

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: P196854

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196854  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22683.3 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 193  
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

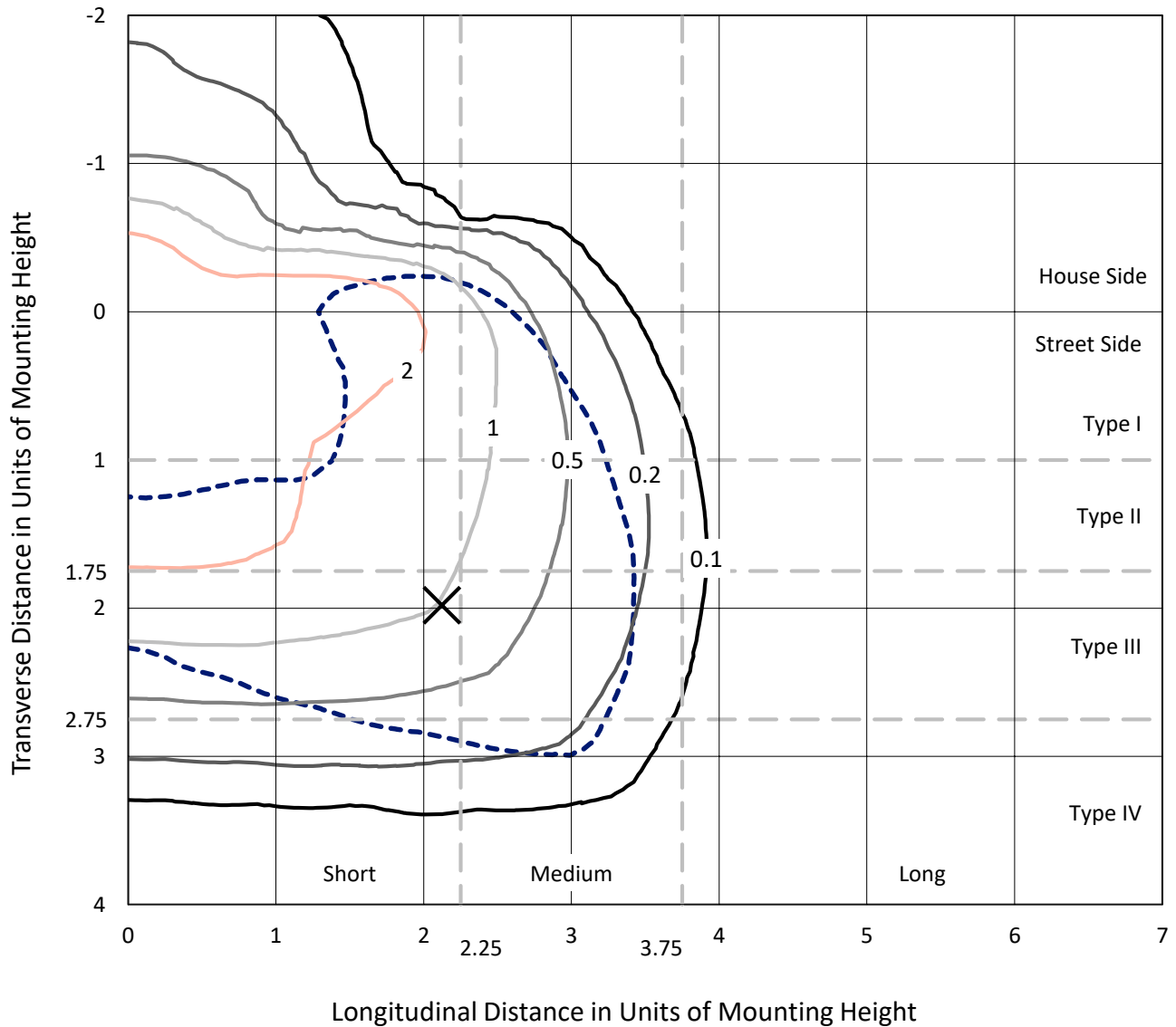


REPORT NUMBER: P196854

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-600

### Iso-Footcandle Lines of Horizontal Illumination

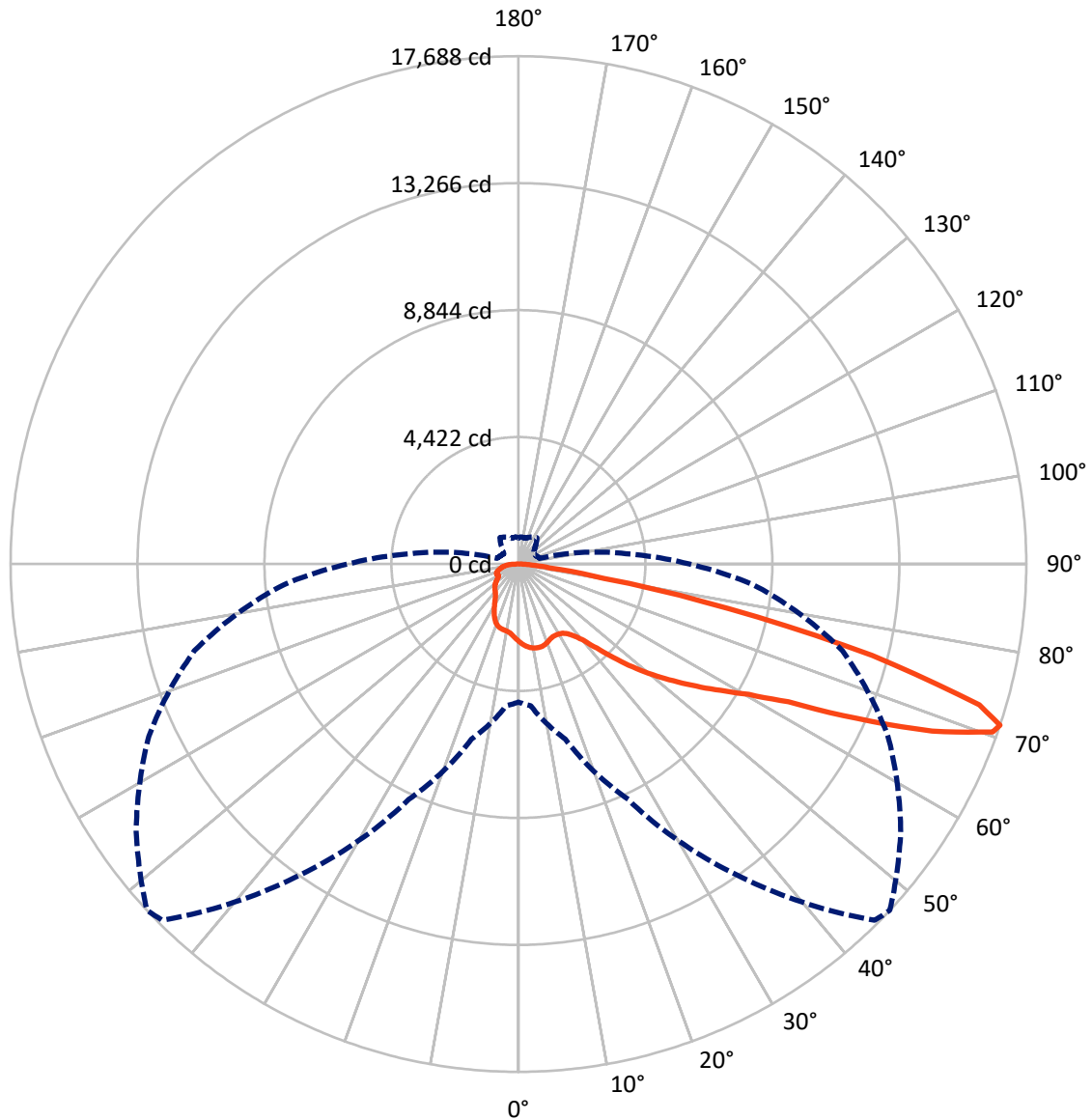
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc  
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P196854  
CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral      - - - Horizontal Cone Through 71-Deg Vertical

REPORT NUMBER: P196854

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4861.4	0.0	4861.4
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	17822.0	0.0	17822.0
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	22683.3	0.0	22683.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	257.5	1.1
10°-20°	753.5	3.3
20°-30°	1119.6	4.9
30°-40°	1607.6	7.1
40°-50°	2850.4	12.6
50°-60°	4877.4	21.5
60°-70°	6924.3	30.5
70°-80°	3792.4	16.7
80°-90°	500.6	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°	22683.3	100.0
0°-180°	22683.3	100.0



