

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: P270581

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
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-RW-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26696.3 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B4 - U0 - G4

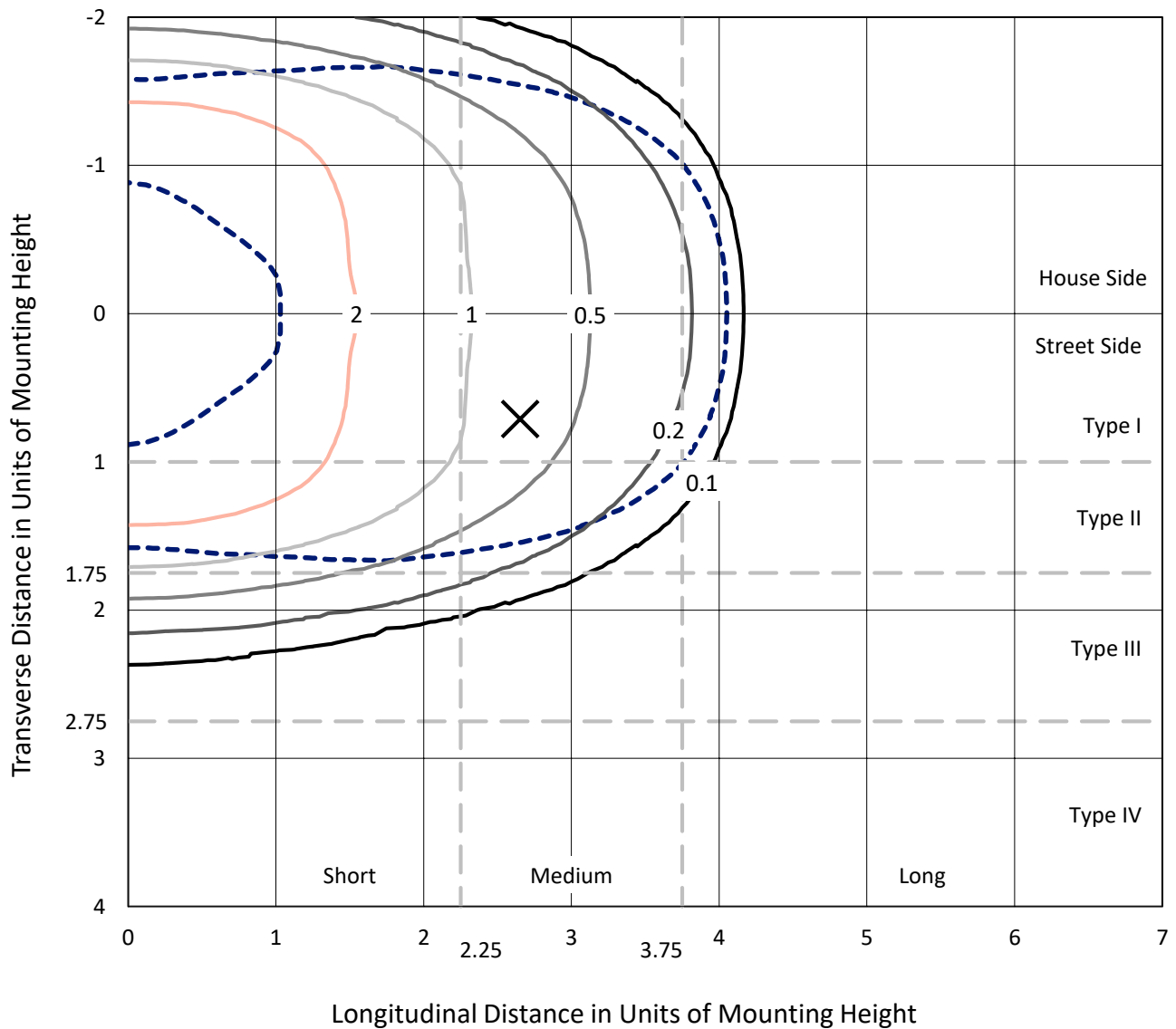
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

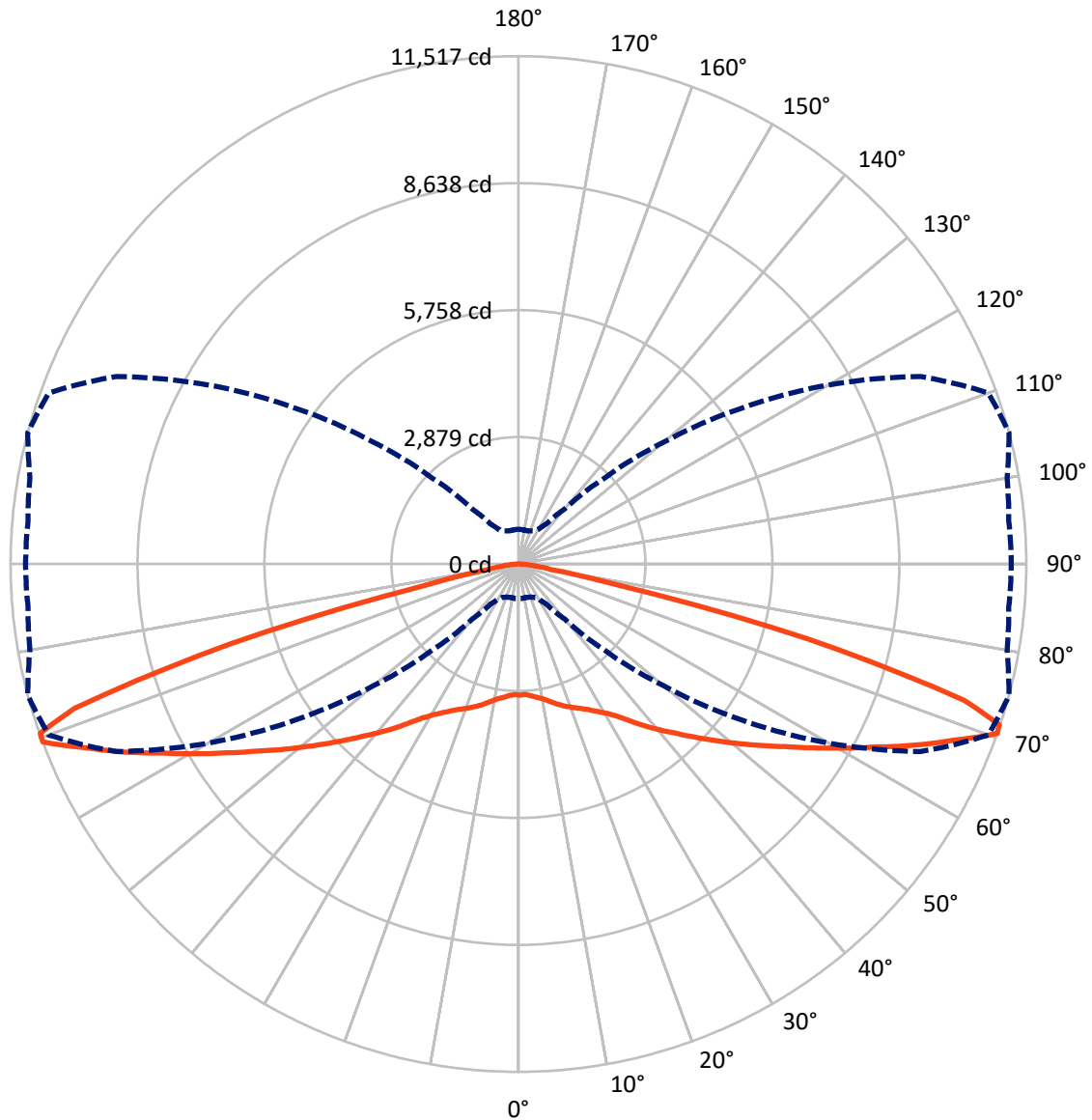
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	13348.1	0.0	13348.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	13348.1	0.0	13348.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	26696.3	0.0	26696.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.2	1.1
10°-20°	884.4	3.3
20°-30°	1661.0	6.2
30°-40°	2925.9	11.0
40°-50°	4849.1	18.2
50°-60°	6745.8	25.3
60°-70°	6368.2	23.9
70°-80°	2719.9	10.2
80°-90°	257.0	1.0
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°	26696.3	100.0
0°-180°	26696.3	100.0



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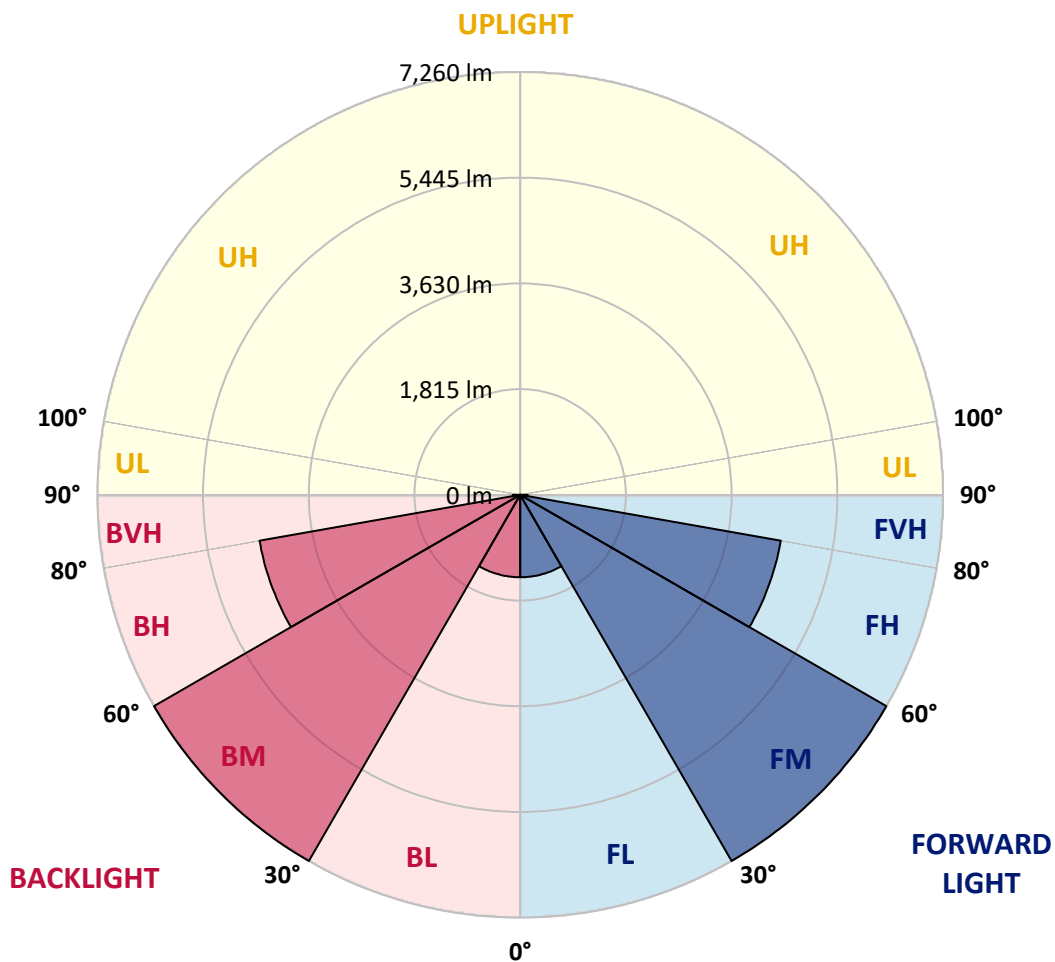
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1415.3	5.3			
FM	(30°-60°)	7260.4	27.2			
FH	(60°-80°)	4544.0	17.0			G2/5000
FVH	(80°-90°)	128.5	0.5			G2/225
BL	(0°-30°)	1415.3	5.3	B3/2500		
BM	(30°-60°)	7260.4	27.2	B4/8500		
