

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: P270345

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270345  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
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-SL2-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10374.3 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

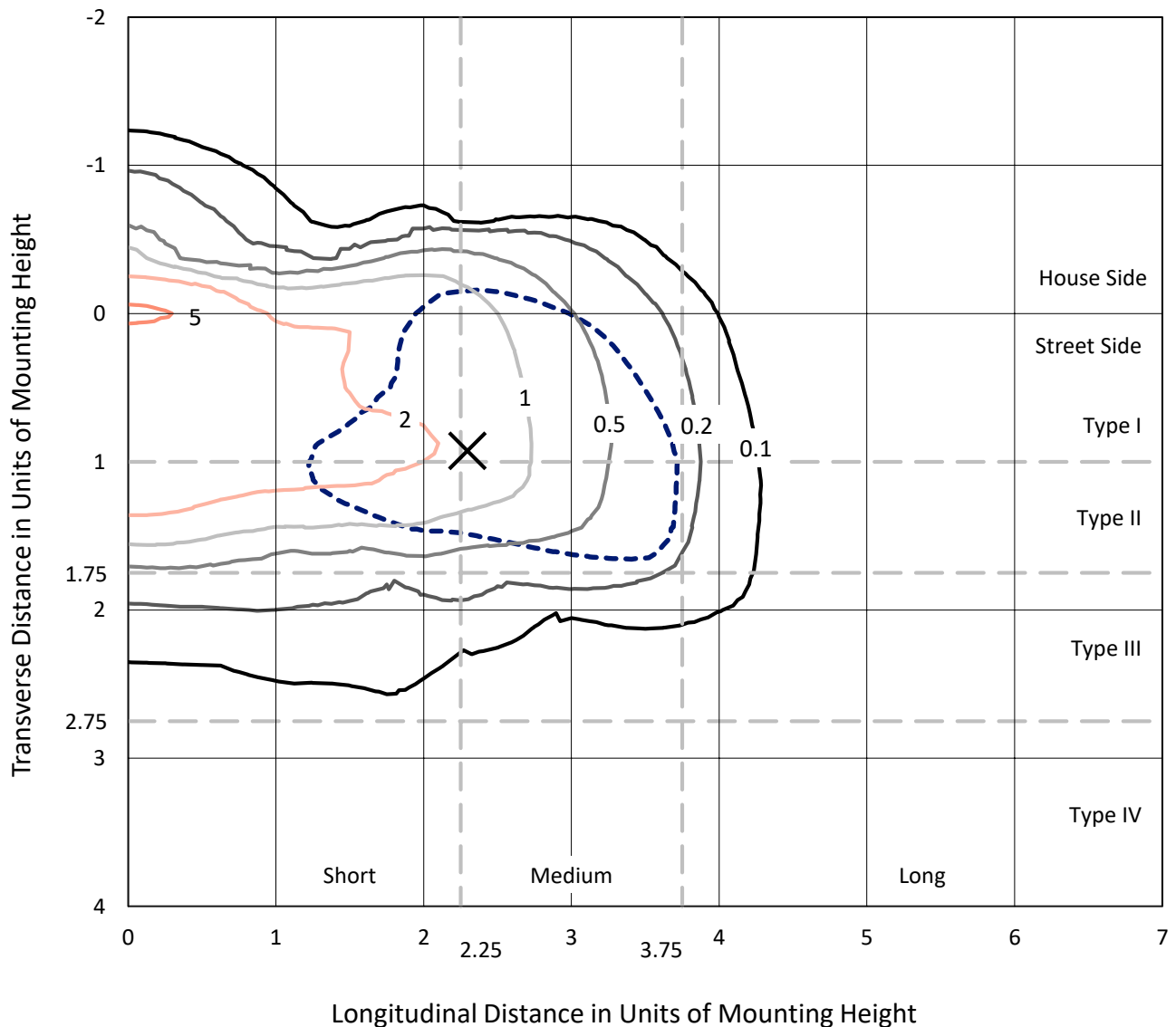
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

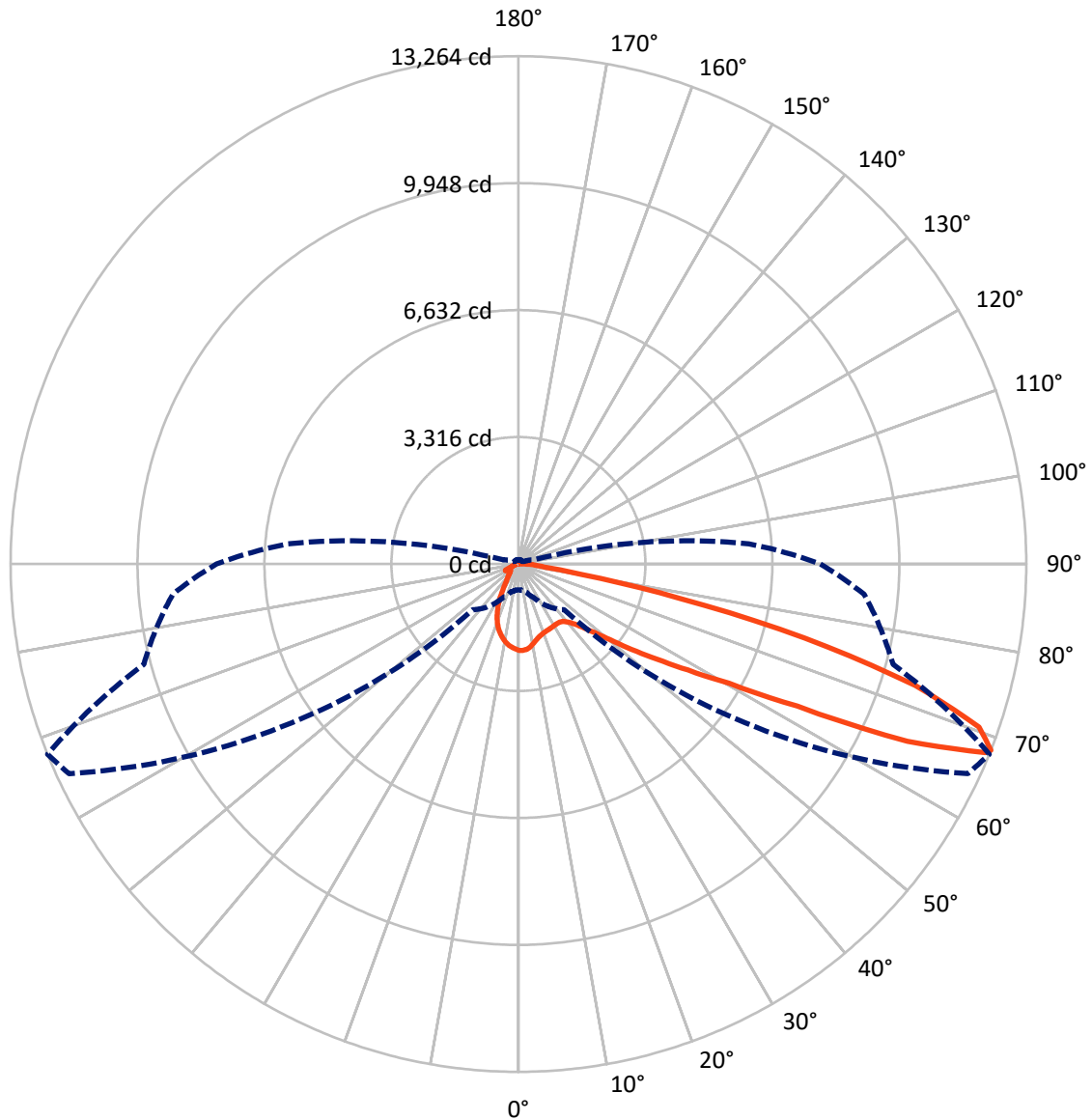
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.6 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1697.3	0.0	1697.3
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	8677.0	0.0	8677.0
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	10374.3	0.0	10374.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	193.4	1.9
10°-20°	448.6	4.3
20°-30°	606.7	5.8
30°-40°	855.4	8.2
40°-50°	1406.7	13.6
50°-60°	2180.5	21.0
60°-70°	2827.1	27.3
70°-80°	1622.4	15.6
80°-90°	233.4	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°	10374.3	100.0
0°-180°	10374.3	100.0



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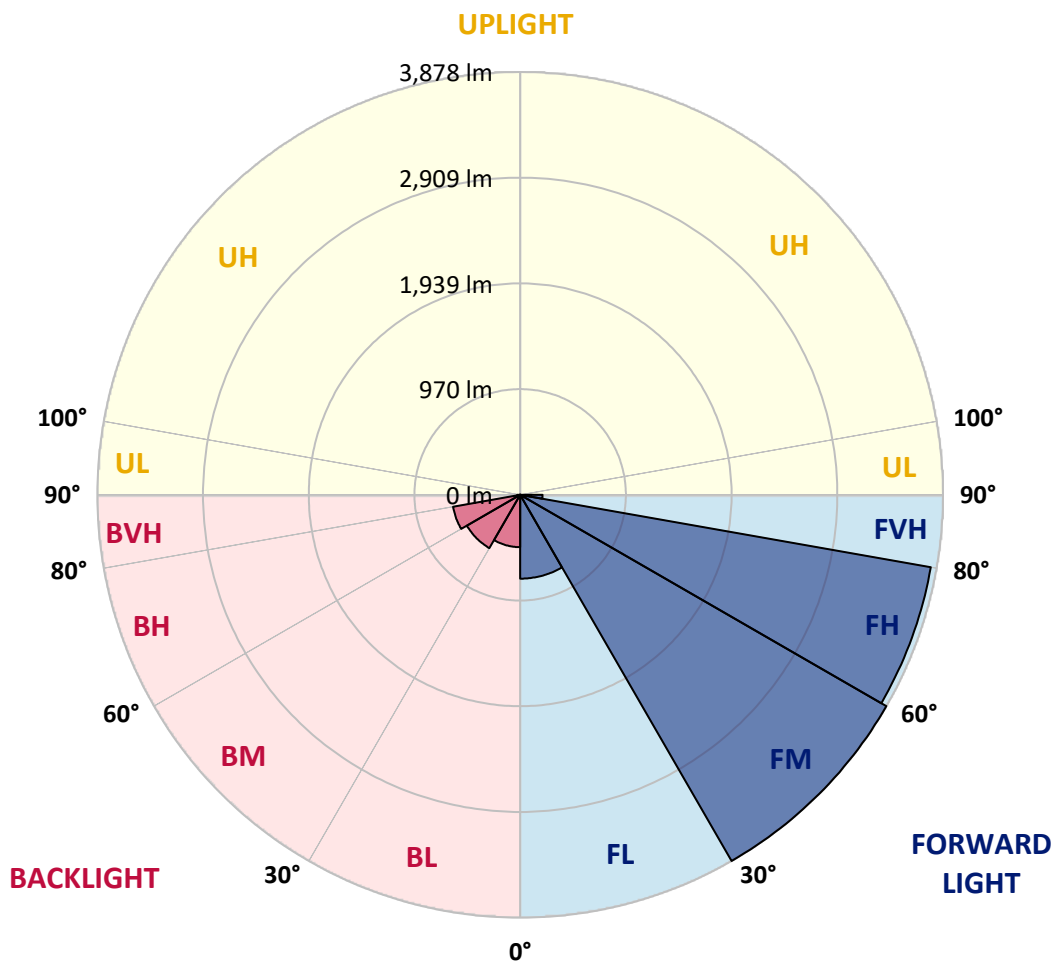
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	768.9	7.4			
FM (30°-60°)	3878.1	37.4			
FH (60°-80°)	3824.4	36.9			G2/5000
FVH (80°-90°)	205.6	2.0			G2/225
BL (0°-30°)	479.8	4.6	B1/500		
BM (30°-60°)	564.5	5.4	B1/1000		
BH (60°-80°)	625.1	6.0	B2/1000		G2/1000
BVH (80°-90°)	27.8	0.3			G1/100