REPORT NUMBER: P196854

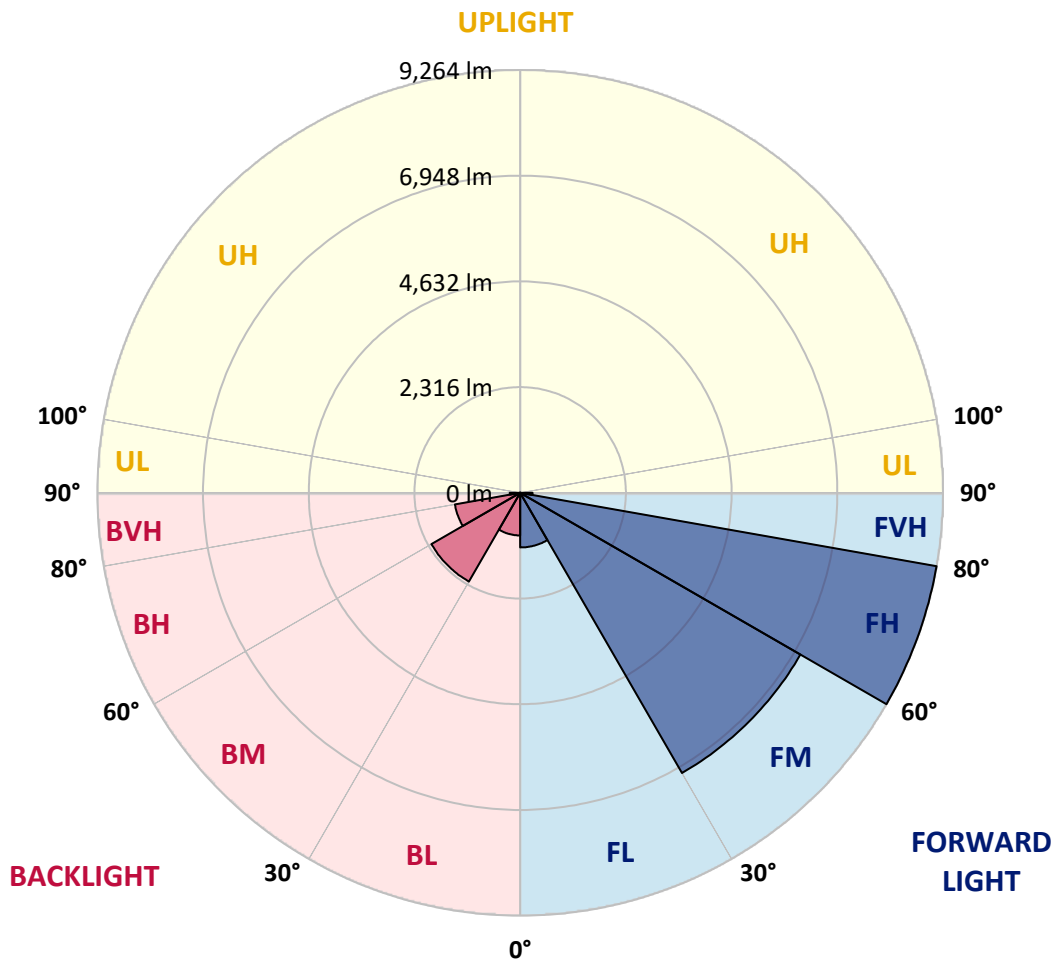
CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-600

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1197.1	5.3			
FM	(30°-60°)	7089.2	31.3			
FH	(60°-80°)	9264.1	40.8			G4/12000
FVH	(80°-90°)	271.5	1.2			G3/500
BL	(0°-30°)	933.5	4.1	B2/1000		
BM	(30°-60°)	2246.2	9.9	B2/2500		
BH	(60°-80°)	1452.5	6.4	B3/2500		G3/2500
BVH	(80°-90°)	229.1	1.0			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

