

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: P270596

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270596  
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-05-D-UNV-SL3-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 800mA 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: 21080.2 lumens  
Efficiency: N/A  
Efficacy: 100.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 210  
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

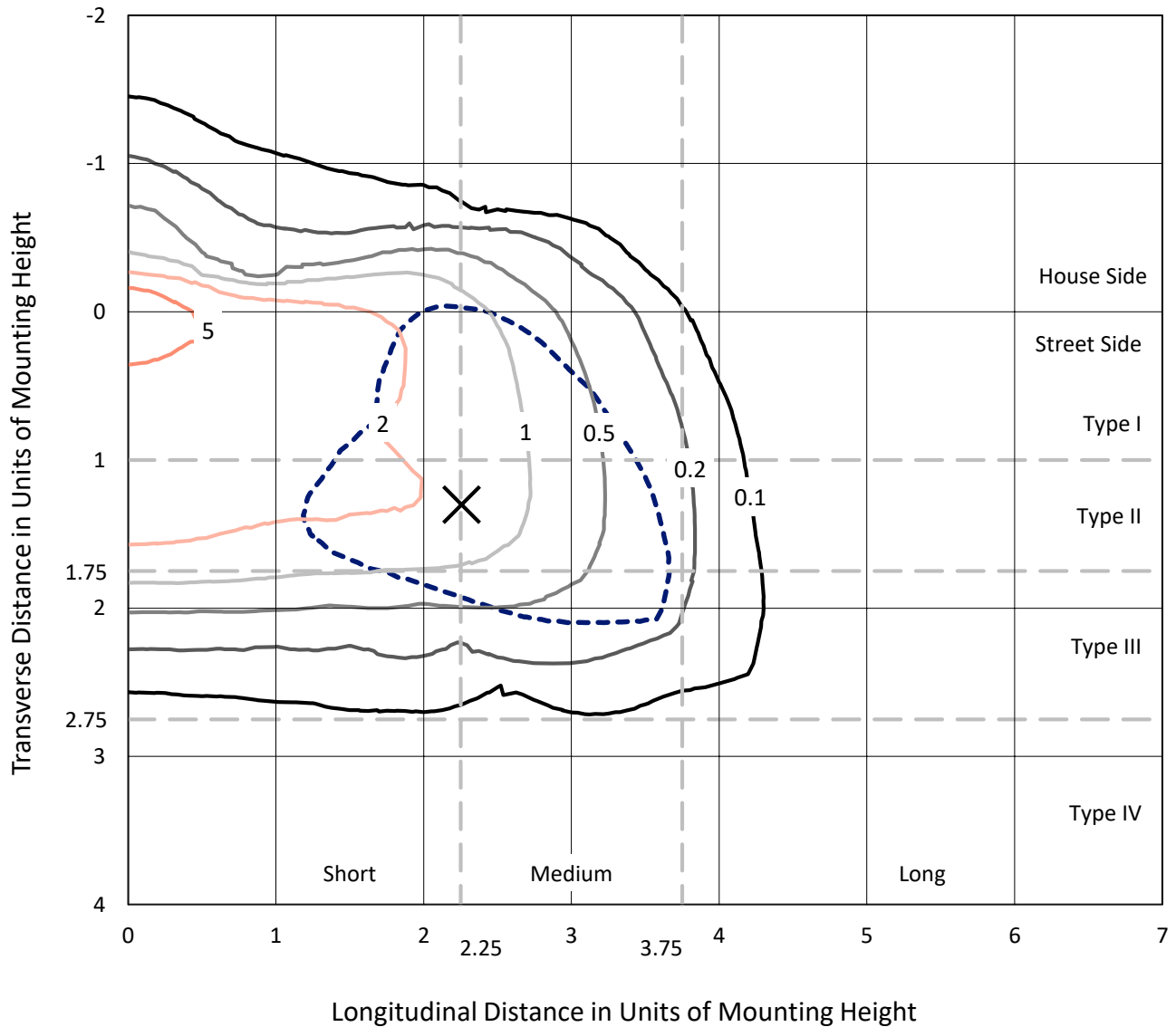


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### Iso-Footcandle Lines of Horizontal Illumination

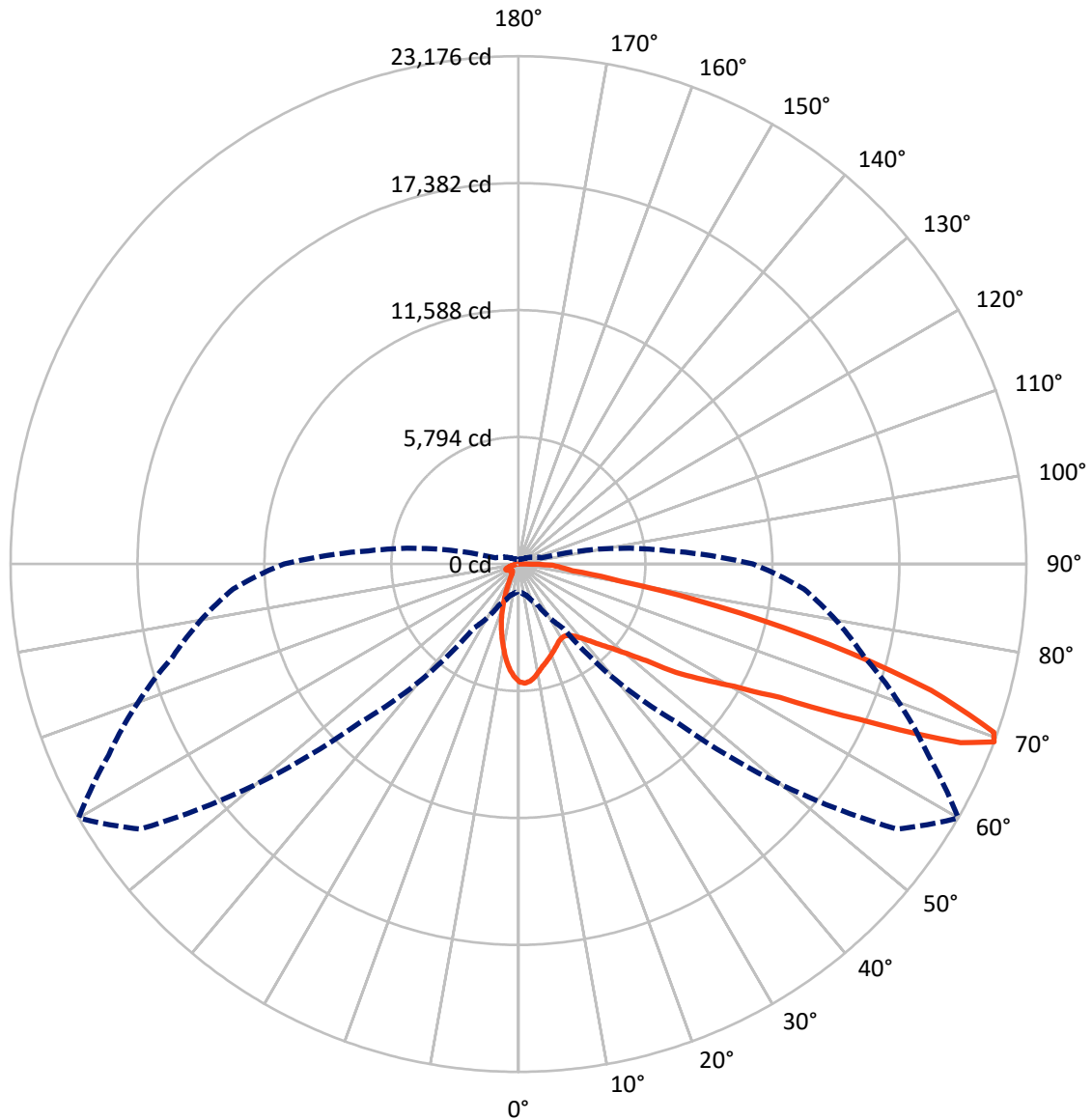
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.6 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	3006.7	0.0	3006.7
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	18073.5	0.0	18073.5
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	21080.2	0.0	21080.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	456.3	2.2
10°-20°	977.0	4.6
20°-30°	1246.3	5.9
30°-40°	1715.1	8.1
40°-50°	2778.1	13.2
50°-60°	4360.1	20.7
60°-70°	5812.8	27.6
70°-80°	3233.2	15.3
80°-90°	501.5	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°	21080.2	100.0
0°-180°	21080.2	100.0

**Coefficient of Utilization**



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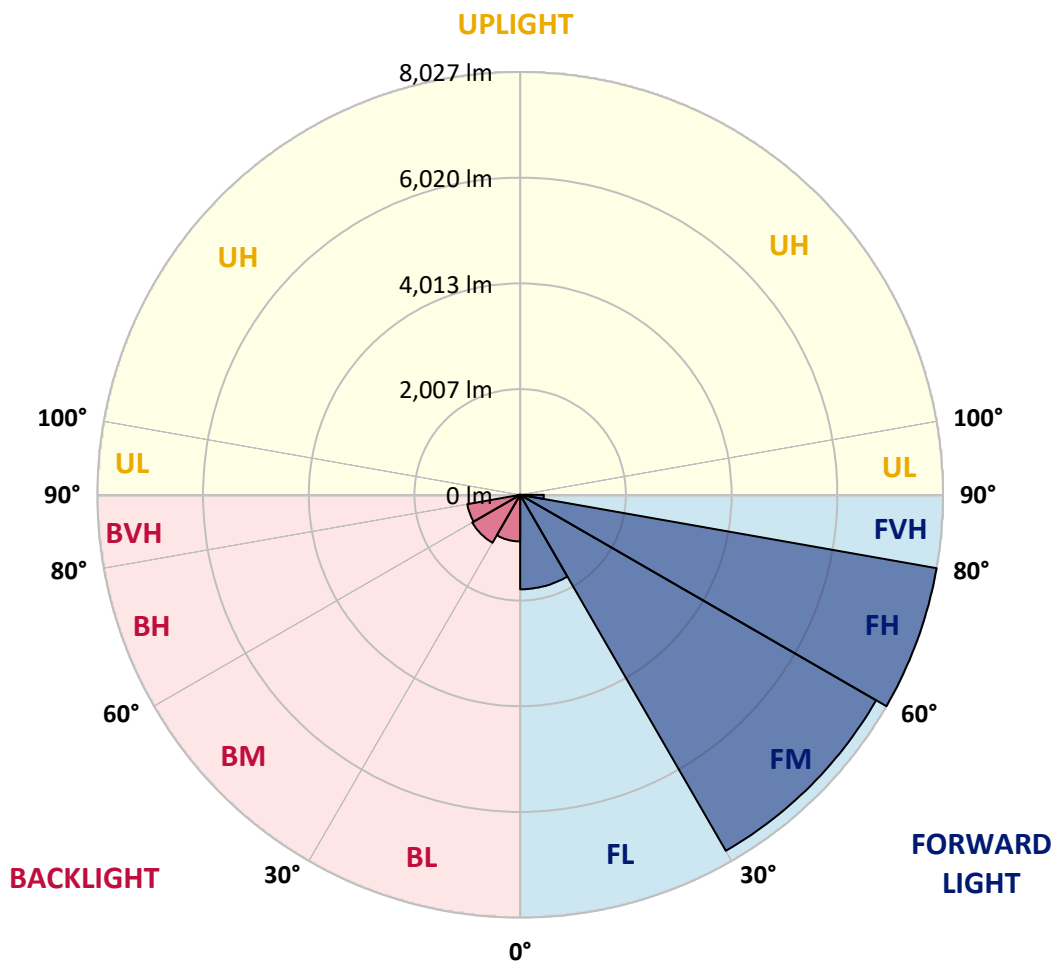
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1793.5	8.5			
FM	(30°-60°)	7802.8	37.0			
FH	(60°-80°)	8026.5	38.1			G4/12000
