

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: P196616

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196616  
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-SL3-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 800mA 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: 9506.6 lumens  
Efficiency: N/A  
Efficacy: 111.8 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

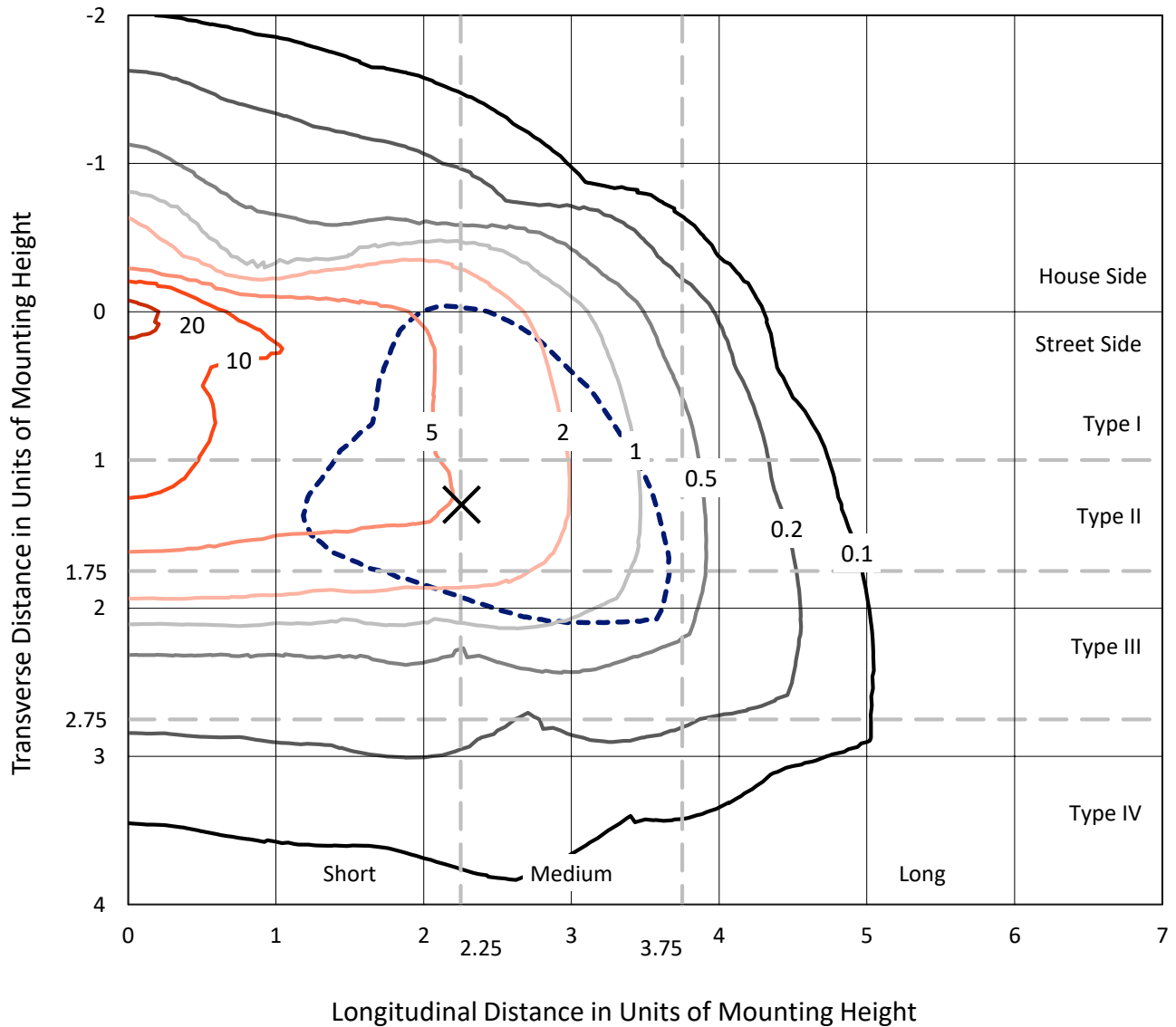
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

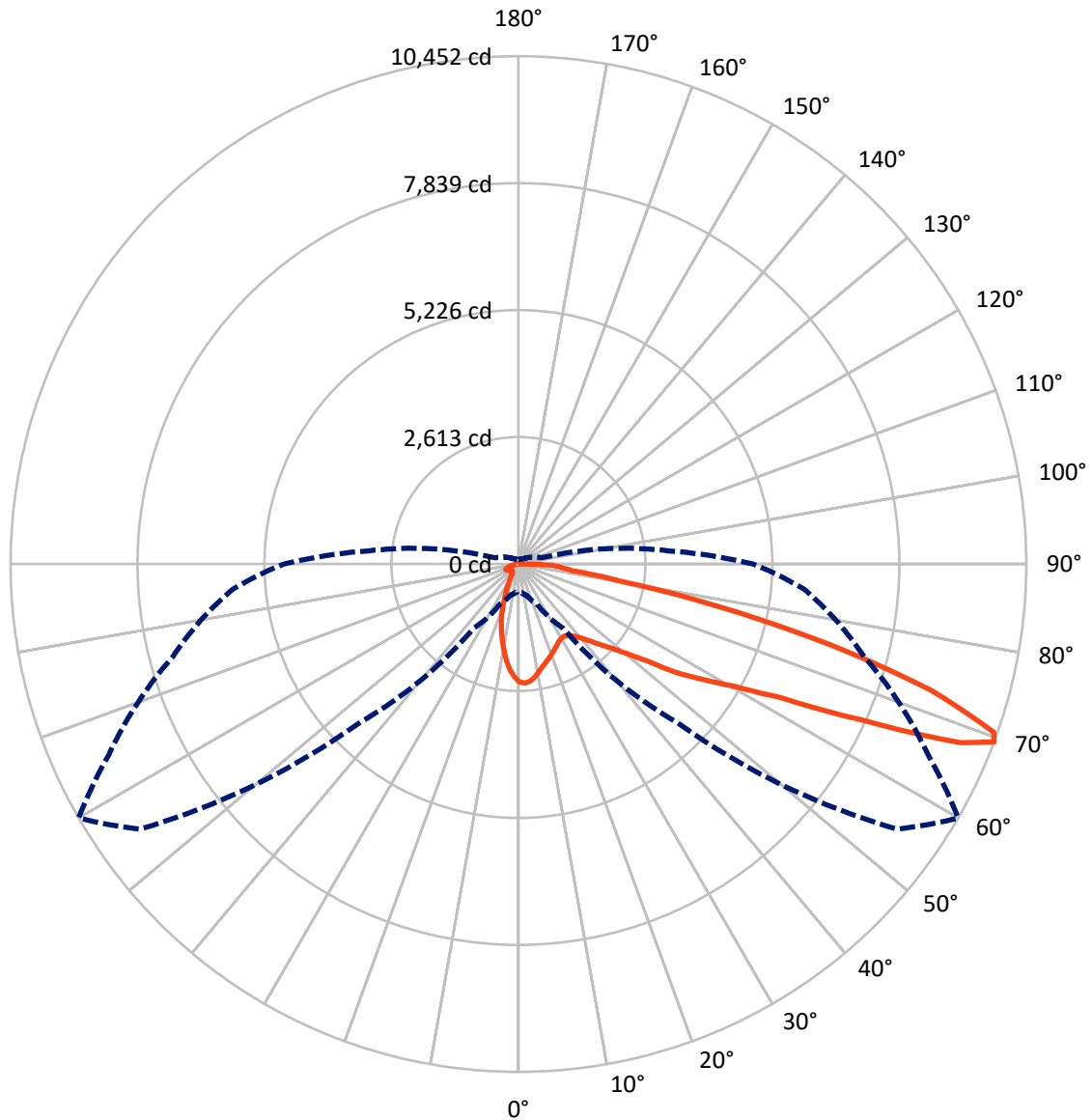
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.3 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1356.0	0.0	1356.0
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	8150.7	0.0	8150.7
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	9506.6	0.0	9506.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.8	2.2
10°-20°	440.6	4.6
20°-30°	562.1	5.9
30°-40°	773.5	8.1
40°-50°	1252.8	13.2
50°-60°	1966.3	20.7
60°-70°	2621.4	27.6
70°-80°	1458.1	15.3
80°-90°	226.1	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°	9506.6	100.0
0°-180°	9506.6	100.0



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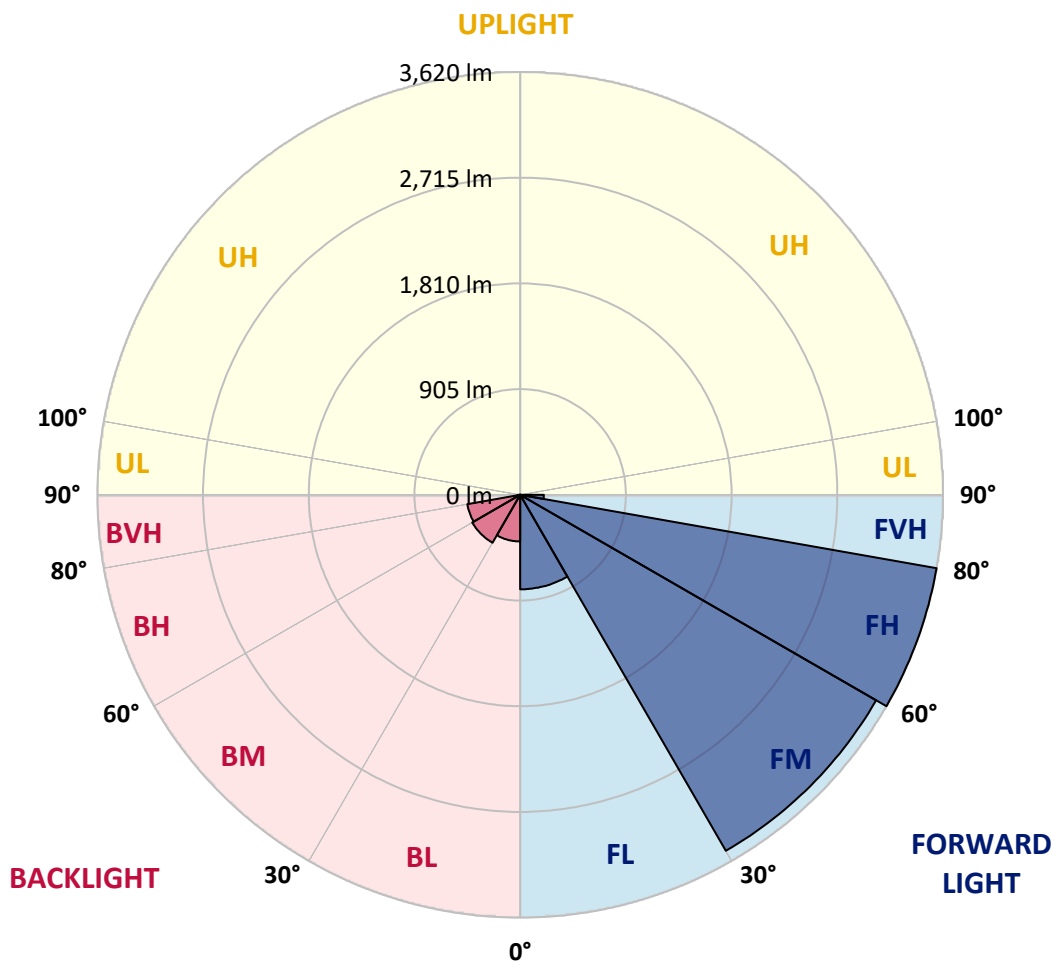
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	808.8	8.5			
FM	(30°-60°)	3518.9	37.0			
FH	(60°-80°)	3619.8	38.1			G2/5000
FVH	(80°-90°)	203.2	2.1			G2/225
BL	(0°-30°)	399.6	4.2	B1/500		
BM	(30°-60°)	473.7	5.0	B1/1000		
