

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: P196581

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-SL2-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18841.8 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

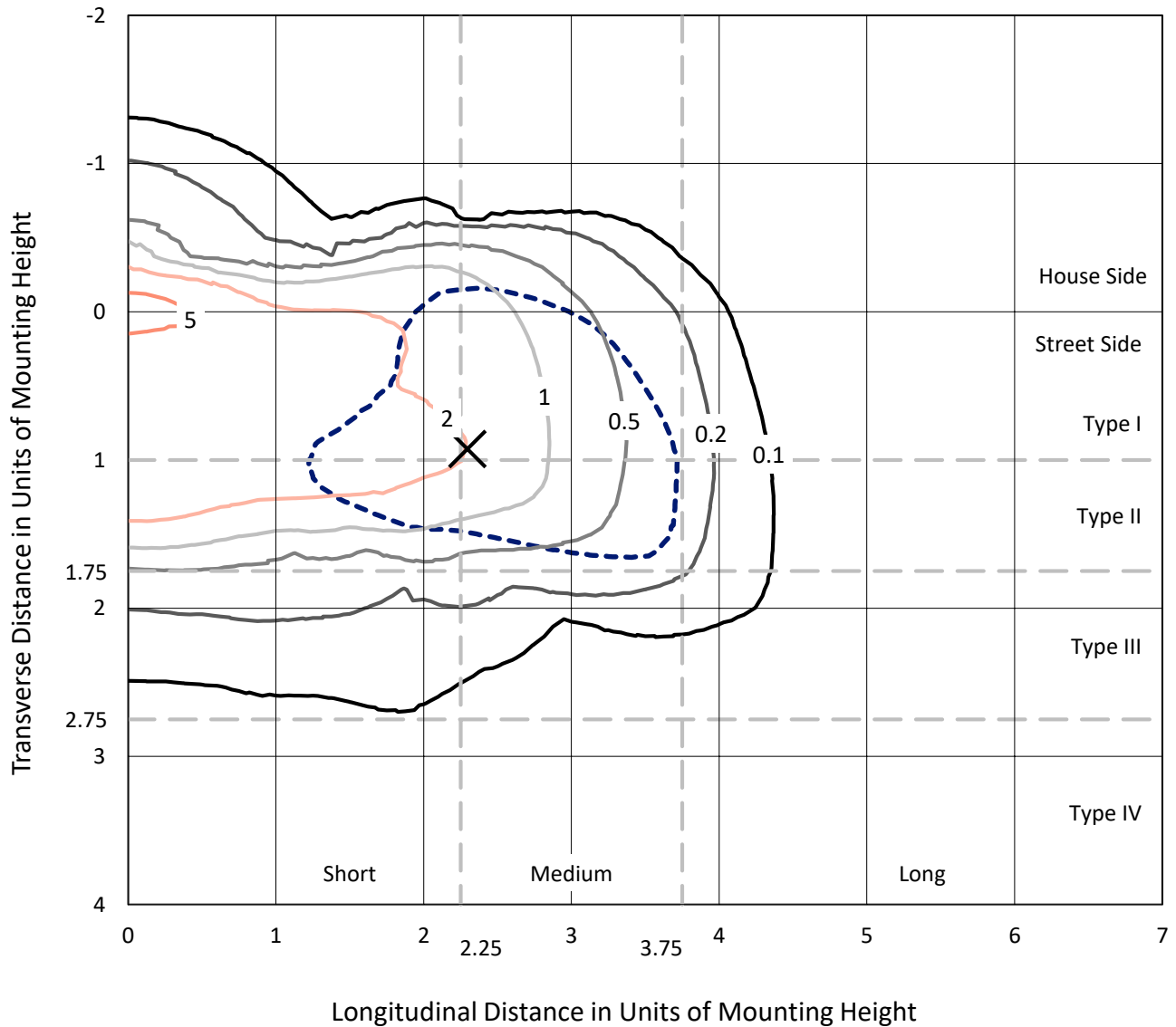
Input Watts (W): 191  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

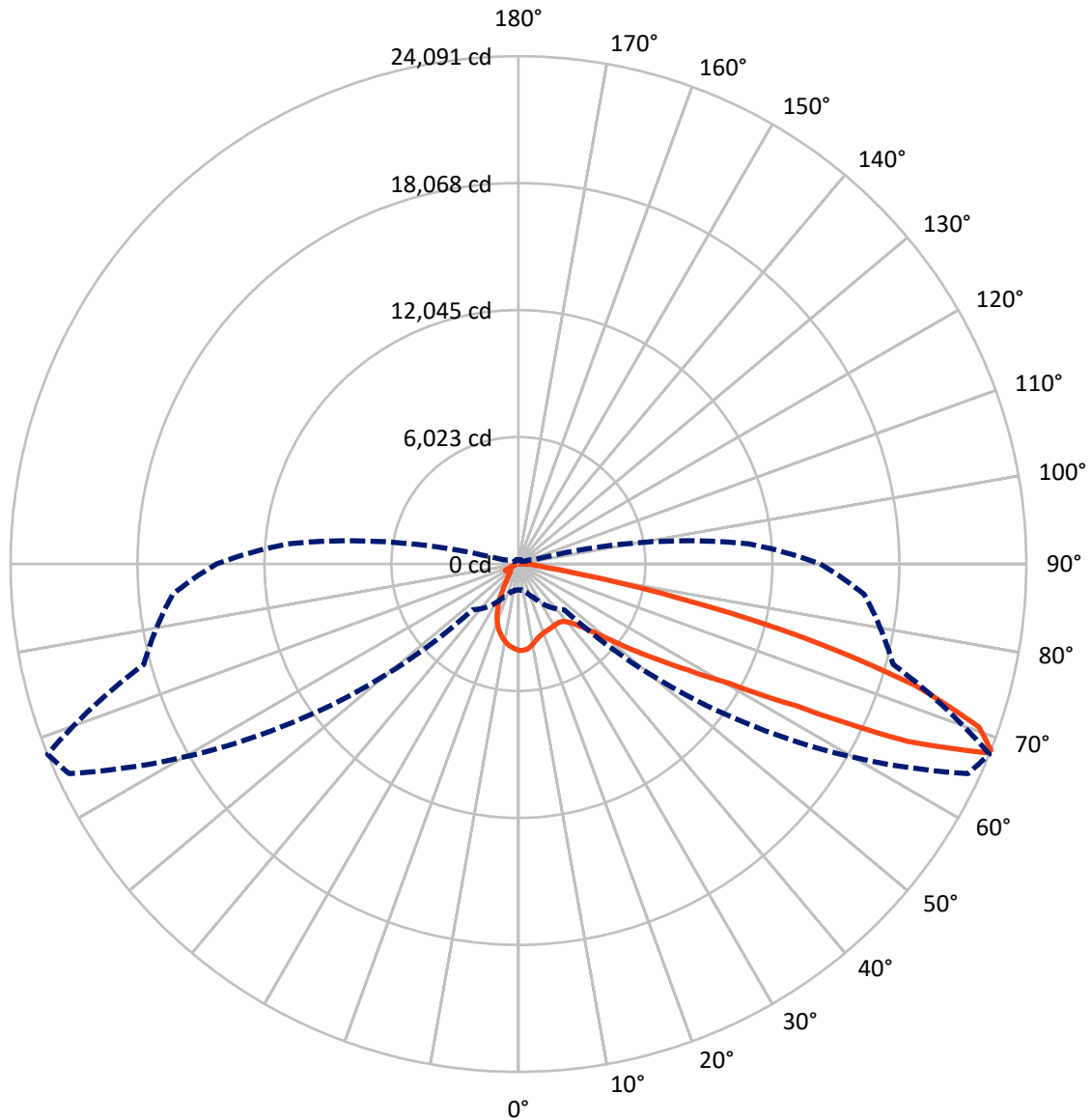
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3082.6	0.0	3082.6
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	15759.2	0.0	15759.2
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	18841.8	0.0	18841.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.3	1.9
10°-20°	814.8	4.3
20°-30°	1101.9	5.8
30°-40°	1553.7	8.2
40°-50°	2554.8	13.6
50°-60°	3960.2	21.0
60°-70°	5134.7	27.3
70°-80°	2946.5	15.6
80°-90°	423.9	2.2
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°	18841.8	100.0
0°-180°	18841.8	100.0



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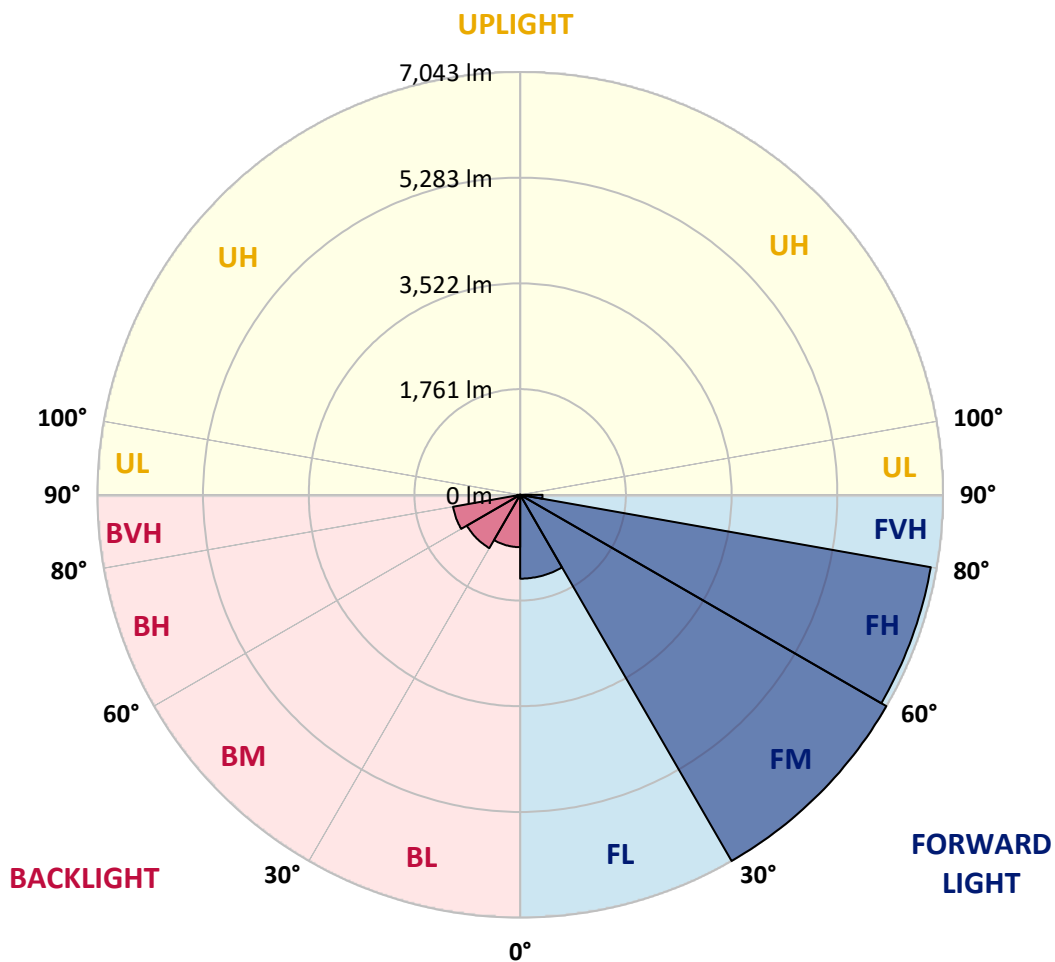
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1396.5	7.4			
FM	(30°-60°)	7043.4	37.4			
FH	(60°-80°)	6945.9	36.9			G3/7500
FVH	(80°-90°)	373.4	2.0			G3/500
BL	(0°-30°)	871.5	4.6	B2/1000		
BM	(30°-60°)	1025.3	5.4	B2/2500		
BH	(60°-80°)	1135.3	6.0	B3/2500		G3/2500
BVH	(80°-90°)	50.5	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9
2.5°	3990.2	4022.3	4022.3	4045.7	4066.5	4083.8	4098.6	4098.6	4098.6	4088.7	4080.1