FVH	(80°-90°)	450.6	2.1			G3/500
BL	(0°-30°)	886.1	4.2	B2/1000		
BM	(30°-60°)	1050.4	5.0	B2/2500		
BH	(60°-80°)	1019.4	4.8	B3/2500		G3/2500
BVH	(80°-90°)	50.8	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°	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7
2.5°	5522.1	5536.9	5536.9	5524.7	5517.8	5478.8	5455.8	5439.5	5411.1	5358.4	5311.0
5°	5324.7	5353.0	5365.1	5370.5	5405.7	5393.6	5395.0	5384.1	5359.7	5303.1	5225.9
7.5°	4962.3	4967.7	4989.4	5025.8	5111.0	5170.6	5219.2	5228.7	5223.3	5181.3	5073.2
10°	4605.5	4615.0	4640.6	4702.7	4784.0	4869.1	4974.5	5017.8	5050.2	5036.6	4900.2
12.5°	4309.4	4310.7	4339.3	4410.9	4501.3	4608.1	4751.4	4819.0	4896.1	4927.3	4774.4
15°	4024.1	4043.1	4070.2	4156.6	4268.8	4404.1	4569.0	4662.3	4763.6	4852.9	4677.1
17.5°	3807.9	3822.7	3839.0	3910.7	4040.4	4209.4	4413.6	4513.5	4647.4	4784.0	4577.1
20°	3689.0	3694.4	3682.2	3717.4	3826.9	4009.3	4245.8	4366.2	4525.8	4717.7	4474.4
22.5°	3664.6	3664.6	3620.0	3613.3	3661.9	3816.0	4072.8	4220.2	4414.9	4671.7	4382.4
25°	3778.2	3770.0	3686.3	3609.2	3591.7	3670.0	3907.9	4089.2	4320.3	4670.4	4313.5
27.5°	3993.1	3982.4	3878.3	3748.4	3636.2	3602.5	3780.8	3966.0	4245.8	4716.3	4278.4
30°	4260.8	4256.7	4151.2	3989.1	3804.0	3629.5	3730.9	3902.5	4196.0	4801.5	4277.0
32.5°	4554.0	4535.3	4470.3	4308.1	4067.4	3779.6	3760.7	3905.2	4182.4	4925.9	4308.1
35°	4866.4	4852.9	4836.7	4673.1	4402.8	4044.4	3891.7	3998.5	4248.7	5098.9	4395.9
37.5°	5263.8	5248.9	5275.9	5097.5	4801.5	4392.0	4113.3	4185.1	4383.8	5350.3	4559.5