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 Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4
2.5°	2197.1	2214.6	2214.6	2227.5	2239.0	2248.5	2256.6	2256.6	2256.6	2251.2	2246.5
5°	1965.9	1989.7	1993.1	2025.6	2068.3	2120.4	2178.7	2230.2	2240.5	2259.3	2266.9
7.5°	1805.4	1812.8	1825.6	1848.1	1891.4	1955.8	2047.2	2162.5	2190.2	2249.8	2281.1
10°	1691.5	1697.5	1708.4	1730.8	1770.1	1828.4	1918.5	2068.3	2114.3	2220.2	2281.8
12.5°	1608.1	1612.8	1623.1	1643.4	1683.3	1735.5	1827.7	1983.5	2040.5	2190.2	2291.2
15°	1543.1	1551.3	1559.4	1579.0	1619.6	1669.8	1763.4	1922.0	1983.5	2166.5	2308.9
17.5°	1517.3	1521.4	1522.7	1532.9	1569.5	1620.4	1713.8	1878.5	1942.2	2147.6	2322.4
20°	1533.5	1534.2	1520.7	1514.0	1534.9	1581.6	1672.6	1845.9	1911.1	2130.6	2327.8
22.5°	1604.7	1604.7	1569.5	1539.7	1525.4	1554.5	1644.7	1823.6	1894.0	2117.8	2327.8
25°	1740.2	1734.2	1679.3	1620.4	1557.3	1545.2	1627.1	1809.4	1881.2	2110.9	2319.1
27.5°	1918.5	1913.1	1843.3	1755.8	1642.0	1565.4	1621.0	1797.9	1868.4	2100.7	2300.0
30°	2135.5	2130.6	2051.3	1936.7	1768.8	1629.9	1635.3	1789.8	1858.2	2083.9	2268.2
32.5°	2351.6	2348.9	2285.7	2168.6	1943.7	1738.8	1672.6	1788.3	1852.8	2063.5	2229.6
35°	2569.2	2569.2	2530.4	2431.5	2178.7	1902.9	1750.4	1813.5	1862.9	2052.6	2196.4
37.5°	2890.2	2877.5	2805.5	2703.3	2474.9	2115.7	1876.5	1866.3	1902.3	2071.0	2185.4
40°	3387.7	3350.5	3170.8	2998.7	2798.1	2388.1	2060.8	1968.6	1990.4	2133.4	2211.3
