

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: P196836

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196836  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)  
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-T4FT-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28370.3 lumens  
Efficiency: N/A  
Efficacy: 113.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G4

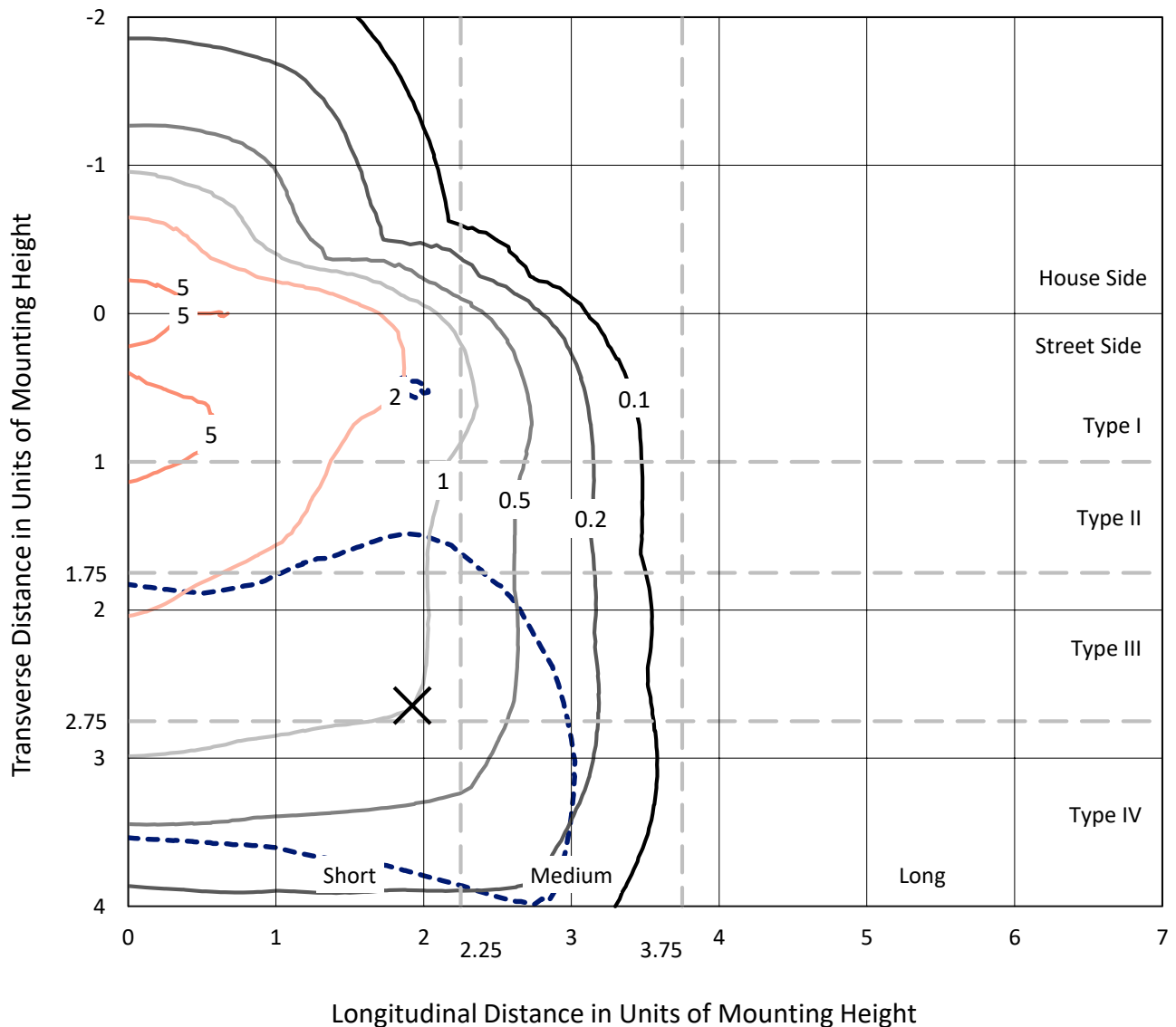
Input Watts (W): 249  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

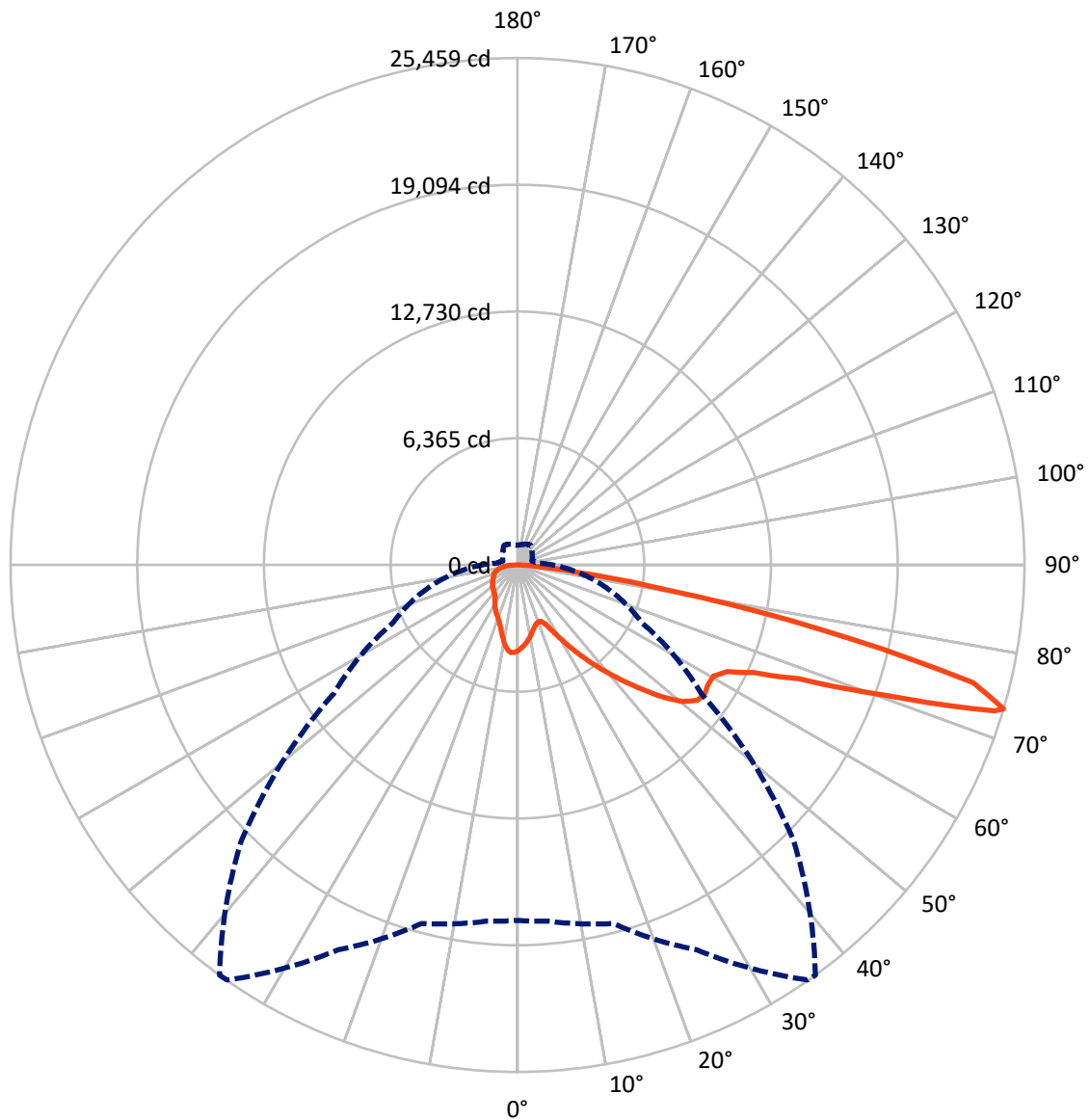
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.9 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral      - - - Horizontal Cone Through 73-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5470.6	0.0	5470.6
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	22899.6	0.0	22899.6
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	28370.3	0.0	28370.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	390.3	1.4
10°-20°	980.3	3.5
20°-30°	1571.7	5.5
30°-40°	2599.7	9.2
40°-50°	4022.7	14.2
50°-60°	5385.2	19.0
60°-70°	7034.7	24.8
70°-80°	5746.1	20.3
80°-90°	639.6	2.3
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°	28370.3	100.0
0°-180°	28370.3	100.0



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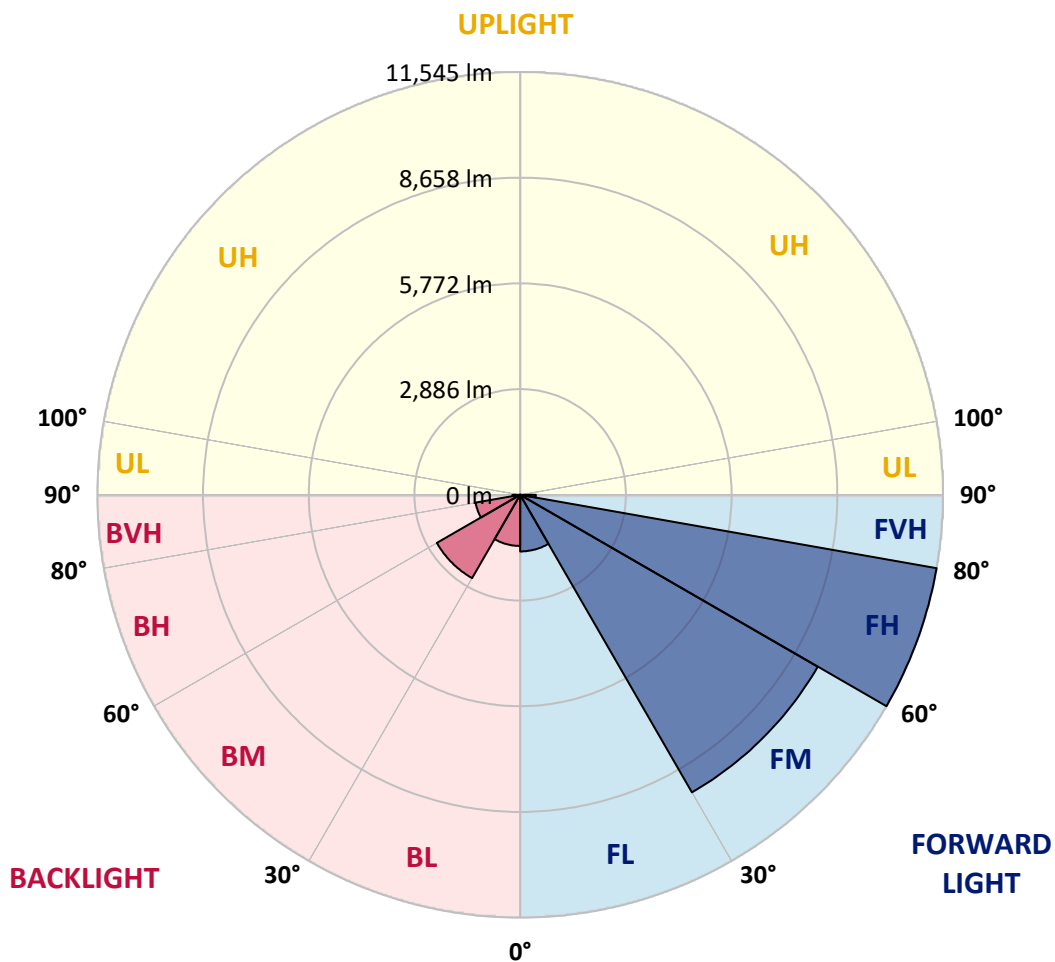
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1545.9	5.4			
FM	(30°-60°)	9380.2	33.1			
FH	(60°-80°)	11544.6	40.7			G4/12000
FVH	(80°-90°)	429.0	1.5			G3/500
BL	(0°-30°)	1396.4	4.9	B3/2500		