BH	(60°-80°)	4544.0	17.0	B4/5000		G4/5000
BVH	(80°-90°)	128.5	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9
2.5°	2991.3	2989.6	2991.3	2986.2	2987.9	2986.2	2986.2	2979.6	2979.6	2976.3	2971.2
5°	2957.8	2961.3	2961.3	2961.3	2966.3	2966.3	2972.9	2974.6	2979.6	2984.6	2987.9
7.5°	2902.7	2904.3	2909.3	2912.7	2922.6	2936.1	2949.4	2964.5	2977.9	2994.6	3013.1
10°	2855.8	2859.1	2867.5	2875.8	2894.2	2911.0	2934.5	2957.8	2981.2	3009.7	3038.2
12.5°	2830.6	2835.7	2849.1	2862.4	2890.9	2912.7	2944.5	2981.2	3013.1	3039.9	3071.7
15°	2834.1	2835.7	2854.2	2872.5	2912.7	2942.8	2987.9	3031.4	3069.9	3100.1	3136.8
17.5°	2882.5	2885.8	2904.3	2931.1	2969.5	3008.1	3056.6	3101.7	3153.6	3188.8	3232.2
20°	2977.9	2982.9	3003.0	3031.4	3073.3	3113.4	3163.7	3210.5	3264.0	3305.9	3349.3
22.5°	3101.7	3110.1	3131.9	3167.0	3208.7	3257.3	3309.1	3357.7	3407.9	3449.8	3486.5
25°	3267.3	3277.3	3300.8	3335.9	3377.7	3429.5	3483.2	3533.4	3585.2	3616.9	3647.1
27.5°	3489.8	3506.5	3531.6	3560.2	3597.0	3652.1	3702.4	3744.1	3794.4	3829.5	3849.5
30°	3789.3	3812.8	3832.8	3862.9	3889.8	3948.2	3988.4	4021.8	4060.2	4080.5	4085.4
32.5°	4155.6	4177.5	4197.5	4219.2	4256.1	4309.6	4348.1	4366.5	4386.6	4383.2	4364.9
35°	4568.9	4585.7	4597.3	4635.9	4696.1	4731.3	4759.6	4766.3	4769.7	4734.5	4699.5
37.5°	5003.9	5024.0	5034.0	5094.3	5151.2	5191.2	5204.7	5219.7	5209.7	5151.2	5087.6