42.5°	3908.2	3849.1	3611.4	3336.2	3132.2	2724.3	2302.7	2134.7	2134.1	2253.9	2293.3
45°	4354.8	4324.4	4066.7	3717.7	3513.8	3102.3	2608.4	2381.3	2357.0	2441.1	2451.1
47.5°	4614.4	4594.0	4438.7	4121.7	3966.5	3549.1	2995.9	2723.7	2677.5	2727.7	2712.1
50°	4542.5	4562.1	4517.3	4355.4	4453.0	4176.5	3490.1	3192.5	3105.1	3155.2	3117.3
52.5°	4164.4	4217.3	4257.2	4288.4	4732.9	5016.1	4110.9	3778.0	3705.6	3696.7	3660.1
55°	3483.3	3567.3	3693.3	3922.4	4657.7	5690.5	5195.1	4486.2	4380.6	4324.9	4339.2
57.5°	2370.4	2497.9	2769.7	3205.4	4266.7	5977.9	6798.5	5401.1	5222.1	5024.3	5070.5
60°	1305.9	1412.2	1735.5	2174.6	3374.2	5935.1	8219.5	6887.9	6324.7	5800.3	5895.1
62.5°	845.0	868.1	1108.7	1485.4	2071.0	5239.9	9009.0	9372.9	8179.5	6823.5	6957.1
65°	678.9	695.3	813.2	1198.1	1442.8	3370.8	9044.2	11950.8	11164.0	8214.1	8218.2
67.5°	663.5	670.9	739.3	1007.7	1353.3	1835.1	7817.7	12967.4	13149.7	9855.5	9061.9
68°	672.9	681.8	750.9	976.5	1352.7	1691.5	7225.3	12951.9	13264.3	10129.9	9061.9
70°	593.6	604.5	765.7	1010.5	1295.0	1454.3	4947.8	12263.9	12766.8	10760.8	8598.3
72.5°	310.4	301.7	378.8	797.7	1457.7	1515.4	2613.8	10245.8	10832.8	9965.9	7428.8
75°	242.0	220.3	212.1	315.1	1282.2	1571.6	1518.0	7282.3	7725.6	7184.0	4965.3
77.5°	227.7	201.3	185.7	186.4	564.6	1635.3	1228.0	4285.6	4285.6	3427.0	1584.4
80°	183.0	158.6	148.4	169.4	272.5	1507.1	1281.5	1953.1	1665.7	885.6	436.4
82.5°	120.6	107.7	108.4	137.6	206.7	1006.3	1484.1	964.3	724.5	392.4	256.8
