

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: P196509

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196509
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-AFL-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19691.8 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

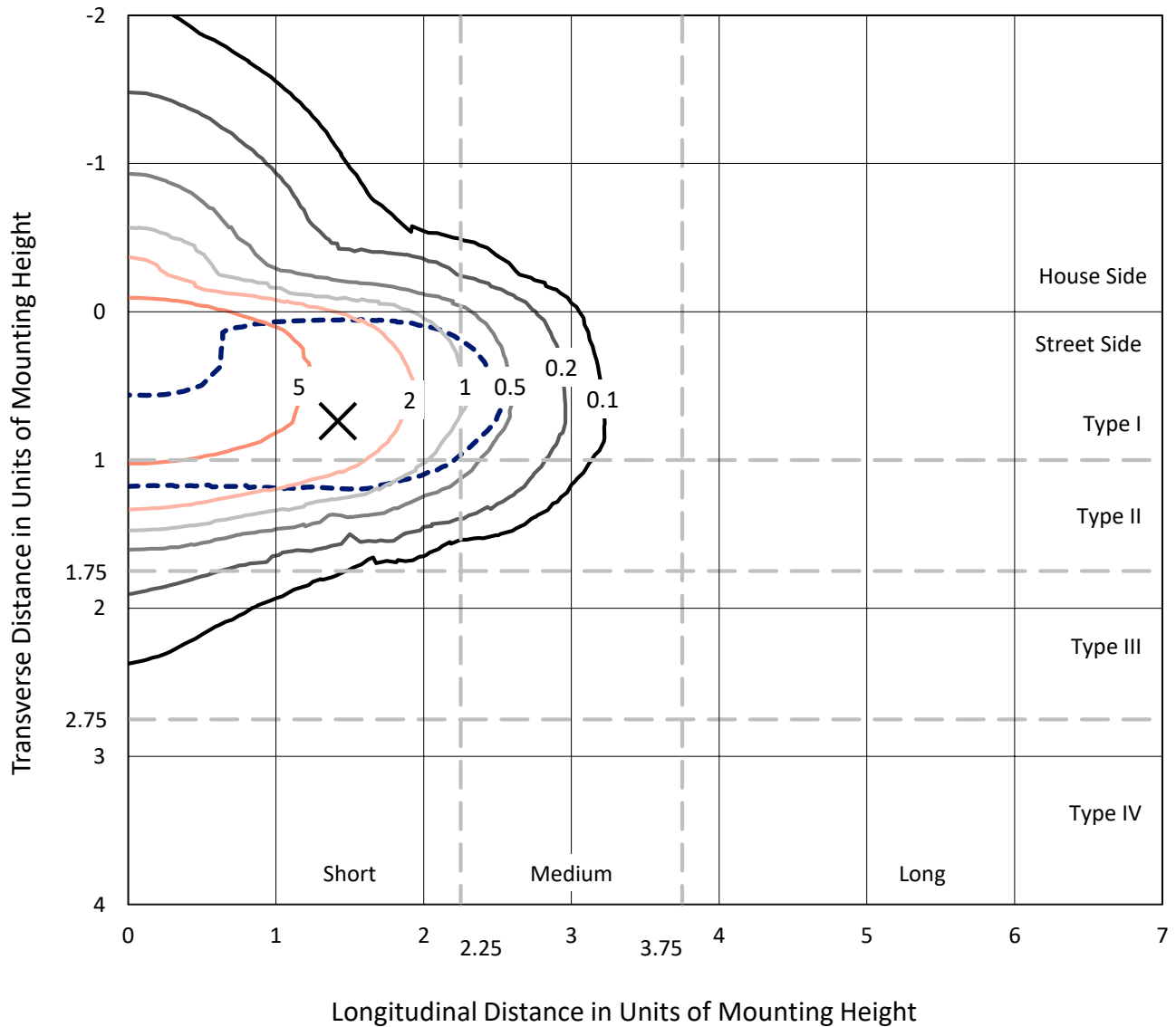
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

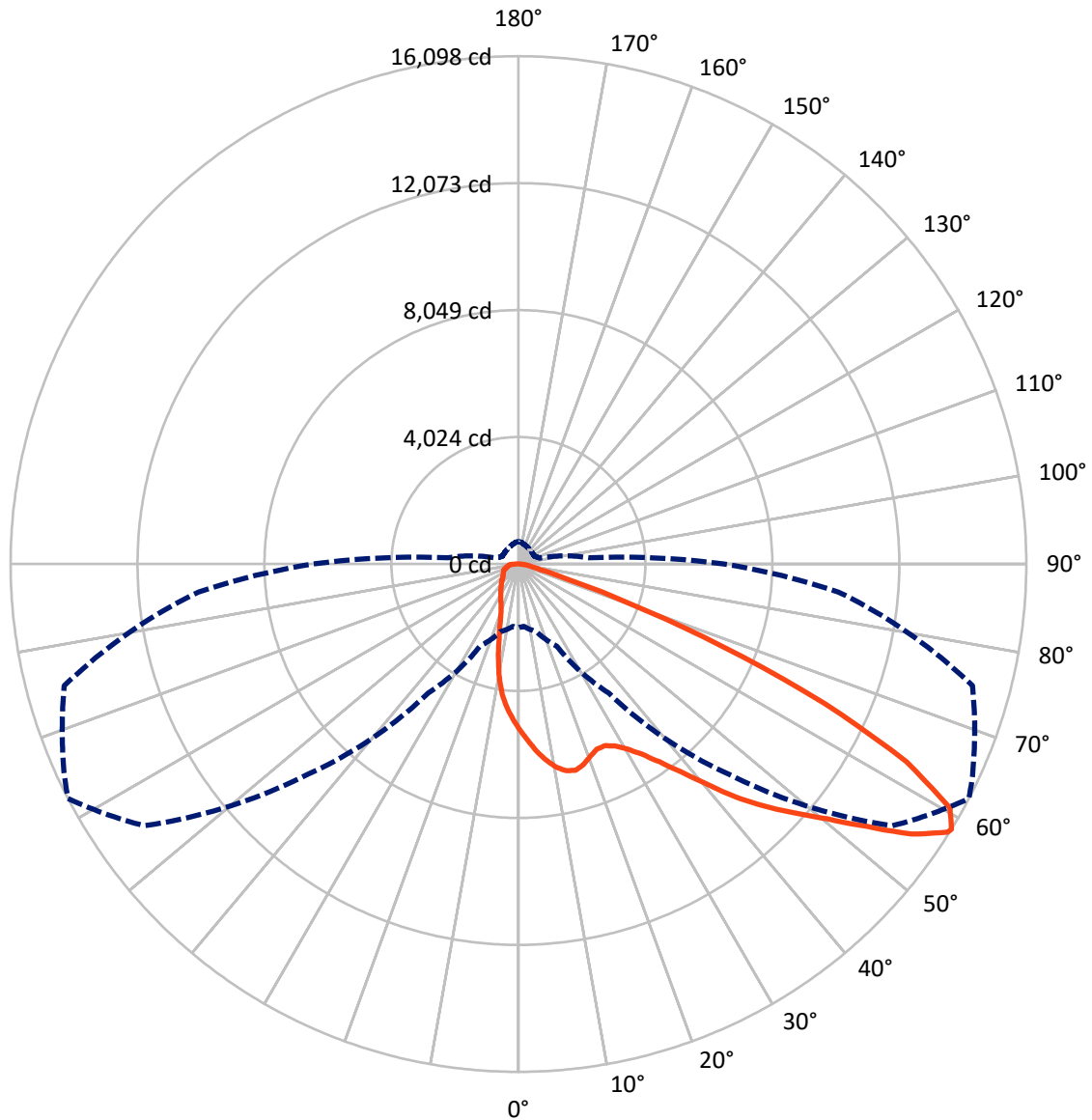
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3023.5	0.0	3023.5
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	16668.4	0.0	16668.4
	% Fixture	84.6	0.0	84.6
Total	Lumens	19691.8	0.0	19691.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	469.9	2.4
10°-20°	1186.0	6.0
20°-30°	1922.1	9.8
30°-40°	3068.7	15.6
40°-50°	4463.6	22.7
50°-60°	4670.8	23.7
60°-70°	2847.5	14.5
70°-80°	796.3	4.0
80°-90°	266.9	1.4
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°	19691.8	100.0
0°-180°	19691.8	100.0



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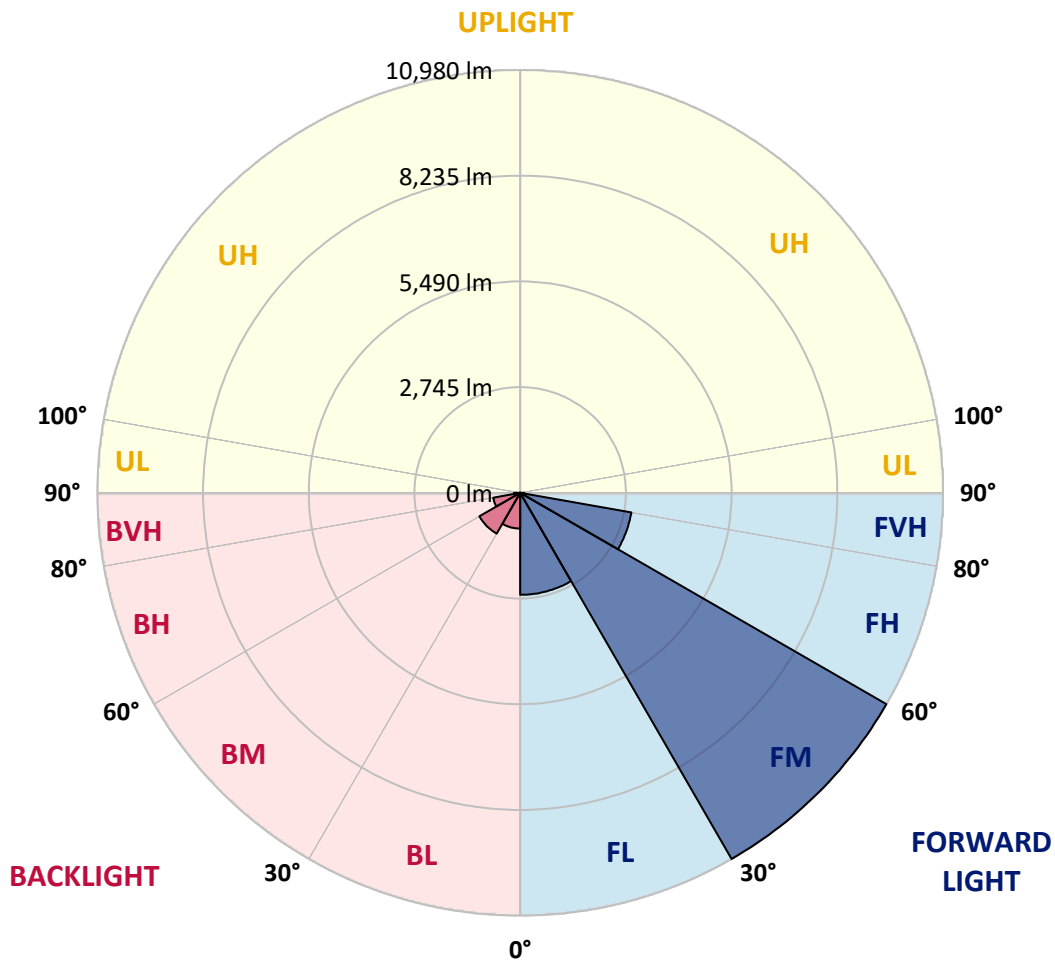
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2648.6	13.5			
FM (30°-60°)	10980.4	55.8			
FH (60°-80°)	2932.0	14.9			G2/5000
FVH (80°-90°)	107.4	0.5			G2/225
BL (0°-30°)	929.4	4.7	B2/1000		
BM (30°-60°)	1222.7	6.2	B2/2500		
BH (60°-80°)	711.8	3.6	B2/1000		G2/1000
BVH (80°-90°)	159.6	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5
2.5°	5967.7	5964.0	5913.5	5880.4	5840.9	5749.9	5658.7	5591.2	5556.6	5424.9	5297.0