40°	5474.0	5495.7	5525.8	5577.8	5644.7	5683.1	5699.8	5698.2	5689.9	5621.2	5517.5
42.5°	5935.7	5962.5	5987.7	6077.9	6133.2	6198.5	6206.7	6205.1	6186.6	6108.0	5987.7
45°	6327.2	6359.0	6410.8	6511.3	6599.8	6678.5	6710.2	6722.0	6703.6	6620.0	6482.8
47.5°	6650.2	6671.8	6737.1	6859.3	6973.1	7088.4	7152.0	7197.2	7195.6	7135.2	6989.7
50°	6871.0	6896.1	6976.3	7113.5	7255.7	7391.3	7516.7	7618.7	7667.4	7623.7	7488.4
52.5°	6934.6	6966.3	7071.6	7235.7	7401.2	7583.6	7771.0	7951.6	8060.4	8087.3	7981.8
55°	6666.9	6702.0	6855.9	7083.5	7356.1	7625.4	7909.8	8167.5	8391.6	8495.5	8453.6
57.5°	5887.2	5912.4	6108.0	6402.5	6792.4	7265.9	7744.3	8216.0	8600.8	8870.1	8917.0
60°	4655.9	4687.6	4901.8	5213.0	5656.4	6255.3	6924.5	7697.3	8452.0	9069.3	9375.4
62.5°	3141.8	3163.7	3369.5	3653.8	4139.0	4716.1	5462.4	6440.9	7516.7	8619.1	9482.5
65°	1649.6	1649.6	1788.4	1987.5	2374.0	2890.9	3655.5	4659.2	5939.1	7315.9	8759.7
67.5°	957.0	955.3	987.1	1032.2	1154.3	1363.4	1785.1	2522.9	3734.2	5336.8	6979.7
70°	789.6	784.6	779.5	779.5	798.1	829.9	910.2	1112.6	1627.8	2752.0	4294.5
71°	754.5	751.2	737.8	732.7	741.1	757.9	793.1	886.6	1155.9	1877.1	3207.0
72.5°	712.6	704.4	684.2	675.9	677.5	684.2	694.3	731.1	813.1	1067.4	1828.6
75°	649.1	629.1	603.9	592.3	587.2	585.5	585.5	595.5	614.0	644.2	749.5