BM	(30°-60°)	2627.3	9.3	B3/5000		
BH	(60°-80°)	1236.2	4.4	B3/2500		G3/2500
BVH	(80°-90°)	210.6	0.7			G2/225
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2
2.5°	4133.3	4144.1	4145.9	4158.5	4158.5	4156.7	4162.1	4183.7	4194.6	4219.8	4241.5
5°	3929.5	3942.2	3947.5	3969.2	3996.2	3998.1	4017.9	4059.3	4099.0	4154.9	4201.8
7.5°	3700.6	3715.1	3729.4	3774.6	3814.2	3817.8	3855.6	3922.3	3974.7	4043.1	4127.9
10°	3479.0	3482.5	3497.0	3554.6	3606.8	3612.3	3666.4	3742.1	3812.4	3907.8	4003.5
12.5°	3296.9	3307.8	3304.1	3347.3	3392.4	3396.0	3468.1	3563.6	3666.4	3774.6	3888.1
15°	3233.7	3232.0	3194.0	3192.3	3212.1	3215.7	3286.1	3397.8	3513.1	3646.5	3792.6
17.5°	3277.0	3262.6	3163.5	3102.2	3089.6	3093.1	3145.5	3268.1	3390.7	3543.9	3718.6
20°	3515.0	3459.0	3226.5	3078.7	3037.3	3037.3	3067.9	3167.1	3302.3	3480.7	3700.6
22.5°	4079.2	3992.7	3497.0	3233.7	3087.7	3073.4	3049.9	3125.6	3275.3	3489.7	3774.6
25°	4789.4	4747.9	3992.7	3646.5	3345.5	3298.6	3143.6	3170.7	3331.1	3587.1	3976.4
27.5°	5447.3	5375.2	4643.4	4246.8	3821.4	3749.3	3421.2	3311.3	3464.5	3767.4	4268.4
30°	5831.2	5782.5	5312.0	4933.6	4427.0	4335.1	3864.6	3588.8	3702.5	4064.8	4683.0
32.5°	6249.4	6220.5	5982.6	5638.4	5083.2	4976.9	4437.9	4041.3	4066.5	4459.5	5182.2
35°	6655.0	6692.9	6557.6	6305.4	5789.7	5690.7	5207.6	4632.6	4515.3	4902.9	5715.9
37.5°	7141.7	7150.7	7066.1	6901.9	6532.4	6451.3	6053.0	5263.4	5003.8	5375.2	6231.4
40°	8113.3	7970.9	7639.2	7509.4	7289.4	7239.0	6784.8	5842.1	5458.1	5860.1	6718.2
42.5°	9164.1	8942.5	8423.4	8210.7	8122.3	8075.4	7394.0	6227.8	5883.5	6345.0	7195.9