40°	5970.8	5927.6	5851.7	5577.3	5266.6	4817.7	4433.9	4444.6	4615.0	5686.9	4821.7
42.5°	7132.0	6992.6	6618.3	6114.0	5757.1	5312.4	4851.4	4800.2	4934.0	6131.7	5203.0
45°	8295.8	8139.1	7506.3	6699.4	6265.5	5843.7	5367.9	5244.8	5331.4	6649.3	5693.6
47.5°	9047.4	8970.4	8256.6	7284.6	6798.1	6422.3	5958.5	5755.8	5818.1	7236.0	6299.3
50°	9267.8	9201.5	8640.4	7742.9	7301.0	7121.1	6689.9	6420.9	6431.8	7921.3	7025.1
52.5°	9102.9	9075.8	8704.0	8026.9	7763.2	7857.8	7702.3	7328.0	7238.7	8673.0	7811.9
55°	8882.5	8892.0	8748.7	8312.0	8233.7	8544.6	9027.1	8725.6	8347.2	9455.6	8631.0
57.5°	8188.9	8195.7	8571.5	8855.4	9131.2	9507.0	10058.5	9931.4	9490.9	10300.4	9549.0
60°	6594.0	6646.6	7483.4	8743.3	10157.1	11403.5	11538.6	11319.7	10707.3	11273.8	10742.6
62.5°	4710.9	4758.2	5727.5	7590.1	10036.9	13550.2	14272.0	13401.5	12358.0	12729.6	12421.5
65°	2475.1	2466.9	3217.2	5244.8	8453.9	14047.5	18578.7	17097.3	15138.4	14731.6	14043.6
67.5°	1382.9	1427.4	1718.1	2645.4	5509.8	12363.4	21329.5	21766.2	19004.5	16319.9	13973.2
69°	1278.7	1293.6	1488.3	2045.3	3591.7	10200.4	21093.0	23176.1	20634.7	16326.7	13072.9
70°	1242.3	1258.4	1435.6	1884.4	3017.1	8358.0	20231.9	23011.3	21030.8	15964.4	12253.8
72.5°	1113.9	1135.5	1307.2	1693.8	2542.7	4308.1	16297.0	19695.2	19050.4	13953.0	9501.6
75°	950.2	986.8	1246.3	1681.5	2408.8	2738.8	10868.2	14673.5	14178.7	9978.7	5390.9
77.5°	393.4	397.4	544.7	1231.4	2527.8	2621.1	5841.0	9294.8	8228.3	4375.6	1623.4
80°	274.4	269.0	271.6	359.6	2039.8	2638.6	2996.8	4727.2	3674.1	1154.4	759.6