BH	(60°-80°)	459.7	4.8	B1/500		G1/500
BVH	(80°-90°)	22.9	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7
2.5°	2490.2	2497.0	2497.0	2491.4	2488.5	2470.8	2460.4	2453.1	2440.3	2416.5	2395.2
5°	2401.3	2414.1	2419.5	2422.0	2437.8	2432.3	2432.9	2428.1	2417.2	2391.4	2356.7
7.5°	2237.8	2240.4	2250.0	2266.6	2305.0	2331.8	2353.7	2358.1	2355.5	2336.6	2287.9
10°	2076.9	2081.2	2092.8	2120.8	2157.5	2195.8	2243.4	2262.9	2277.5	2271.4	2209.9
12.5°	1943.4	1944.0	1956.9	1989.2	2030.0	2078.2	2142.8	2173.2	2208.0	2222.0	2153.2
15°	1814.8	1823.3	1835.5	1874.6	1925.1	1986.2	2060.5	2102.5	2148.2	2188.5	2109.2
17.5°	1717.2	1724.0	1731.3	1763.7	1822.1	1898.4	1990.3	2035.5	2095.8	2157.5	2064.1
20°	1663.6	1666.1	1660.6	1676.5	1725.9	1808.1	1914.8	1969.1	2041.0	2127.5	2017.8
22.5°	1652.6	1652.6	1632.6	1629.5	1651.5	1721.0	1836.7	1903.2	1991.0	2106.8	1976.4
25°	1703.9	1700.2	1662.4	1627.6	1619.8	1655.1	1762.4	1844.1	1948.3	2106.2	1945.3
27.5°	1800.8	1795.9	1749.0	1690.5	1639.9	1624.5	1705.1	1788.6	1914.8	2127.0	1929.4
30°	1921.6	1919.6	1872.1	1799.0	1715.5	1636.8	1682.5	1759.9	1892.3	2165.3	1928.9
32.5°	2053.7	2045.3	2016.0	1942.8	1834.4	1704.5	1695.9	1761.2	1886.2	2221.5	1942.8
35°	2194.6	2188.5	2181.2	2107.4	1985.5	1824.0	1755.0	1803.3	1916.0	2299.5	1982.5
37.5°	2373.8	2367.1	2379.3	2298.9	2165.3	1980.7	1855.0	1887.4	1976.9	2412.9	2056.3
40°	2692.7	2673.1	2639.0	2515.2	2375.1	2172.6	1999.6	2004.4	2081.2	2564.7	2174.5
