

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: P197102

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197102  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-SL3-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9927 lumens  
Efficiency: N/A  
Efficacy: 87.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

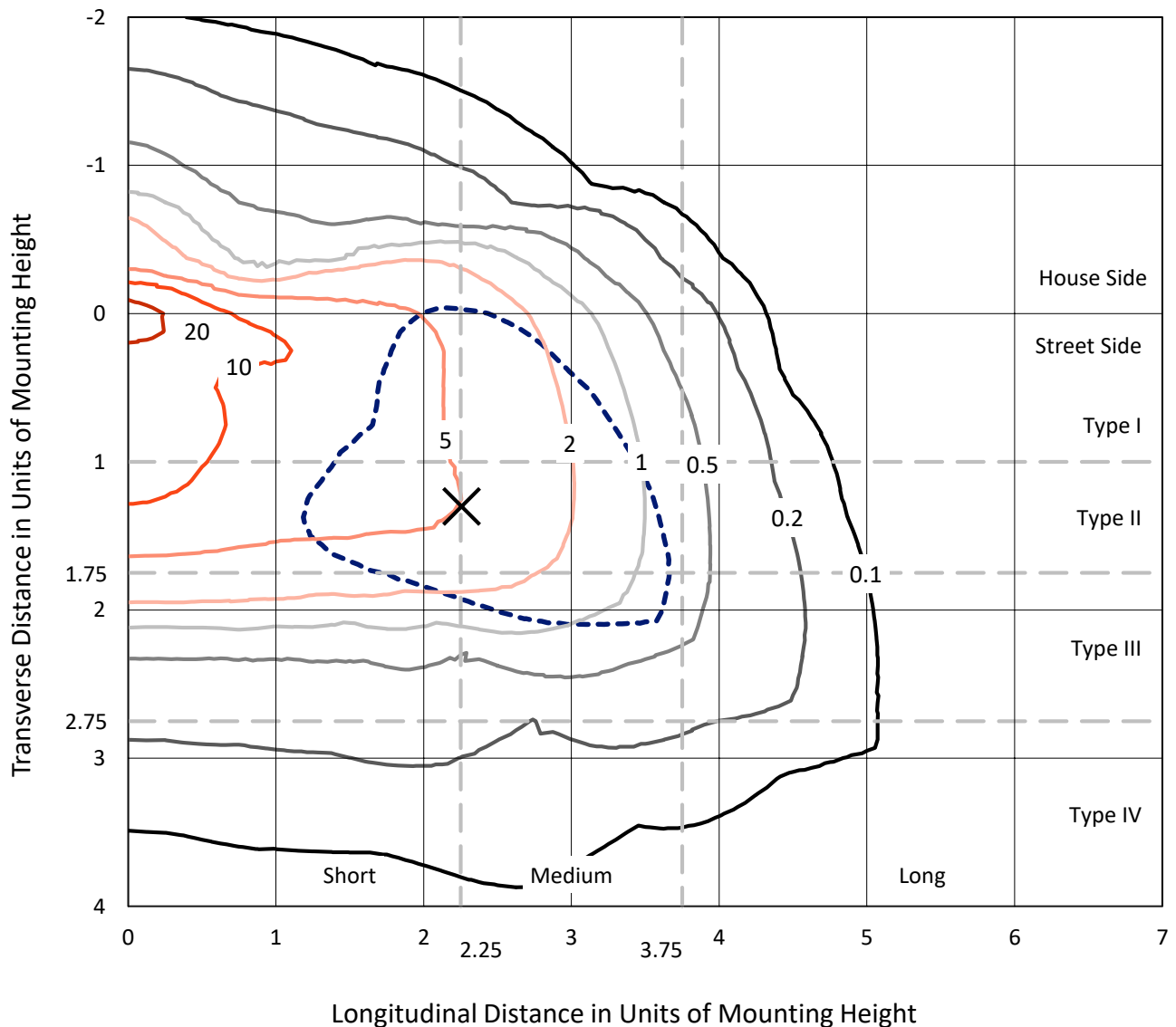
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P197102  
 CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-8030