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

Type IV Short





REPORT NUMBER: P196854

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4
2.5°	2862.0	2856.1	2859.1	2848.8	2823.8	2797.4	2797.4	2769.5	2740.0	2710.6	2678.3
5°	3039.9	3031.1	3023.7	2991.4	2942.9	2888.5	2879.7	2823.8	2763.6	2703.3	2644.5
7.5°	3188.4	3179.6	3157.5	3098.7	3028.1	2947.4	2937.0	2863.5	2784.2	2700.4	2618.1
10°	3294.2	3288.3	3245.8	3170.8	3088.4	2992.9	2975.2	2900.3	2806.3	2701.9	2597.4
12.5°	3353.0	3344.2	3292.7	3204.6	3107.6	3010.5	2992.9	2920.8	2813.5	2698.9	2576.9
15°	3329.5	3325.1	3276.5	3187.0	3090.0	3006.2	2991.4	2917.9	2809.2	2688.7	2557.8
17.5°	3229.6	3239.9	3201.7	3113.5	3034.0	2975.2	2959.1	2890.0	2787.1	2663.6	2528.4
20°	3091.4	3103.2	3084.1	2994.4	2948.8	2910.5	2901.7	2845.8	2750.4	2626.9	2493.1
22.5°	2944.4	2954.7	2956.1	2872.3	2857.6	2842.9	2835.6	2796.0	2718.1	2604.8	2469.6
25°	2842.9	2854.7	2857.6	2784.2	2793.0	2797.4	2796.0	2768.0	2712.2	2604.8	2472.5
27.5°	2816.4	2822.3	2819.4	2751.8	2768.0	2793.0	2794.5	2788.6	2735.7	2634.2	2513.7
30°	2907.6	2910.5	2873.8	2772.4	2788.6	2820.8	2822.3	2819.4	2785.7	2710.6	2606.3
32.5°	3301.6	3298.6	3172.3	2910.5	2854.7	2866.5	2870.9	2897.3	2900.3	2837.0	2740.0
35°	3901.3	3899.9	3752.8	3305.9	3042.9	2981.1	2987.0	3028.1	3064.9	3022.3	2966.4
37.5°	4561.3	4565.7	4476.2	3870.5	3448.6	3191.4	3185.5	3216.4	3282.4	3297.2	3304.5
40°	5293.4	5315.5	5311.1	4518.8	4017.5	3550.1	3491.3	3456.0	3583.8	3664.7	3769.0
42.5°	6129.9	6124.0	6126.9	5230.2	4667.2	4114.4	4005.7	3841.1	3989.5	4129.2	4358.5
45°	6848.7	6872.2	6889.8	5987.3	5394.9	4759.8	4649.5	4349.7	4483.5	4692.2	5042.1
47.5°	7571.8	7530.7	7563.0	6829.6	6204.9	5496.3	5353.7	4949.5	5074.4	5368.4	5900.5
50°	8414.2	8395.1	8248.1	7929.2	7183.8	6243.1	6056.3	5575.6	5758.0	6150.4	6960.4
52.5°	9169.8	9066.9	8952.2	8793.5	8146.7	6998.6	6761.9	6226.9	6562.0	7048.6	8276.1
55°	9446.1	9377.0	9515.3	9721.1	9165.3	7768.9	7504.3	6986.8	7469.0	8076.1	9823.9
57.5°	9740.1	9763.6	10075.4	10491.3	10129.7	8590.6	8303.9	7886.5	8464.2	9225.7	11554.0
60°	9887.1	9981.2	10603.1	11383.6	11046.9	9491.7	9216.8	8919.9	9568.2	10495.7	13279.9
62.5°	9912.1	10038.5	10919.1	11696.6	12309.7	10872.1	10554.6	10232.5	10947.0	11899.5	14529.4
65°	9453.4	9647.5	10891.2	12081.8	13460.6	13178.5	12977.0	12415.4	12793.2	13135.8	14742.5
67.5°	8105.5	8317.2	9813.6	11923.0	14383.9	15571.5	15533.4	14704.3	14219.2	13613.6	13162.3
70°	5949.0	6119.5	7557.3	10192.9	13981.1	17450.3	17517.9	16187.6	14617.6	12599.2	9787.2
71°	4811.2	4958.3	6313.5	9049.3	13196.2	17547.2	17688.3	16253.6	14203.0	11683.4	8193.7
72.5°	2994.4	3076.6	4192.4	6829.6	11363.0	16547.7	16785.8	15406.9	12897.6	9875.4	5791.8
75°	1130.4	1162.7	1555.2	3012.0	6782.5	12431.6	12719.8	11643.8	9061.0	5637.4	2424.0
77.5°	607.2	623.4	771.7	1252.4	2718.1	7126.6	7497.0	6641.5	4346.8	1972.6	990.8
80°	407.2	417.5	533.6	742.3	1249.5	2713.6	3022.3	2666.6	1627.3	1126.0	705.6
82.5°	263.1	269.0	363.1	488.1	807.0	954.1	1089.4	1137.7	1015.8	807.0	426.3
85°	173.5	177.9	239.6	311.6	499.8	470.4	482.2	630.7	692.3	532.1	217.5
87.5°	100.0	102.9	144.1	160.2	224.8	176.4	191.1	299.9	411.6	346.9	125.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196854

