4123.8	4129.9	4116.3	4155.5	4277.9	4482.0	4746.4	4880.8	5059.1	5273.7	5001.8
22.5°	4096.5	4096.5	4046.8	4039.2	4093.6	4265.8	4553.0	4717.7	4935.2	5222.4	4898.9
25°	4223.5	4214.4	4120.8	4034.6	4015.1	4102.6	4368.6	4571.1	4829.5	5220.9	4821.9
27.5°	4463.8	4451.8	4335.4	4190.3	4064.9	4027.1	4226.5	4433.6	4746.4	5272.3	4782.6
30°	4763.0	4758.5	4640.6	4459.3	4252.3	4057.4	4170.7	4362.6	4690.5	5367.5	4781.1
32.5°	5090.9	5069.7	4997.2	4815.9	4547.0	4225.0	4203.9	4365.6	4675.3	5506.4	4815.9
35°	5440.0	5424.8	5406.7	5223.9	4921.7	4521.2	4350.4	4469.9	4749.4	5699.9	4914.2
37.5°	5884.2	5867.7	5897.9	5698.4	5367.5	4909.6	4598.2	4678.4	4900.5	5981.0	5097.0
40°	6674.5	6626.2	6541.6	6234.9	5887.3	5385.6	4956.4	4968.6	5158.9	6357.2	5390.1
42.5°	7972.6	7817.0	7398.4	6834.7	6435.8	5938.7	5423.4	5365.9	5515.5	6854.4	5816.2
45°	9273.7	9098.3	8391.2	7489.0	7003.9	6532.5	6000.6	5863.1	5959.8	7433.1	6364.8
47.5°	10113.8	10027.7	9229.9	8143.3	7599.3	7179.3	6661.0	6434.3	6503.7	8088.9	7041.8
50°	10360.2	10286.1	9658.9	8655.6	8161.4	7960.5	7478.5	7177.8	7189.8	8855.1	7853.2
52.5°	10175.8	10145.6	9730.0	8972.9	8678.3	8784.1	8610.2	8191.7	8092.0	9695.2	8732.6
55°	9929.5	9940.1	9779.9	9291.9	9204.1	9551.7	10091.1	9754.2	9331.1	10570.2	9648.4
57.5°	9154.3	9161.8	9581.9	9899.2	10207.5	10627.6	11244.2	11102.1	10609.5	11514.7	10674.4
60°	7371.1	7430.0	8365.4	9773.8	11354.4	12747.8	12898.8	12654.0	11969.5	12602.6	12008.8
62.5°	5266.2	5319.1	6402.6	8484.8	11220.0	15147.3	15954.2	14981.1	13814.5	14230.2	13885.5
65°	2766.9	2757.8	3596.5	5863.1	9450.5	15703.4	20768.6	19112.5	16922.8	16468.0	15698.9
67.5°	1545.9	1595.7	1920.7	2957.2	6159.3	13820.5	23843.7	24331.8	21244.7	18243.6	15620.4
69°	1429.5	1446.1	1663.7	2286.2	4015.1	11402.9	23579.4	25907.9	23067.1	18251.1	14613.9
70°	1388.6	1406.8	1604.8	2106.5	3372.9	9343.2	22616.7	25723.6	23509.8	17846.2	13698.2
72.5°	1245.1	1269.4	1461.3	1893.5	2842.4	4815.9	18217.9	22016.9	21296.0	15597.7	10621.5
75°	1062.3	1103.1	1393.3	1879.8	2692.8	3061.6	12149.3	16403.1	15850.0	11155.1	6026.3
77.5°	439.8	444.2	609.0	1376.6	2825.8	2930.0	6529.5	10390.3	9198.1	4891.4	1814.8
80°	306.8	300.7	303.7	402.0	2280.2	2949.7	3350.1	5284.4	4107.2	1290.5	849.3
82.5°	258.4	255.3	267.4	252.4	772.1	3347.0	2801.6	2754.8	1934.2	695.1	405.1
85°	170.8	166.2	219.1	229.7	367.2	2658.1	3013.2	2165.4	1441.5	371.7	172.3
87.5°	83.1	84.6	125.4	155.7	194.9	841.8	2886.2	1712.1	1113.7	161.7	69.5
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°	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6	6012.6
2.5°	5916.0	5870.6	5829.8	5778.5	5739.2	5705.9	5660.6	5659.1	5651.6	5662.2	5665.1