### Iso-Footcandle Lines of Horizontal Illumination

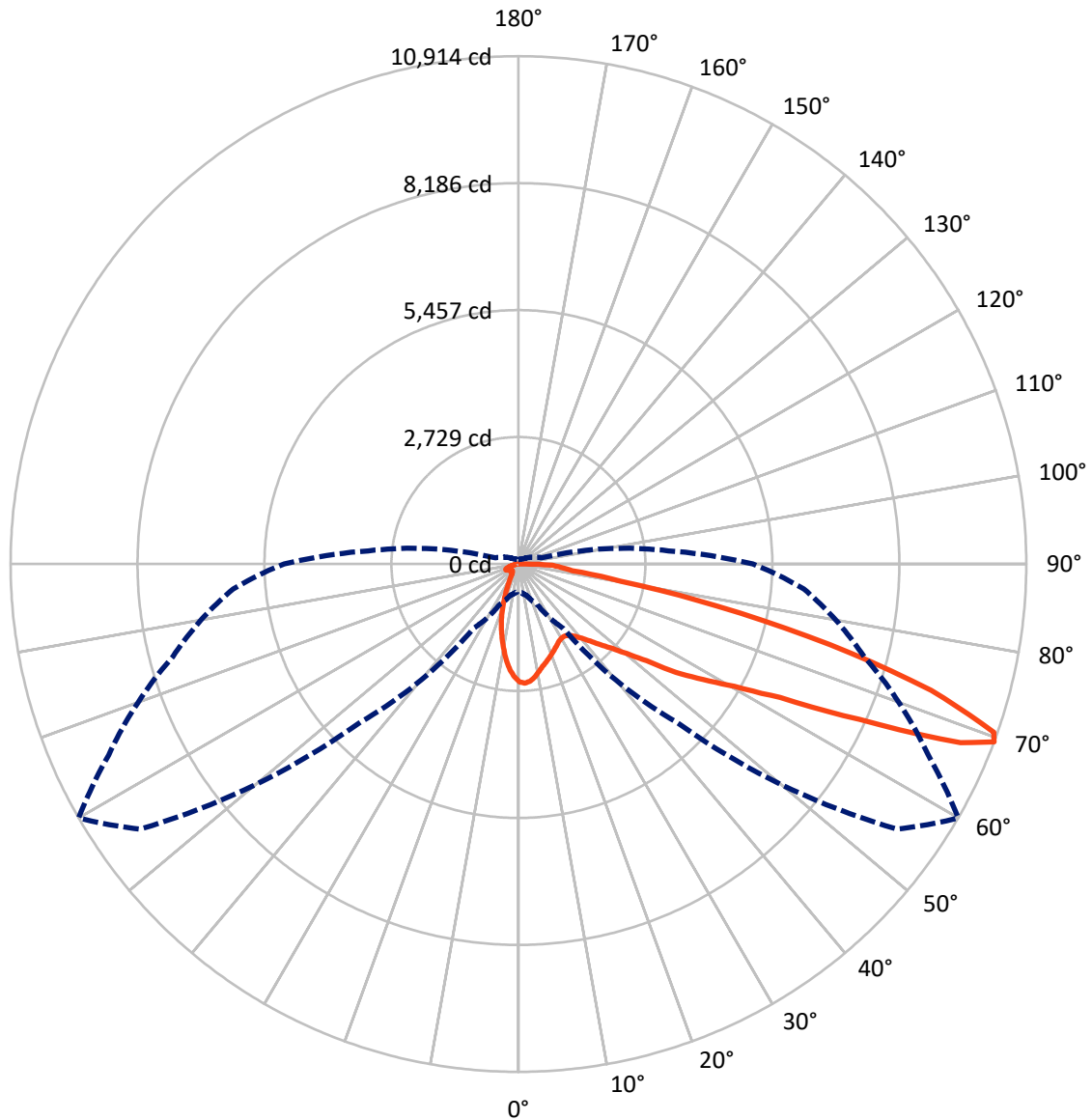
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 25.3 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P197102  
CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-8030

### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P197102

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-8030

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1415.9	0.0	1415.9
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	8511.1	0.0	8511.1
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	9927.0	0.0	9927.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	214.9	2.2
10°-20°	460.1	4.6
20°-30°	586.9	5.9
30°-40°	807.6	8.1
40°-50°	1308.2	13.2
50°-60°	2053.2	20.7
60°-70°	2737.3	27.6
70°-80°	1522.6	15.3
80°-90°	236.2	2.4
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°	9927.0	100.0
0°-180°	9927.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P197102