5°	6461.3	6446.4	6418.1	6382.5	6330.8	6216.3	6072.3	5948.0	5898.8	5665.0	5429.8
7.5°	6200.4	6223.7	6311.1	6409.4	6513.0	6520.3	6418.1	6270.5	6216.3	5903.8	5559.1
10°	5477.9	5468.0	5577.5	5769.6	6110.5	6447.7	6616.3	6543.6	6487.0	6130.1	5688.4
12.5°	5258.7	5256.4	5274.8	5323.9	5538.2	6000.9	6565.8	6723.4	6703.7	6370.2	5826.1
15°	5325.3	5327.7	5326.5	5332.6	5391.7	5612.0	6283.9	6783.7	6845.2	6607.7	5966.4
17.5°	5538.2	5529.6	5502.6	5472.9	5481.5	5560.3	5980.0	6680.3	6864.9	6819.3	6084.6
20°	5866.7	5866.7	5794.1	5711.7	5657.6	5674.8	5853.2	6503.0	6773.8	6999.0	6173.2
22.5°	6279.0	6285.2	6178.2	6028.1	5904.9	5858.2	5925.9	6371.4	6663.0	7165.2	6252.1
25°	6791.0	6789.8	6633.4	6418.1	6223.7	6111.8	6110.5	6377.6	6628.5	7359.6	6334.5
27.5°	7424.8	7367.1	7184.9	6878.4	6603.9	6432.8	6355.4	6532.6	6701.2	7598.4	6445.2
30°	8140.0	8080.9	7842.1	7448.2	7076.6	6826.7	6698.6	6800.9	6922.7	7902.4	6612.6
32.5°	8847.6	8861.2	8580.4	8136.2	7658.6	7306.7	7117.1	7180.0	7264.8	8274.1	6839.1
35°	9883.8	9882.6	9515.8	8960.8	8393.4	7906.1	7666.0	7699.3	7776.8	8798.3	7156.6
37.5°	10656.7	10644.4	10408.0	9917.0	9278.3	8693.8	8346.7	8351.6	8418.0	9456.7	7575.1
40°	10735.5	10733.0	10731.8	10661.6	10224.7	9673.4	9239.0	9149.1	9176.1	10155.7	8019.3
42.5°	10133.7	10223.5	10481.9	10878.2	11000.1	10710.8	10299.8	10099.2	10040.2	10958.2	8489.5
45°	9275.9	9321.4	9774.3	10665.4	11390.2	11685.6	11376.6	10953.2	10852.4	11738.5	8872.2