5°	3570.6	3613.6	3619.8	3678.9	3756.5	3851.2	3957.1	4050.6	4069.1	4103.4	4117.0
7.5°	3278.9	3292.4	3315.8	3356.5	3435.2	3552.1	3718.2	3927.5	3977.9	4086.3	4142.9
10°	3072.1	3083.2	3102.9	3143.5	3214.9	3320.7	3484.4	3756.5	3840.1	4032.1	4144.1
12.5°	2920.7	2929.3	2947.9	2984.8	3057.3	3152.1	3319.6	3602.6	3706.0	3977.9	4161.3
15°	2802.5	2817.2	2832.1	2867.7	2941.6	3032.7	3202.5	3490.5	3602.6	3934.9	4193.4
17.5°	2755.7	2763.1	2765.6	2784.0	2850.6	2942.9	3112.7	3411.7	3527.4	3900.4	4218.0
20°	2785.3	2786.5	2762.0	2749.6	2787.8	2872.7	3037.6	3352.7	3470.8	3869.6	4227.8
22.5°	2914.5	2914.5	2850.6	2796.4	2770.5	2823.5	2987.1	3312.0	3440.1	3846.3	4227.8
25°	3160.7	3149.6	3050.0	2942.9	2828.4	2806.3	2955.1	3286.2	3416.7	3833.9	4211.8
27.5°	3484.4	3474.6	3347.8	3189.1	2982.2	2843.2	2944.1	3265.3	3393.3	3815.5	4177.3
30°	3878.2	3869.6	3725.6	3517.6	3212.4	2960.1	2969.8	3250.6	3374.9	3784.7	4119.5
32.5°	4270.8	4265.9	4151.6	3938.6	3529.9	3158.2	3037.6	3248.1	3364.9	3747.8	4049.3
35°	4665.9	4665.9	4595.8	4416.2	3957.1	3456.1	3179.1	3293.6	3383.4	3728.2	3989.0
37.5°	5249.4	5226.0	5095.6	4909.7	4494.9	3842.5	3408.2	3389.7	3454.9	3761.4	3969.3
40°	6152.8	6085.0	5758.9	5446.2	5081.9	4337.4	3742.9	3575.5	3614.9	3874.6	4016.2
42.5°	7098.0	6991.0	6559.0	6059.2	5688.8	4947.8	4182.2	3877.1	3875.8	4093.6	4165.1
45°	7909.2	7853.8	7386.0	6752.2	6381.8	5634.6	4737.4	4325.0	4280.8	4433.3	4451.8