42.5°	3216.4	3153.5	2984.6	2757.2	2596.3	2395.7	2187.9	2164.8	2225.1	2765.3	2346.5
45°	3741.1	3670.4	3385.2	3021.2	2825.6	2635.4	2420.7	2365.4	2404.4	2998.7	2567.7
47.5°	4080.2	4045.5	3723.5	3285.2	3065.7	2896.3	2687.1	2595.8	2623.8	3263.2	2840.8
50°	4179.5	4149.6	3896.6	3491.8	3292.5	3211.4	3016.9	2895.7	2900.5	3572.3	3168.2
52.5°	4105.1	4093.0	3925.2	3619.9	3501.0	3543.8	3473.6	3304.8	3264.4	3911.3	3522.9
55°	4005.8	4010.1	3945.5	3748.4	3713.1	3853.3	4071.0	3935.1	3764.3	4264.3	3892.4
57.5°	3693.1	3696.1	3865.6	3993.5	4118.0	4287.5	4536.1	4478.9	4280.1	4645.2	4306.4
60°	2973.7	2997.4	3374.8	3942.9	4580.5	5142.8	5203.7	5104.9	4828.7	5084.2	4844.5
62.5°	2124.5	2145.9	2582.9	3423.0	4526.4	6110.8	6436.3	6043.6	5573.1	5740.7	5601.7
65°	1116.2	1112.6	1450.9	2365.4	3812.5	6335.1	8378.5	7710.4	6827.1	6643.6	6333.3
67.5°	623.7	643.7	774.8	1193.0	2484.8	5575.5	9619.0	9816.0	8570.6	7359.8	6301.5
69°	576.7	583.5	671.2	922.3	1619.8	4600.2	9512.4	10451.8	9305.7	7362.9	5895.5
70°	560.3	567.6	647.4	849.8	1360.6	3769.2	9124.1	10377.5	9484.4	7199.5	5526.2
72.5°	502.4	512.1	589.5	763.8	1146.6	1942.8	7349.6	8882.0	8591.3	6292.5	4284.9
75°	428.6	445.0	562.0	758.4	1086.4	1235.0	4901.3	6617.4	6394.2	4500.2	2431.1
77.5°	177.4	179.1	245.8	555.4	1140.0	1182.0	2634.1	4191.7	3710.7	1973.3	732.1
80°	123.8	121.3	122.5	162.1	919.9	1190.0	1351.5	2131.8	1656.9	520.6	342.6
82.5°	104.3	103.0	107.9	101.8	311.5	1350.3	1130.2	1111.2	780.3	280.5	163.4