47.5°	8877.1	8857.4	9119.6	10090.5	11352.0	12460.9	12483.1	11789.0	11617.9	12411.7	9198.3
50°	8021.7	7995.9	8326.9	9245.1	10936.1	12846.1	13619.0	12699.6	12383.3	13051.7	9493.6
52.5°	6317.3	6292.6	6736.9	7919.5	10005.6	12702.2	14576.5	13817.2	13278.1	13668.3	9769.3
55°	4110.6	4113.1	4536.3	5756.0	8096.8	11862.9	15025.7	15108.2	14503.8	14284.8	9992.1
57.5°	2263.3	2242.3	2543.9	3293.4	5570.1	9956.5	14651.5	16038.6	15723.5	14814.0	10153.4
58°	2012.2	1987.7	2220.1	2866.3	4994.2	9418.5	14463.3	16097.6	15879.8	14901.5	10176.7
60°	1433.8	1392.0	1356.2	1616.0	2877.4	6791.0	13208.0	15714.9	15925.3	15076.1	10154.5
62.5°	1208.5	1160.6	1032.6	1022.6	1355.1	3321.7	10444.9	13801.2	14390.6	14673.7	9797.6
65°	1122.4	1074.4	905.8	845.4	919.3	1433.8	6458.8	10656.7	11444.4	13274.5	8899.2
67.5°	1060.9	1004.3	823.4	744.6	759.4	857.8	2740.8	6969.5	7882.7	10351.4	7139.3
70°	1005.5	942.7	758.1	667.0	654.8	652.3	1070.7	3639.2	4519.2	6773.8	4782.5
72.5°	942.7	881.1	700.3	603.0	576.1	529.3	643.6	1504.0	2061.4	3320.5	2191.8
75°	851.6	801.2	636.3	550.1	503.3	429.5	475.1	721.2	888.6	1271.3	1017.7
77.5°	749.5	708.9	571.1	505.9	443.0	350.7	363.1	488.6	548.9	716.3	589.6
80°	530.5	545.2	498.4	445.6	390.2	283.1	279.3	358.2	393.9	481.2	396.3
82.5°	365.5	376.6	406.1	352.1	315.1	220.2	205.5	248.6	267.0	290.4	192.0
85°	260.9	253.5	281.8	252.3	231.4	140.3	131.6	157.6	168.6	177.2	92.4
87.5°	158.8	157.6	162.5	130.4	120.6	71.3	65.2	75.1	80.0	77.6	44.4