47.5°	8380.5	8343.6	8061.7	7485.7	7203.9	6445.7	5441.3	4946.6	4862.9	4954.0	4925.6
50°	8250.0	8285.7	8204.5	7910.4	8087.6	7585.5	6338.6	5798.3	5639.5	5730.6	5661.7
52.5°	7563.3	7659.3	7731.8	7788.5	8595.9	9110.4	7466.0	6861.7	6730.1	6714.0	6647.6
55°	6326.3	6479.0	6707.9	7123.9	8459.3	10335.1	9435.3	8147.9	7955.9	7854.9	7880.9
57.5°	4305.4	4536.8	5030.3	5821.7	7749.1	10856.9	12347.4	9809.6	9484.6	9125.2	9208.8
60°	2371.8	2565.0	3152.1	3949.6	6128.2	10779.4	14928.4	12509.8	11487.1	10534.4	10706.8
62.5°	1534.8	1576.6	2013.5	2697.9	3761.4	9516.6	16362.2	17023.2	14855.8	12392.9	12635.4
65°	1233.2	1262.8	1476.9	2176.0	2620.4	6122.1	16426.2	21705.2	20276.3	14918.6	14925.9
67.5°	1204.9	1218.5	1342.8	1830.2	2457.9	3333.1	14198.6	23551.4	23882.4	17899.5	16458.3
68°	1222.2	1238.2	1363.8	1773.6	2456.7	3072.1	13122.8	23523.1	24090.5	18398.0	16458.3
70°	1078.2	1097.8	1390.8	1835.1	2352.1	2641.4	8986.0	22273.8	23187.1	19543.9	15616.4
72.5°	563.7	547.7	688.0	1448.7	2647.5	2752.0	4747.2	18608.5	19674.4	18100.2	13492.0
75°	439.4	400.0	385.2	572.3	2328.7	2854.2	2757.0	13226.2	14031.2	13047.7	9018.0
77.5°	413.5	365.6	337.3	338.4	1025.3	2969.8	2230.2	7783.6	7783.6	6224.2	2877.6
80°	332.3	288.0	269.6	307.7	494.8	2737.3	2327.4	3547.2	3025.3	1608.7	792.6
82.5°	219.1	195.7	196.8	249.8	375.5	1827.7	2695.4	1751.4	1315.7	712.6	466.4
85°	139.1	119.4	133.0	174.9	280.6	814.7	2668.3	1217.2	871.5	400.0	232.6
87.5°	70.2	54.2	66.4	91.1	171.1	233.9	2196.9	1086.8	646.2	166.2	126.7