CATALOG NUMBER: NAV-AF-06-D-UNV-T4W-7030-600

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4	2697.4
2.5°	2663.6	2651.8	2625.4	2609.2	2601.9	2599.0	2596.0	2601.9	2601.9	2599.0	2593.0
5°	2615.1	2593.0	2548.9	2518.1	2501.9	2497.5	2503.3	2510.8	2515.1	2515.1	2510.8
7.5°	2579.8	2547.5	2488.7	2446.1	2421.0	2413.7	2429.9	2456.3	2473.9	2482.8	2484.2
10°	2550.4	2506.3	2441.6	2397.5	2376.9	2373.9	2394.6	2428.4	2465.2	2481.4	2484.2
12.5°	2524.0	2473.9	2403.3	2362.3	2347.6	2354.9	2382.8	2413.7	2456.3	2479.8	2481.4
15°	2499.0	2447.5	2372.6	2330.0	2327.0	2338.8	2365.3	2390.1	2422.5	2451.9	2451.9
17.5°	2469.6	2413.7	2335.9	2296.1	2296.1	2306.5	2324.1	2337.3	2357.9	2385.7	2384.4
20°	2434.3	2376.9	2297.6	2256.4	2247.6	2241.8	2241.8	2244.6	2262.3	2287.4	2291.7
22.5°	2407.8	2349.1	2265.3	2215.2	2175.6	2137.3	2121.2	2115.3	2131.4	2155.0	2160.9
25°	2407.8	2349.1	2255.0	2171.2	2074.2	2000.6	1969.8	1960.9	1977.1	1999.2	2007.9
27.5°	2447.5	2388.7	2278.5	2131.4	1953.7	1836.0	1799.3	1792.0	1806.6	1824.3	1833.1
30°	2540.2	2482.8	2346.2	2085.9	1819.8	1665.5	1624.3	1617.0	1624.3	1631.7	1641.9
32.5°	2694.5	2645.9	2456.3	2044.8	1684.6	1511.2	1461.2	1449.5	1452.4	1453.8	1462.7
35°	2945.8	2923.8	2603.3	1996.2	1556.7	1384.8	1333.3	1309.8	1308.3	1315.6	1326.0
37.5°	3331.0	3344.2	2793.0	1925.7	1450.9	1295.0	1243.6	1220.1	1208.3	1223.0	1234.7
40°	3874.9	3905.8	3012.0	1830.1	1364.1	1242.2	1187.7	1165.7	1149.5	1145.1	1151.0
42.5°	4581.9	4573.1	3235.5	1708.2	1270.0	1206.9	1149.5	1126.0	1099.5	1065.8	1058.4
45°	5419.8	5293.4	3422.1	1558.1	1162.7	1173.0	1114.2	1081.8	1040.8	990.8	984.9
47.5°	6409.1	6060.7	3536.8	1398.0	1062.8	1128.9	1074.6	1024.7	964.3	932.0	927.6
50°	7601.2	6958.9	3617.7	1234.7	973.2	1073.2	1018.8	952.5	893.7	884.9	883.5
52.5°	9012.5	8018.7	3717.5	1087.7	902.6	1001.1	962.8	895.3	848.2	852.6	852.6
55°	10513.4	9115.4	3720.5	971.7	840.9	917.2	921.7	867.3	830.6	845.2	849.6
57.5°	11882.0	10073.8	3428.0	889.4	782.1	851.1	908.5	877.6	849.6	901.1	905.5
60°	13075.5	10811.8	2798.9	821.7	733.5	826.1	937.9	940.8	934.9	1074.6	1084.8
62.5°	13512.1	10819.1	1987.4	764.4	707.0	840.9	999.6	1004.0	1004.0	1133.3	1152.4
65°	12900.6	9918.0	1323.0	730.6	689.4	873.2	1049.6	1030.5	984.9	1074.6	1054.1
67.5°	10745.6	7720.4	967.3	708.5	664.4	874.6	1093.6	1045.2	967.3	1043.7	1008.5
70°	7385.2	4912.8	809.9	688.0	635.1	836.4	1117.1	1040.8	940.8	973.2	926.1
71°	5944.6	3920.4	768.8	680.5	623.4	814.4	1120.1	1034.9	927.6	948.2	905.5
72.5°	3916.1	2415.1	718.8	664.4	605.7	776.2	1112.8	1021.7	909.9	911.4	883.5
75°	1544.9	1001.1	646.9	627.7	555.7	714.4	1080.5	993.7	876.1	846.8	835.0
77.5°	780.5	654.1	568.9	576.3	496.8	651.1	1034.9	948.2	829.1	789.4	780.5
80°	570.4	496.8	486.5	499.8	430.7	589.5	977.6	886.4	768.8	809.9	792.3
82.5°	346.9	302.8	380.8	413.1	360.1	526.3	909.9	814.4	692.3	638.0	617.5
85°	164.7	177.9	274.9	304.3	266.0	420.4	832.0	735.0	604.2	521.8	530.7
87.5°	80.9	98.5	157.4	182.3	175.0	308.6	627.7	570.4	476.3	392.5	383.7
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)