

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: P963123

Luminaire Tested: **NAV-SB2D-827-U-T4W**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963123
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T4W
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18102.5 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

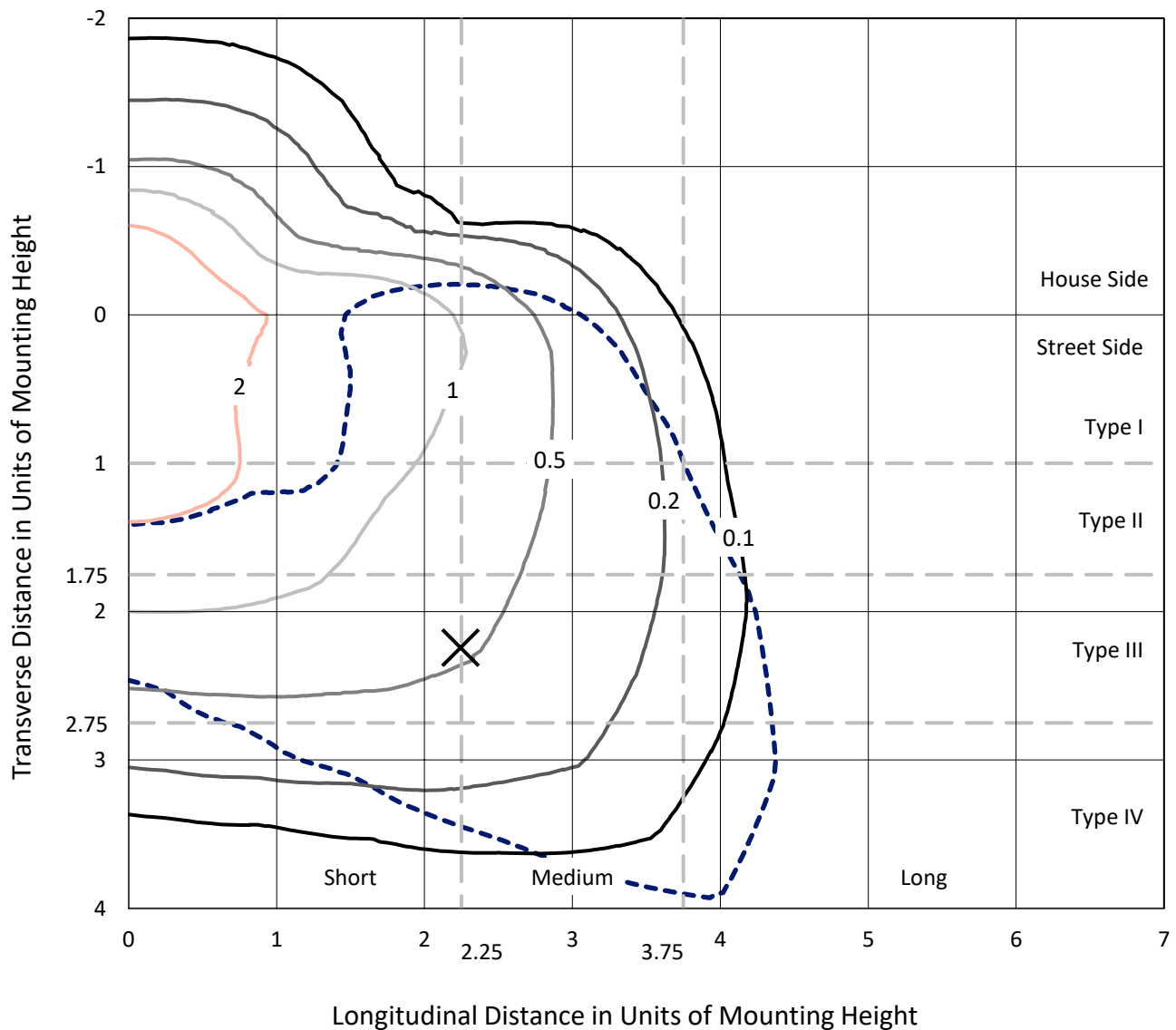
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