77.5°	575.5	547.1	520.3	508.6	500.3	495.1	491.8	485.2	481.9	495.1	533.8
80°	486.8	456.7	435.0	428.3	423.3	413.2	399.8	386.5	378.0	384.7	408.2
82.5°	376.4	346.2	349.7	351.3	343.0	326.3	312.9	297.8	282.7	279.5	291.1
85°	299.4	284.5	274.3	296.1	277.8	257.6	239.3	214.2	179.0	147.2	160.5
87.5°	128.8	130.6	187.3	282.7	247.7	199.1	165.6	133.8	85.2	63.6	65.2
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9	2972.9
2.5°	2969.5	2969.5	2964.5	2961.3	2961.3	2961.3	2957.8	2959.5
5°	2989.6	2993.0	2996.2	2994.6	2999.7	3004.7	3003.0	3001.3
7.5°	3023.1	3033.0	3043.2	3048.2	3054.9	3061.6	3063.2	3058.2
10°	3056.6	3076.7	3091.6	3105.0	3113.4	3120.2	3125.2	3123.4
12.5°	3098.3	3126.8	3153.6	3180.3	3198.8	3208.7	3218.8	3215.5
15°	3167.0	3198.8	3232.2	3267.3	3295.8	3310.9	3325.9	3322.6
17.5°	3260.7	3289.1	3315.9	3350.9	3386.2	3402.9	3419.6	3418.0
20°	3377.7	3399.5	3414.5	3434.6	3468.0	3486.5	3501.6	3496.6
22.5°	3511.7	3518.3	3520.0	3526.7	3553.4	3575.2	3595.2	3600.2
25°	3657.1	3652.1	3642.1	3637.1	3655.5	3678.9	3704.0	3710.7
27.5°	3837.7	3821.1	3796.0	3775.9	3781.0	3811.1	3839.4	3846.3
30°	4065.4	4026.9	3973.4	3934.8	3928.2	3960.0	3990.1	4000.2
32.5°	4324.7	4272.8	4199.1	4140.6	4115.6	4144.1	4170.7	4185.8
35°	4632.5	4575.5	4486.9	4411.7	4371.5	4389.8	4436.8	4453.4
37.5°	4997.2	4918.6	4819.9	4724.5	4657.6	4660.9	4711.2	4731.3