85°	68.9	67.0	88.4	92.7	148.1	1072.3	1215.6	873.5	581.6	150.0	69.5
87.5°	33.6	34.1	50.6	62.9	78.6	339.6	1164.3	690.7	449.3	65.2	28.1
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°	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7	2425.7
2.5°	2386.7	2368.3	2352.0	2331.1	2315.3	2301.9	2283.6	2283.0	2279.9	2284.2	2285.4
5°	2333.6	2303.0	2256.8	2205.0	2168.4	2120.2	2073.3	2057.5	2039.8	2037.9	2043.4
7.5°	2253.7	2206.2	2127.0	2047.7	1968.5	1887.4	1810.5	1771.5	1733.7	1722.2	1727.6
10°	2164.8	2104.4	1983.0	1853.8	1742.2	1621.6	1504.5	1428.9	1360.1	1330.8	1338.1
12.5°	2095.3	2018.4	1847.8	1680.1	1513.0	1339.9	1185.7	1036.4	923.6	873.0	876.0
15°	2035.5	1937.3	1721.0	1497.8	1288.7	1051.6	837.6	664.6	565.8	529.2	527.9
17.5°	1970.9	1852.1	1588.6	1328.4	1057.1	763.8	560.8	458.5	419.4	407.2	407.2
20°	1901.9	1764.2	1450.3	1143.6	813.2	533.4	421.8	382.2	367.5	364.0	363.3
22.5°	1838.0	1678.2	1311.3	946.7	588.3	404.8	359.0	343.8	341.4	344.3	344.3
25°	1787.4	1602.8	1170.5	739.4	428.0	338.9	319.5	317.6	326.8	337.7	339.6
27.5°	1749.6	1535.0	1031.5	540.1	336.5	295.0	288.3	296.3	317.6	339.6	343.8
30°	1723.3	1477.0	865.0	388.3	280.5	258.5	261.5	275.6	307.9	341.4	350.5
32.5°	1711.8	1430.2	697.4	298.1	239.6	227.4	235.4	253.6	287.2	320.6	331.6
35°	1722.8	1396.0	542.6	247.5	209.7	200.6	209.7	228.6	250.5	267.0	273.7
37.5°	1762.4	1383.8	408.4	219.5	190.2	181.1	188.4	201.1	211.0	217.0	220.0
40°	1845.9	1396.7	320.0	204.9	179.1	169.0	170.7	176.8	183.4	188.4	189.0