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°	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5	5257.5
2.5°	5249.0	5188.6	5056.9	4951.1	4836.7	4749.3	4661.9	4612.7	4558.6	4527.8	4524.1
5°	5306.8	5183.7	4903.1	4642.2	4373.9	4132.7	3896.4	3721.7	3578.9	3497.7	3492.8
7.5°	5370.8	5177.6	4744.4	4292.7	3815.3	3340.2	2920.5	2623.9	2433.1	2344.4	2338.3
10°	5420.1	5151.8	4551.2	3848.4	3091.5	2463.9	2082.4	1907.5	1849.8	1835.0	1832.5
12.5°	5479.2	5133.3	4307.4	3278.7	2363.0	1875.6	1759.9	1748.8	1761.2	1768.6	1769.8
15°	5534.5	5097.6	3978.9	2647.3	1849.8	1676.2	1678.7	1702.0	1726.8	1737.8	1739.0
17.5°	5560.3	5010.2	3546.9	2086.1	1618.3	1586.3	1614.7	1645.5	1667.7	1676.2	1676.2
20°	5560.3	4869.9	3046.0	1689.8	1497.7	1504.0	1538.4	1561.8	1566.7	1559.3	1555.7
22.5°	5536.9	4696.4	2558.7	1474.4	1399.3	1422.7	1449.8	1433.8	1375.9	1331.7	1323.0
25°	5516.1	4490.9	2089.7	1342.7	1313.2	1343.9	1332.9	1223.3	1134.6	1089.2	1081.7
27.5°	5481.5	4242.2	1698.3	1234.4	1229.5	1254.1	1144.6	1038.7	994.4	969.7	964.9
30°	5472.9	3972.7	1421.5	1138.4	1147.0	1112.6	987.0	952.5	942.7	929.1	923.0
32.5°	5501.3	3703.3	1248.0	1059.6	1068.2	955.0	907.1	912.0	910.6	893.5	887.3
35°	5578.8	3441.0	1137.2	988.2	963.6	855.4	861.5	876.3	876.3	855.4	848.0
37.5°	5714.2	3197.4	1067.0	927.9	843.1	803.6	819.7	839.3	839.3	824.6	818.5
40°	5858.2	2959.9	1014.2	880.0	766.8	768.0	783.9	798.6	804.9	807.3	802.4
42.5°	5988.6	2713.7	957.4	828.3	732.2	740.9	748.3	759.4	785.1	802.4	800.0