45°	10011.3	9831.0	9322.8	9059.6	9070.3	8994.7	7925.7	6572.1	6345.0	6831.7	7729.3
47.5°	10845.9	10544.9	9975.3	9937.4	10063.7	9951.9	8434.2	6916.3	6826.2	7361.6	8262.8
50°	10900.0	10626.0	10395.3	10698.1	10914.5	10775.5	8895.6	7367.1	7325.5	8003.4	8951.4
52.5°	10242.1	10202.4	10553.9	11064.0	11422.7	11298.4	9272.3	7830.3	7835.6	8805.4	9789.6
55°	10002.3	9951.9	10373.6	11001.0	11485.8	11411.9	9553.5	8353.0	8401.7	9778.8	10689.1
57.5°	10406.1	10279.8	10362.8	10882.0	11338.1	11294.7	9845.5	8933.4	9021.7	10900.0	11520.1
60°	11658.8	11401.1	10961.3	11058.5	11343.4	11318.1	10263.7	9580.5	9728.3	12068.0	12046.4
62.5°	13535.4	13243.4	12347.4	11914.8	11851.8	11803.1	10954.2	10375.5	10449.3	12911.6	11740.0
65°	15593.8	15280.2	14214.8	13506.5	13135.1	13030.6	12068.0	11334.4	10871.2	12909.8	10546.7
67.5°	17904.7	17573.0	16511.4	15835.4	15433.4	15255.0	13876.0	12109.5	10734.1	11817.5	8439.5
70°	20271.4	19955.9	19469.4	19705.5	19882.1	19609.9	16724.0	12367.3	9750.0	9265.0	5667.2
72.5°	19015.1	18989.8	19359.3	21598.2	25003.1	25057.2	19568.5	11639.1	7532.9	5506.7	3021.0
73°	17848.8	17955.1	18640.1	21318.6	25441.1	25459.1	19624.3	11262.3	6916.3	4744.2	2653.4
75°	9247.0	9968.0	12509.6	17286.5	23557.5	23642.2	17299.0	8526.0	4122.5	2635.4	1788.1
77.5°	2476.7	2444.2	4030.5	8421.4	15705.6	15593.8	10930.7	4127.9	1975.6	1653.0	1254.7
80°	849.1	859.8	1371.8	3080.6	7331.0	7592.3	4744.2	1800.7	1299.6	1151.8	888.6
82.5°	432.5	447.0	717.4	1310.4	3066.2	3001.3	1526.8	1060.0	870.6	699.4	497.4
85°	230.7	237.9	394.8	679.6	1124.9	1137.4	537.1	566.0	553.4	396.6	245.2