40°	5400.4	5286.6	5161.1	5042.4	4945.3	4938.6	4983.8	4998.9
42.5°	5820.3	5674.8	5527.5	5372.0	5251.5	5229.8	5288.3	5289.9
45°	6272.1	6084.6	5902.4	5721.7	5596.1	5557.6	5614.5	5621.2
47.5°	6753.8	6519.5	6303.8	6108.0	5972.6	5912.4	5967.5	5977.6
50°	7255.7	7013.2	6762.3	6544.7	6385.8	6312.2	6377.3	6384.2
52.5°	7752.6	7523.5	7274.1	7024.8	6832.5	6748.8	6825.9	6849.1
55°	8252.8	8031.9	7797.7	7548.5	7305.9	7232.3	7315.9	7341.0
57.5°	8773.1	8560.7	8348.2	8097.2	7861.3	7749.3	7839.6	7874.7
60°	9347.0	9159.6	8958.8	8706.3	8473.6	8343.2	8420.2	8460.2
62.5°	9910.8	9872.3	9689.9	9427.3	9132.8	9002.4	9067.6	9096.0
65°	9957.6	10581.7	10573.3	10312.3	9900.7	9681.6	9700.0	9713.4
67.5°	8691.1	10123.2	11038.4	11120.3	10662.0	10319.0	10278.9	10287.2
70°	6153.2	8119.1	10061.3	11336.2	11516.8	11250.8	11163.9	11177.3
71°	4930.3	6966.3	9104.4	10819.1	11503.4	11426.5	11377.9	11413.1
72.5°	3146.9	5132.7	7213.8	9264.9	10578.4	10954.7	11009.8	11031.6
75°	1142.6	2208.4	3737.5	5355.2	6787.4	7772.7	8314.7	8358.2
77.5°	614.0	791.3	1223.0	1827.0	2295.3	2546.2	2576.3	2588.0
80°	451.7	523.6	598.9	684.2	737.8	747.7	729.5	690.9
82.5°	319.5	361.4	391.5	421.6	443.4	425.0	353.0	269.3
85°	185.7	204.2	220.9	235.9	239.3	225.8	148.8	122.1
87.5°	73.7	80.3	78.6	88.7	85.2	78.6	58.6	50.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)