45°	6064.9	2466.3	895.9	764.3	708.9	712.6	710.0	729.9	760.6	786.4	786.4
47.5°	6135.1	2263.3	845.4	700.3	685.5	685.5	678.2	697.8	726.1	756.8	759.4
50°	6201.5	2131.5	809.8	651.0	656.0	652.3	649.8	668.2	706.5	743.4	749.5
52.5°	6269.2	2087.3	777.8	615.3	625.2	620.3	622.8	648.6	691.6	729.9	736.0
55°	6364.1	2115.6	744.6	590.8	595.7	594.5	604.3	633.8	672.0	710.0	712.6
57.5°	6480.9	2218.9	716.3	572.3	567.4	574.7	590.8	619.1	656.0	701.6	705.2
58°	6504.3	2243.5	711.4	567.4	561.1	572.3	588.3	615.3	653.5	701.6	705.2
60°	6539.9	2330.9	699.0	557.6	540.3	560.0	579.6	606.7	648.6	707.7	715.0
62.5°	6367.6	2348.2	695.3	546.4	518.1	542.7	566.1	596.9	643.6	728.5	744.6
65°	5770.7	2171.0	669.5	527.9	499.7	529.3	553.8	589.6	658.4	791.4	798.6
67.5°	4632.4	1803.0	606.7	499.7	478.8	513.2	544.0	589.6	664.7	801.2	806.2
70°	3185.0	1355.1	527.9	468.9	454.1	493.6	540.3	603.0	643.6	758.1	743.4
72.5°	1663.9	942.7	462.7	433.2	424.6	476.3	576.1	589.6	619.1	707.7	692.9
75°	838.1	641.3	407.3	392.6	391.3	470.2	644.8	567.4	593.2	665.8	697.8
77.5°	494.7	502.1	363.1	354.4	360.5	459.1	646.2	545.2	563.7	613.0	647.4
80°	338.4	414.7	328.7	326.1	331.0	422.2	595.7	518.1	529.3	579.6	616.6
82.5°	190.7	228.9	288.0	304.0	301.5	345.8	514.4	471.4	484.9	685.5	724.9
85°	92.4	137.8	241.3	284.3	257.2	230.1	418.5	418.5	422.2	491.0	497.2
87.5°	34.4	61.5	162.5	225.2	179.7	137.8	284.3	296.6	329.9	339.7	347.0
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)