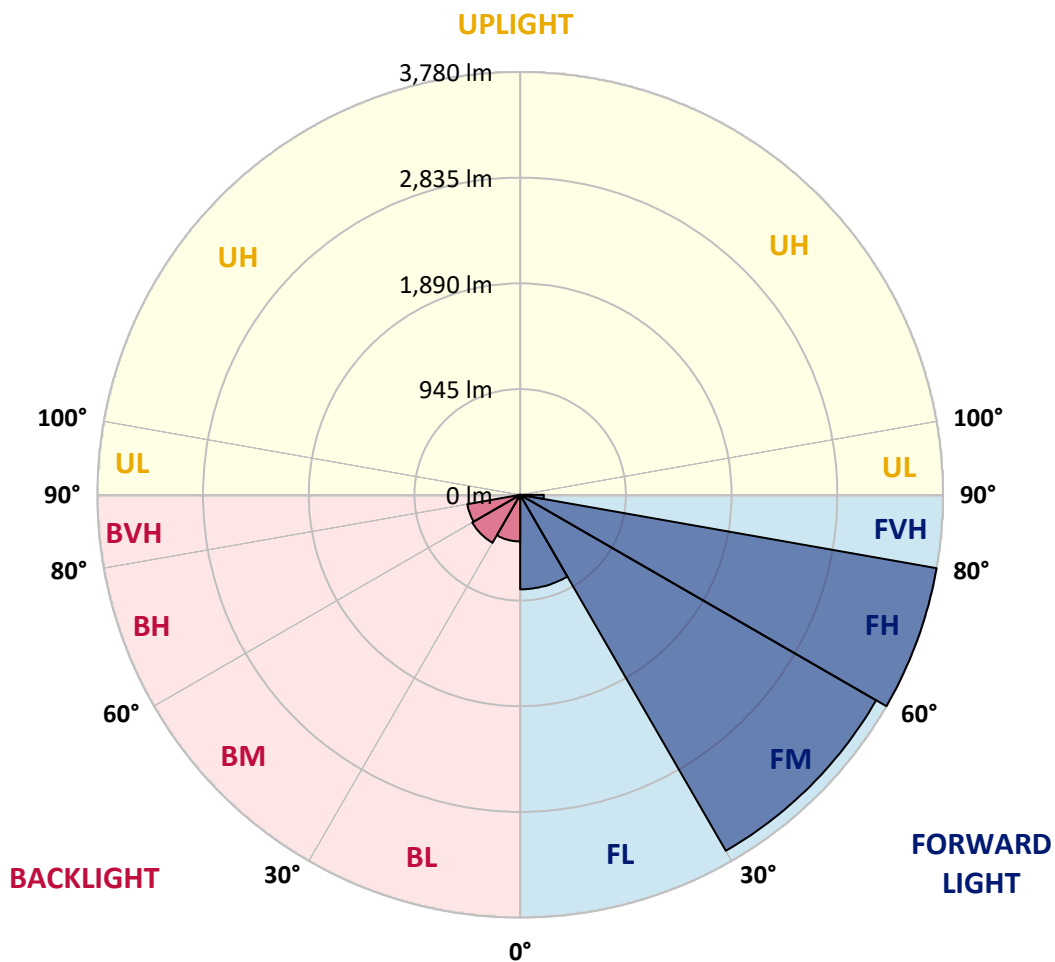
CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-8030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	844.6	8.5			
FM	(30°-60°)	3674.5	37.0			
FH	(60°-80°)	3779.8	38.1			G2/5000
FVH	(80°-90°)	212.2	2.1			G2/225
BL	(0°-30°)	417.3	4.2	B1/500		
BM	(30°-60°)	494.6	5.0	B1/1000		
BH	(60°-80°)	480.1	4.8	B1/500		G1/500
BVH	(80°-90°)	23.9	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type III Medium





REPORT NUMBER: P197102  
 CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-8030