85°	76.5	65.8	73.2	96.2	154.5	448.7	1469.2	670.2	479.8	220.3	128.1
87.5°	38.6	29.9	36.7	50.1	94.2	128.7	1209.7	598.5	355.8	91.4	69.8
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°	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4	2257.4
2.5°	2246.5	2231.6	2224.2	2211.9	2197.1	2182.2	2171.9	2167.3	2164.5	2165.9	2165.2
5°	2262.8	2243.1	2211.3	2165.9	2119.1	2069.7	2031.6	2002.5	1984.3	1978.8	1977.4
7.5°	2275.0	2246.5	2186.8	2104.2	2024.2	1937.5	1863.7	1804.7	1764.7	1746.3	1745.6
10°	2272.9	2236.3	2142.2	2020.2	1902.9	1775.5	1659.6	1560.6	1488.9	1454.3	1453.0
12.5°	2275.0	2224.8	2087.2	1922.0	1753.9	1571.6	1399.4	1245.6	1138.5	1087.7	1085.6
15°	2283.1	2212.6	2031.0	1812.2	1579.7	1322.1	1076.2	883.0	785.4	752.2	752.2
17.5°	2282.5	2192.4	1965.9	1684.7	1373.0	1028.0	734.6	615.2	605.8	636.3	641.1
20°	2268.8	2159.7	1881.9	1533.5	1130.3	711.5	498.1	481.1	557.0	641.1	650.6
22.5°	2247.9	2117.8	1785.0	1358.1	847.8	463.5	384.2	409.9	513.0	617.3	632.2
25°	2218.8	2066.9	1673.8	1154.1	563.9	333.5	320.5	352.3	424.9	494.6	505.6
27.5°	2176.1	2002.5	1552.6	933.2	359.9	274.4	279.3	301.7	332.7	362.6	368.7
30°	2122.4	1927.4	1420.4	688.6	273.2	245.2	253.4	266.9	280.6	299.6	303.5
32.5°	2068.3	1850.8	1282.8	473.0	238.5	229.7	238.0	245.2	256.8	269.8	272.5
35°	2019.5	1779.6	1141.1	330.0	223.7	219.5	223.7	228.3	239.8	252.8	254.1
37.5°	1984.3	1721.3	993.4	260.9	214.9	210.7	212.8	214.9	228.3	247.4	249.4
40°	1979.4	1682.6	843.7	234.5	208.0	202.6	201.3	202.6	220.3	242.0	244.0