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°	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9	4099.9
2.5°	4080.1	4053.1	4039.6	4017.4	3990.2	3963.2	3944.7	3936.1	3931.1	3933.7	3932.5
5°	4109.7	4074.0	4016.2	3933.7	3848.7	3758.8	3689.9	3637.0	3603.8	3594.0	3591.5
7.5°	4131.7	4080.1	3971.8	3821.7	3676.3	3518.9	3384.8	3277.7	3205.0	3171.8	3170.6
10°	4128.2	4061.6	3890.6	3669.0	3456.1	3224.7	3014.3	2834.5	2704.0	2641.4	2638.8
12.5°	4131.7	4040.7	3790.9	3490.5	3185.4	2854.2	2541.6	2262.2	2067.7	1975.4	1971.7
15°	4146.6	4018.5	3688.7	3291.2	2869.0	2401.3	1954.5	1603.7	1426.5	1366.2	1366.2
17.5°	4145.3	3981.6	3570.6	3059.8	2493.7	1867.1	1334.2	1117.6	1100.4	1155.8	1164.3
20°	4120.7	3922.5	3417.9	2785.3	2053.0	1292.3	904.6	873.8	1011.7	1164.3	1181.5
22.5°	4082.6	3846.3	3241.9	2466.5	1539.7	841.9	697.8	744.6	931.8	1121.2	1148.4
25°	4029.6	3753.9	3040.0	2096.0	1024.0	605.6	582.2	640.0	771.7	898.4	918.3
27.5°	3952.1	3637.0	2819.8	1694.8	653.6	498.4	507.1	547.7	604.3	658.5	669.5
30°	3854.8	3500.4	2579.7	1250.5	496.0	445.6	460.3	484.9	509.5	544.0	551.4
32.5°	3756.5	3361.4	2330.0	859.1	433.2	417.3	432.0	445.6	466.4	489.8	494.8
35°	3667.9	3232.1	2072.6	599.4	406.1	398.8	406.1	414.7	435.7	459.1	461.5
37.5°	3603.8	3126.2	1804.3	473.8	390.2	382.7	386.4	390.2	414.7	449.3	453.0
40°	3595.1	3056.1	1532.4	425.9	377.8	367.9	365.6	367.9	400.0	439.4	443.0
42.5°	3678.9	3059.8	1266.6	406.1	367.9	356.9	347.1	352.1	380.3	411.1	413.5