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9
2.5°	2600.4	2607.4	2607.4	2601.7	2598.5	2580.0	2569.2	2561.6	2548.2	2523.4	2501.1
5°	2507.4	2520.8	2526.5	2529.1	2545.6	2539.9	2540.5	2535.5	2524.0	2497.3	2461.0
7.5°	2336.8	2339.4	2349.6	2366.8	2406.9	2434.9	2457.8	2462.2	2459.7	2440.0	2389.0
10°	2168.8	2173.2	2185.3	2214.6	2252.8	2292.9	2342.6	2362.9	2378.2	2371.9	2307.6
12.5°	2029.4	2030.0	2043.4	2077.1	2119.8	2170.1	2237.5	2269.4	2305.7	2320.3	2248.4
15°	1895.1	1904.0	1916.7	1957.4	2010.3	2073.9	2151.6	2195.5	2243.3	2285.3	2202.5
17.5°	1793.2	1800.2	1807.9	1841.6	1902.7	1982.3	2078.4	2125.5	2188.5	2252.8	2155.4
20°	1737.2	1739.7	1734.0	1750.6	1802.1	1888.1	1999.5	2056.1	2131.2	2221.6	2107.0
22.5°	1725.7	1725.7	1704.7	1701.5	1724.5	1797.0	1918.0	1987.4	2079.0	2200.0	2063.8
25°	1779.2	1775.4	1735.9	1699.6	1691.4	1728.3	1840.3	1925.6	2034.5	2199.3	2031.3
27.5°	1880.4	1875.3	1826.3	1765.2	1712.4	1696.5	1780.5	1867.7	1999.5	2221.0	2014.7
30°	2006.5	2004.6	1954.9	1878.5	1791.3	1709.2	1756.9	1837.8	1975.9	2261.1	2014.1
32.5°	2144.6	2135.7	2105.1	2028.7	1915.4	1779.8	1770.9	1839.0	1969.5	2319.7	2028.7
35°	2291.6	2285.3	2277.6	2200.6	2073.3	1904.6	1832.7	1883.0	2000.7	2401.1	2070.1
37.5°	2478.8	2471.8	2484.5	2400.5	2261.1	2068.2	1937.1	1970.8	2064.4	2519.5	2147.1
40°	2811.7	2791.4	2755.7	2626.5	2480.1	2268.7	2087.9	2093.0	2173.2	2678.0	2270.6
42.5°	3358.5	3293.0	3116.6	2879.2	2711.1	2501.7	2284.6	2260.5	2323.5	2887.5	2450.2
45°	3906.6	3832.8	3534.9	3154.8	2950.5	2751.9	2527.8	2469.9	2510.6	3131.3	2681.2
47.5°	4260.6	4224.3	3888.2	3430.5	3201.3	3024.3	2806.0	2710.5	2739.8	3407.6	2966.4
50°	4364.3	4333.1	4068.9	3646.3	3438.1	3353.4	3150.4	3023.7	3028.8	3730.3	3308.2
52.5°	4286.7	4273.9	4098.9	3779.9	3655.8	3700.4	3627.2	3450.8	3408.8	4084.2	3678.7
55°	4182.9	4187.3	4119.9	3914.3	3877.3	4023.7	4251.0	4109.0	3930.8	4452.8	4064.5
57.5°	3856.3	3859.5	4036.5	4170.2	4300.0	4477.0	4736.7	4676.9	4469.3	4850.7	4496.7
60°	3105.2	3130.0	3524.0	4117.3	4783.2	5370.1	5433.7	5330.6	5042.3	5309.0	5058.8
62.5°	2218.4	2240.7	2697.1	3574.3	4726.5	6381.0	6720.9	6310.9	5819.5	5994.6	5849.4
65°	1165.6	1161.7	1515.0	2469.9	3981.1	6615.2	8749.0	8051.3	7128.9	6937.3	6613.3
67.5°	651.2	672.2	809.1	1245.8	2594.7	5822.1	10044.4	10250.0	8949.5	7685.3	6580.2
69°	602.2	609.2	700.9	963.1	1691.4	4803.5	9933.0	10914.0	9717.2	7688.5	6156.3
70°	585.0	592.6	676.0	887.4	1420.8	3935.9	9527.5	10836.3	9903.7	7517.9	5770.5
72.5°	524.5	534.7	615.6	797.6	1197.4	2028.7	7674.5	9274.8	8971.2	6570.7	4474.4
75°	447.5	464.7	586.9	791.9	1134.4	1289.7	5118.0	6909.9	6677.0	4699.1	2538.6
77.5°	185.2	187.2	256.5	579.9	1190.4	1234.3	2750.6	4377.0	3874.8	2060.6	764.5
80°	129.2	126.7	128.0	169.3	960.6	1242.6	1411.3	2226.1	1730.2	543.6	357.8
82.5°	108.9	107.6	112.7	106.3	325.3	1410.0	1180.2	1160.5	814.8	292.8	170.6
85°	71.9	70.0	92.3	96.8	154.7	1119.7	1269.3	912.2	607.3	156.6	72.6
87.5°	35.0	35.6	52.8	65.6	82.1	354.6	1215.8	721.2	469.2	68.1	29.3
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: P197102