82.5°	231.1	228.4	239.3	225.7	690.7	2994.2	2506.2	2464.3	1730.2	621.7	362.2
85°	152.7	148.7	196.0	205.4	328.5	2377.8	2695.5	1937.0	1289.5	332.6	154.1
87.5°	74.4	75.6	112.2	139.2	174.5	752.9	2581.9	1531.6	996.3	144.6	62.3
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°	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7
2.5°	5292.2	5251.6	5215.1	5169.1	5134.1	5104.3	5063.7	5062.4	5055.7	5065.2	5067.8
5°	5174.5	5107.0	5004.3	4889.4	4808.3	4701.5	4597.3	4562.2	4523.1	4519.0	4531.1
7.5°	4997.5	4892.1	4716.3	4540.7	4364.9	4185.1	4014.7	3928.3	3844.4	3818.8	3830.9
10°	4800.2	4666.3	4397.4	4110.7	3863.4	3595.7	3336.1	3168.5	3015.8	2950.9	2967.1
12.5°	4646.0	4475.7	4097.2	3725.5	3355.1	2971.2	2629.2	2298.0	2048.0	1935.8	1942.4
15°	4513.5	4296.0	3816.0	3321.4	2857.7	2331.8	1857.3	1473.4	1254.5	1173.4	1170.6
17.5°	4370.3	4106.7	3522.8	2945.5	2343.9	1693.8	1243.7	1016.5	930.0	902.9	902.9
20°	4217.5	3911.9	3215.8	2535.9	1803.3	1182.8	935.5	847.6	815.1	806.9	805.7
22.5°	4075.6	3721.4	2907.6	2099.2	1304.5	897.5	796.2	762.4	757.0	763.7	763.7
25°	3963.4	3553.9	2595.5	1639.6	948.9	751.6	708.4	704.4	724.6	748.8	752.9
27.5°	3879.6	3403.8	2287.3	1197.7	746.2	654.2	639.5	657.0	704.4	752.9	762.4
30°	3821.5	3275.3	1918.2	861.0	621.7	573.2	579.9	610.9	682.6	757.0	777.3
32.5°	3795.8	3171.2	1546.4	661.1	531.3	504.2	521.7	562.2	636.7	711.0	735.4
35°	3820.1	3095.6	1203.1	548.9	465.1	444.8	465.1	507.0	555.6	592.1	607.0
37.5°	3907.9	3068.5	905.8	486.6	421.8	401.5	417.7	446.1	467.7	481.2	488.0
40°	4093.1	3096.8	709.8	454.3	397.4	374.5	378.5	392.0	406.9	417.7	419.1