5°	5784.5	5709.1	5594.1	5465.7	5375.0	5255.6	5139.2	5100.0	5056.2	5051.6	5065.3
7.5°	5586.5	5468.7	5272.3	5075.8	4879.4	4678.4	4488.0	4391.2	4297.6	4268.9	4282.5
10°	5365.9	5216.4	4915.7	4595.2	4318.7	4019.5	3729.4	3542.0	3371.3	3298.7	3316.9
12.5°	5193.6	5003.3	4580.1	4164.6	3750.6	3321.4	2939.1	2568.9	2289.3	2163.9	2171.4
15°	5045.6	4802.3	4265.8	3712.7	3194.5	2606.7	2076.3	1647.1	1402.4	1311.6	1308.6
17.5°	4885.4	4590.7	3937.9	3292.7	2620.2	1893.5	1390.3	1136.4	1039.6	1009.4	1009.4
20°	4714.6	4373.1	3594.9	2834.8	2015.9	1322.2	1045.7	947.5	911.2	902.2	900.7
22.5°	4556.0	4160.0	3250.4	2346.8	1458.2	1003.3	890.0	852.2	846.2	853.8	853.8
25°	4430.6	3972.6	2901.4	1833.0	1060.8	840.2	791.8	787.3	809.9	837.2	841.8
27.5°	4336.8	3805.0	2556.7	1338.9	834.0	731.4	714.8	734.4	787.3	841.8	852.2
30°	4271.9	3661.4	2144.2	962.6	695.1	640.7	648.2	683.0	763.0	846.2	868.9
32.5°	4243.2	3545.0	1728.7	738.9	593.9	563.7	583.3	628.6	711.8	794.9	822.0
35°	4270.4	3460.5	1344.9	613.5	519.8	497.1	519.8	566.6	621.0	661.9	678.5
37.5°	4368.6	3430.2	1012.4	544.0	471.5	448.8	467.0	498.7	522.8	538.0	545.5
40°	4575.7	3462.0	793.3	507.7	444.2	418.6	423.2	438.2	454.8	467.0	468.4
42.5°	4905.0	3566.2	705.7	494.2	427.6	394.4	386.9	397.3	415.5	432.2	435.2
45°	5343.4	3740.0	696.6	498.7	420.1	374.8	359.7	370.2	394.4	421.6	426.1
47.5°	5910.0	4015.1	738.9	522.8	424.6	364.2	341.6	352.1	383.8	420.1	426.1
50°	6580.9	4395.8	817.5	559.1	445.8	364.2	334.0	343.1	376.3	417.1	423.2
52.5°	7371.1	4926.2	899.1	595.4	476.1	377.8	336.9	335.4	365.7	403.5	411.1
55°	8243.1	5585.0	977.7	627.1	492.6	395.9	344.5	326.3	350.6	380.8	386.9
57.5°	9269.1	6487.2	1115.2	657.3	501.7	409.5	353.6	317.3	330.9	352.1	356.6
60°	10660.9	7812.5	1382.6	708.6	518.3	415.5	355.1	308.2	306.8	321.9	323.4
62.5°	12475.7	9364.3	1638.1	769.1	551.5	417.1	349.1	302.2	287.2	291.6	291.6
65°	13766.2	9935.5	1564.0	820.5	581.8	415.5	343.1	297.7	271.9	264.4	264.4
67.5°	13031.8	8776.5	1328.3	834.0	584.7	398.9	329.4	287.2	258.4	240.3	240.3
69°	11952.9	7693.1	1219.5	809.9	560.6	379.2	314.3	276.5	249.3	228.2	228.2
70°	11073.4	6872.5	1153.0	781.2	531.9	362.6	300.7	265.9	240.3	222.2	220.6
72.5°	8267.2	4586.1	985.2	673.9	436.7	306.8	263.0	237.2	216.2	204.0	204.0
75°	4362.6	2298.4	806.9	550.0	336.9	244.8	216.2	199.5	187.4	185.8	184.3
77.5°	1429.5	1039.6	580.2	414.1	247.8	190.4	172.3	161.7	160.2	166.2	166.2
80°	772.1	621.0	373.2	279.6	172.3	142.0	133.0	131.4	136.0	145.1	145.1
82.5°	374.8	306.8	222.2	172.3	117.9	104.3	104.3	105.8	111.8	122.4	122.4
85°	161.7	145.1	128.5	96.7	72.5	65.0	74.1	81.6	86.1	93.6	96.7
87.5°	77.0	68.0	58.9	37.8	31.6	33.3	39.4	48.4	57.5	63.5	65.0
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)