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-8030

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9	2532.9
2.5°	2492.2	2473.1	2455.9	2434.2	2417.7	2403.7	2384.6	2383.9	2380.8	2385.2	2386.5
5°	2436.8	2405.0	2356.6	2302.5	2264.3	2214.0	2165.0	2148.4	2130.0	2128.0	2133.8
7.5°	2353.4	2303.7	2221.0	2138.2	2055.5	1970.8	1890.6	1849.9	1810.4	1798.3	1804.0
10°	2260.5	2197.4	2070.8	1935.8	1819.3	1693.3	1571.1	1492.1	1420.2	1389.6	1397.3
12.5°	2187.9	2107.7	1929.4	1754.4	1580.0	1399.2	1238.1	1082.2	964.4	911.6	914.7
15°	2125.5	2023.0	1797.0	1564.0	1345.7	1098.1	874.6	693.9	590.7	552.5	551.3
17.5°	2058.0	1933.9	1658.9	1387.1	1103.8	797.6	585.6	478.7	438.0	425.2	425.2
20°	1986.1	1842.2	1514.4	1194.2	849.2	557.0	440.5	399.1	383.9	380.0	379.4
22.5°	1919.3	1752.5	1369.3	988.6	614.3	422.7	374.9	359.0	356.5	359.7	359.7
25°	1866.4	1673.5	1222.2	772.2	446.9	353.9	333.6	331.7	341.2	352.7	354.6
27.5°	1827.0	1602.9	1077.1	564.0	351.4	308.1	301.1	309.4	331.7	354.6	359.0
30°	1799.6	1542.4	903.3	405.5	292.8	269.9	273.1	287.7	321.5	356.5	366.0
32.5°	1787.5	1493.4	728.2	311.3	250.2	237.4	245.7	264.8	299.8	334.8	346.3
35°	1798.9	1457.7	566.5	258.4	219.0	209.4	219.0	238.7	261.6	278.8	285.8
37.5°	1840.3	1445.0	426.5	229.2	198.6	189.1	196.7	210.1	220.3	226.6	229.8
40°	1927.5	1458.4	334.2	213.9	187.2	176.3	178.2	184.6	191.6	196.7	197.3
42.5°	2066.3	1502.3	297.3	208.2	180.1	166.1	163.0	167.4	175.1	182.1	183.3
45°	2250.9	1575.5	293.5	210.1	177.0	157.9	151.5	156.0	166.1	177.6	179.5
47.5°	2489.6	1691.4	311.3	220.3	178.9	153.4	143.9	148.3	161.7	177.0	179.5
50°	2772.3	1851.8	344.4	235.5	187.8	153.4	140.7	144.5	158.5	175.7	178.2
52.5°	3105.2	2075.2	378.8	250.8	200.5	159.1	142.0	141.3	154.0	170.0	173.1
55°	3472.5	2352.8	411.9	264.2	207.5	166.8	145.1	137.5	147.7	160.4	163.0
57.5°	3904.7	2732.8	469.8	276.9	211.3	172.5	149.0	133.7	139.4	148.3	150.2
60°	4491.0	3291.1	582.5	298.6	218.3	175.1	149.6	129.9	129.2	135.6	136.2
62.5°	5255.5	3944.8	690.0	324.0	232.3	175.7	147.0	127.3	120.9	122.9	122.9
65°	5799.1	4185.4	658.8	345.7	245.1	175.1	144.5	125.4	114.6	111.4	111.4
67.5°	5489.8	3697.2	559.5	351.4	246.4	168.1	138.8	120.9	108.9	101.2	101.2
69°	5035.3	3240.8	513.7	341.2	236.2	159.8	132.4	116.5	105.0	96.1	96.1
70°	4664.8	2895.1	485.7	329.1	224.1	152.8	126.7	112.0	101.2	93.6	92.9
72.5°	3482.7	1932.0	415.0	283.9	184.0	129.2	110.8	99.9	91.0	85.9	85.9
75°	1837.8	968.2	339.9	231.7	142.0	103.1	91.0	84.0	78.9	78.3	77.7
77.5°	602.2	438.0	244.4	174.4	104.4	80.2	72.6	68.1	67.5	70.0	70.0
80°	325.3	261.6	157.2	117.8	72.6	59.8	56.0	55.4	57.3	61.1	61.1
82.5°	157.9	129.2	93.6	72.6	49.7	43.9	43.9	44.6	47.1	51.6	51.6
85°	68.1	61.1	54.1	40.7	30.6	27.4	31.2	34.4	36.3	39.5	40.7
87.5°	32.5	28.6	24.8	15.9	13.4	14.0	16.6	20.4	24.2	26.7	27.4
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)