42.5°	1978.8	1438.7	284.7	199.4	172.5	159.1	156.0	160.3	167.6	174.4	175.6
45°	2155.5	1508.8	281.1	201.1	169.5	151.3	145.1	149.3	159.1	170.1	171.9
47.5°	2384.1	1619.8	298.1	211.0	171.3	147.0	137.7	142.0	154.8	169.5	171.9
50°	2654.9	1773.4	329.9	225.5	179.8	147.0	134.7	138.4	151.8	168.3	170.7
52.5°	2973.7	1987.3	362.7	240.2	192.1	152.4	135.9	135.4	147.5	162.8	165.8
55°	3325.5	2253.2	394.4	252.9	198.8	159.7	139.0	131.6	141.4	153.6	156.0
57.5°	3739.4	2617.1	449.9	265.2	202.3	165.2	142.7	128.1	133.6	142.0	143.9
60°	4300.8	3151.7	557.8	285.9	209.1	167.6	143.2	124.3	123.8	129.8	130.4
62.5°	5032.9	3777.7	660.8	310.3	222.6	168.3	140.8	122.0	115.9	117.7	117.7
65°	5553.5	4008.1	631.0	331.0	234.7	167.6	138.4	120.0	109.7	106.6	106.6
67.5°	5257.3	3540.6	535.8	336.5	235.9	160.9	132.9	115.9	104.3	96.9	96.9
69°	4822.0	3103.5	492.0	326.8	226.1	153.0	126.8	111.6	100.6	92.1	92.1
70°	4467.3	2772.6	465.1	315.2	214.5	146.3	121.3	107.3	96.9	89.6	89.0
72.5°	3335.2	1850.2	397.4	271.8	176.1	123.8	106.1	95.7	87.2	82.3	82.3
75°	1759.9	927.2	325.5	221.9	135.9	98.8	87.2	80.5	75.6	75.0	74.4
77.5°	576.7	419.4	234.2	167.0	100.0	76.8	69.5	65.2	64.6	67.0	67.0
80°	311.5	250.5	150.6	112.7	69.5	57.3	53.6	53.0	54.8	58.6	58.6
82.5°	151.3	123.8	89.6	69.5	47.5	42.1	42.1	42.7	45.2	49.3	49.3
85°	65.2	58.6	51.8	39.0	29.3	26.2	29.8	32.9	34.8	37.8	39.0
87.5°	31.1	27.5	23.8	15.2	12.8	13.4	15.9	19.5	23.2	25.5	26.2
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)