42.5°	2025.6	1684.7	697.4	223.7	202.6	196.5	191.1	193.9	209.5	226.4	227.7
45°	2134.7	1732.1	570.7	218.8	197.8	193.1	185.1	186.4	193.9	202.6	203.9
47.5°	2327.1	1835.9	473.6	216.2	193.9	189.7	179.7	175.4	176.2	181.0	181.0
50°	2634.8	2009.2	414.7	213.4	190.4	183.0	171.4	163.3	161.2	164.0	164.7
52.5°	3093.7	2306.8	386.4	208.0	184.3	174.1	161.2	153.2	149.7	152.5	152.5
55°	3713.7	2782.0	372.7	200.6	176.8	163.3	151.9	145.0	142.3	144.4	144.4
57.5°	4420.5	3399.2	395.8	190.4	167.4	151.9	143.6	138.9	136.9	138.9	139.5
60°	5260.1	4207.0	554.3	177.5	157.3	141.7	136.9	134.1	132.8	134.8	134.8
62.5°	6376.3	5281.9	857.9	167.4	146.3	132.1	130.9	129.4	128.1	130.2	130.2
65°	7581.2	6259.7	883.0	161.2	136.9	124.1	124.7	124.7	123.3	125.4	125.4
67.5°	7964.7	6174.9	493.3	153.8	125.4	115.9	118.5	118.5	117.9	120.0	119.3
68°	7883.4	6040.8	429.7	151.9	123.3	113.8	116.6	117.3	116.6	118.5	117.9
70°	7277.6	5303.6	282.5	140.2	114.5	107.1	111.1	111.7	111.1	113.8	113.1
72.5°	6007.7	3978.0	208.8	122.7	103.7	98.3	102.3	103.0	103.7	106.4	105.7
75°	3815.3	2197.1	164.7	104.4	92.9	88.2	92.2	94.2	95.6	99.6	97.6
77.5°	1045.0	666.8	133.5	88.8	79.9	78.0	80.7	83.4	84.7	89.4	86.1
80°	366.0	294.9	111.1	75.2	66.5	65.8	68.5	71.1	72.6	76.5	72.6
82.5°	222.3	192.4	88.8	59.0	52.2	51.6	54.8	57.6	59.0	59.0	56.2
85°	115.9	101.7	65.0	41.3	35.9	33.9	40.0	43.4	44.0	43.4	41.3
87.5°	65.0	57.6	34.6	19.7	16.3	17.0	21.0	25.7	27.8	27.0	25.7
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)