87.5°	113.5	117.1	189.2	299.3	416.4	402.0	187.5	245.2	272.2	223.6	135.2
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2	4297.2
2.5°	4268.4	4268.4	4291.8	4331.5	4360.3	4387.5	4405.5	4434.3	4450.4	4448.7	4446.9
5°	4239.6	4257.7	4304.5	4353.1	4385.5	4407.2	4407.2	4419.9	4419.9	4414.4	4407.2
7.5°	4172.9	4203.5	4272.0	4315.3	4324.3	4300.9	4254.0	4218.0	4172.9	4149.4	4140.5
10°	4066.5	4106.2	4192.8	4212.6	4165.7	4082.8	3969.2	3871.8	3785.4	3745.7	3733.1
12.5°	3962.0	4014.3	4095.4	4064.8	3953.0	3790.7	3615.9	3482.5	3385.2	3347.3	3334.7
15°	3875.4	3938.6	4001.6	3906.1	3711.4	3486.1	3293.3	3168.8	3095.0	3066.2	3058.9
17.5°	3817.8	3891.7	3913.3	3734.9	3464.5	3212.1	3040.9	2959.9	2927.4	2914.7	2911.1
20°	3821.4	3904.3	3852.1	3569.1	3226.5	2972.4	2858.9	2835.4	2835.4	2835.4	2833.6
22.5°	3920.6	3992.7	3826.8	3414.1	2997.6	2770.5	2721.8	2741.7	2756.1	2756.1	2754.3
25°	4126.0	4165.7	3844.9	3264.4	2783.2	2595.7	2597.4	2635.4	2647.9	2647.9	2644.3
27.5°	4439.6	4407.2	3877.3	3098.6	2572.2	2437.0	2462.2	2496.6	2505.6	2500.2	2498.3
30°	4832.6	4702.8	3904.3	2903.9	2373.9	2289.2	2310.9	2330.7	2323.5	2310.9	2309.0
32.5°	5272.5	5003.8	3888.1	2685.8	2199.1	2136.0	2148.6	2159.4	2148.6	2118.0	2118.0
35°	5708.7	5276.0	3799.8	2447.9	2060.3	1988.2	1986.5	2020.6	2018.9	1982.8	1984.5
37.5°	6090.7	5490.6	3628.5	2229.8	1941.3	1880.1	1887.2	1908.9	1919.6	1871.1	1865.6
40°	6424.2	5638.4	3387.0	2044.1	1845.8	1849.4	1829.5	1795.3	1782.7	1761.0	1757.4
42.5°	6737.9	5741.1	3131.1	1889.1	1797.1	1838.7	1771.8	1690.8	1656.6	1676.4	1689.0