42.5°	4387.9	3190.2	631.2	442.1	382.6	352.9	346.0	355.5	371.8	386.6	389.3
45°	4779.8	3345.6	623.2	446.1	375.9	335.2	321.8	331.1	352.9	377.2	381.2
47.5°	5286.7	3591.7	661.1	467.7	379.9	325.7	305.6	314.9	343.3	375.9	381.2
50°	5887.0	3932.3	731.3	500.1	398.8	325.7	298.7	306.9	336.5	373.1	378.5
52.5°	6594.0	4406.7	804.3	532.5	425.7	337.9	301.4	300.2	327.2	360.8	367.6
55°	7373.8	4996.2	874.6	561.0	440.7	354.1	308.2	291.9	313.6	340.6	346.0
57.5°	8291.7	5803.1	997.6	588.0	448.9	366.2	316.4	283.9	296.0	314.9	319.0
60°	9536.8	6988.6	1236.8	633.9	463.6	371.8	317.7	275.8	274.4	287.9	289.3
62.5°	11160.3	8377.0	1465.3	688.0	493.3	373.1	312.3	270.4	256.8	260.9	260.9
65°	12314.7	8887.9	1399.1	734.0	520.5	371.8	306.9	266.3	243.4	236.6	236.6
67.5°	11657.7	7851.0	1188.2	746.2	523.2	356.8	294.6	256.8	231.1	215.0	215.0
69°	10692.5	6881.8	1090.9	724.6	501.6	339.3	281.2	247.4	223.0	204.2	204.2
70°	9905.8	6147.8	1031.4	698.9	475.8	324.4	269.0	238.0	215.0	198.7	197.4
72.5°	7395.6	4102.6	881.3	602.9	390.7	274.4	235.1	212.2	193.3	182.4	182.4
75°	3902.5	2056.0	721.9	492.0	301.4	218.9	193.3	178.5	167.7	166.2	164.8
77.5°	1278.7	930.0	519.1	370.5	221.7	170.3	154.1	144.6	143.3	148.7	148.7
80°	690.7	555.6	333.9	250.1	154.1	127.1	118.9	117.6	121.7	129.7	129.7
82.5°	335.2	274.4	198.7	154.1	105.5	93.2	93.2	94.6	100.0	109.6	109.6
85°	144.6	129.7	115.0	86.4	64.9	58.1	66.3	73.0	77.1	83.8	86.4
87.5°	68.9	60.8	52.7	33.7	28.3	29.7	35.2	43.3	51.4	56.8	58.1
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)