45°	3877.1	3145.9	1036.4	397.6	359.4	350.8	336.0	338.4	352.1	367.9	370.5
47.5°	4226.5	3334.3	860.3	392.7	352.1	344.6	326.1	318.8	320.0	328.7	328.7
50°	4785.3	3649.4	753.3	387.7	345.8	332.3	311.4	296.6	293.0	297.8	299.1
52.5°	5618.6	4189.6	701.6	377.8	334.8	316.3	293.0	278.2	272.0	277.0	277.0
55°	6744.8	5052.4	677.0	364.3	321.2	296.6	275.7	263.5	258.5	262.1	262.1
57.5°	8028.5	6173.7	718.8	345.8	304.0	275.7	260.9	252.3	248.7	252.3	253.6
60°	9553.5	7640.8	1006.9	322.5	285.5	257.2	248.7	243.6	241.3	245.0	245.0
62.5°	11580.6	9592.9	1558.1	304.0	265.8	240.1	237.5	235.1	232.6	236.3	236.3
65°	13769.0	11368.9	1603.7	293.0	248.7	225.2	226.5	226.5	224.0	227.7	227.7
67.5°	14465.6	11215.0	896.0	279.3	227.7	210.5	215.3	215.3	214.1	217.9	216.7
68°	14317.9	10971.4	780.3	275.7	224.0	206.8	211.8	212.9	211.8	215.3	214.1
70°	13217.5	9632.3	513.2	254.8	208.0	194.5	201.8	203.1	201.8	206.8	205.5
72.5°	10911.0	7224.8	379.1	222.8	188.4	178.4	185.8	187.1	188.4	193.3	192.0
75°	6929.4	3990.2	299.1	189.6	168.6	159.9	167.3	171.1	173.5	181.0	177.2
77.5°	1898.0	1211.1	242.4	161.2	145.2	141.5	146.5	151.5	153.8	162.5	156.3
80°	664.7	535.4	201.8	136.6	120.6	119.4	124.3	129.3	131.6	139.1	131.6
82.5°	403.7	349.5	161.2	107.1	94.7	93.5	99.7	104.7	107.1	107.1	102.1
85°	210.5	184.6	118.1	75.1	65.2	61.5	72.6	78.7	80.0	78.7	75.1
87.5°	118.1	104.7	62.9	35.7	29.5	30.8	38.1	46.8	50.5	49.2	46.8
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)