45°	7046.1	5856.6	2884.1	1761.0	1735.8	1806.2	1714.2	1624.1	1584.5	1593.4	1606.1
47.5°	7422.8	6016.9	2586.6	1624.1	1642.1	1746.6	1678.2	1580.9	1521.3	1485.3	1474.5
50°	7918.6	6249.4	2200.9	1476.3	1543.0	1681.8	1647.5	1517.7	1452.8	1380.7	1362.7
52.5°	8538.6	6469.3	1811.5	1357.3	1461.9	1625.9	1597.1	1463.6	1384.4	1297.8	1283.4
55°	9156.9	6500.0	1476.3	1254.7	1369.9	1550.2	1535.7	1420.4	1308.6	1238.4	1223.9
57.5°	9589.5	6209.7	1251.0	1168.1	1281.6	1456.4	1479.9	1368.2	1245.5	1191.5	1182.5
60°	9596.8	5515.9	1114.0	1110.4	1215.0	1375.3	1422.2	1306.8	1205.9	1169.8	1162.6
62.5°	8834.2	4445.1	1025.6	1067.1	1166.3	1308.6	1379.0	1272.7	1196.9	1182.5	1175.3
65°	7404.8	3284.3	955.4	1027.5	1121.2	1252.7	1342.9	1261.8	1193.3	1187.8	1182.5
67.5°	5467.2	2251.4	895.8	977.0	1070.7	1195.1	1308.6	1245.5	1171.7	1193.3	1186.1
70°	3439.3	1503.3	839.9	919.3	1004.0	1128.4	1263.6	1216.7	1144.6	1132.0	1108.6
72.5°	1941.3	1086.9	773.3	845.4	917.4	1040.0	1202.3	1168.1	1083.3	1032.8	1009.4
73°	1753.8	1029.2	757.0	827.4	897.7	1022.0	1187.8	1153.7	1065.3	1009.4	987.8
75°	1283.4	841.9	683.2	753.5	814.7	939.1	1119.4	1081.5	985.9	919.3	904.8
77.5°	930.2	648.9	587.6	650.7	704.8	823.9	1016.6	973.4	879.6	843.6	829.2
80°	670.6	492.1	486.6	547.9	594.8	715.6	906.7	861.6	771.5	877.8	854.4
82.5°	400.2	315.4	356.9	425.3	474.0	600.3	787.8	735.5	648.9	656.1	558.8
85°	191.1	178.4	221.7	279.3	313.7	411.1	656.1	614.7	519.1	425.3	416.4
87.5°	84.6	81.1	106.3	124.3	167.6	246.9	448.8	398.4	376.7	225.3	176.7
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)