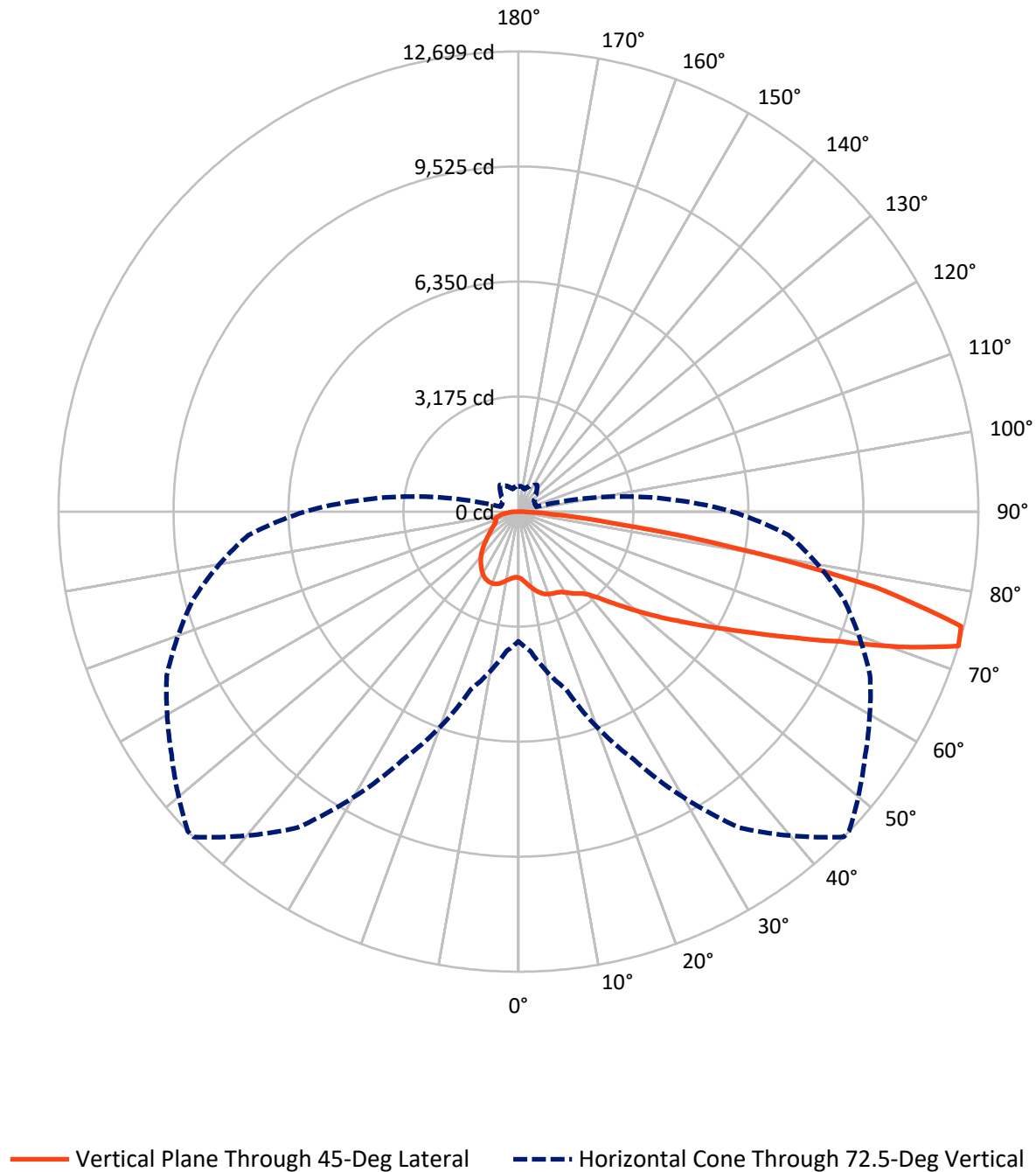
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4092.4	0.0	4092.4
	% Fixture	22.6	0.0	22.6
Street Side	Lumens	14010.2	0.0	14010.2
	% Fixture	77.4	0.0	77.4
Total	Lumens	18102.5	0.0	18102.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.9	1.0
10°-20°	619.7	3.4
20°-30°	1078.0	6.0
30°-40°	1545.4	8.5
40°-50°	2176.0	12.0
50°-60°	3333.1	18.4
60°-70°	4828.4	26.7
70°-80°	3855.8	21.3
80°-90°	480.2	2.7
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°	18102.5	100.0
0°-180°	18102.5	100.0

Coefficient of Utilization



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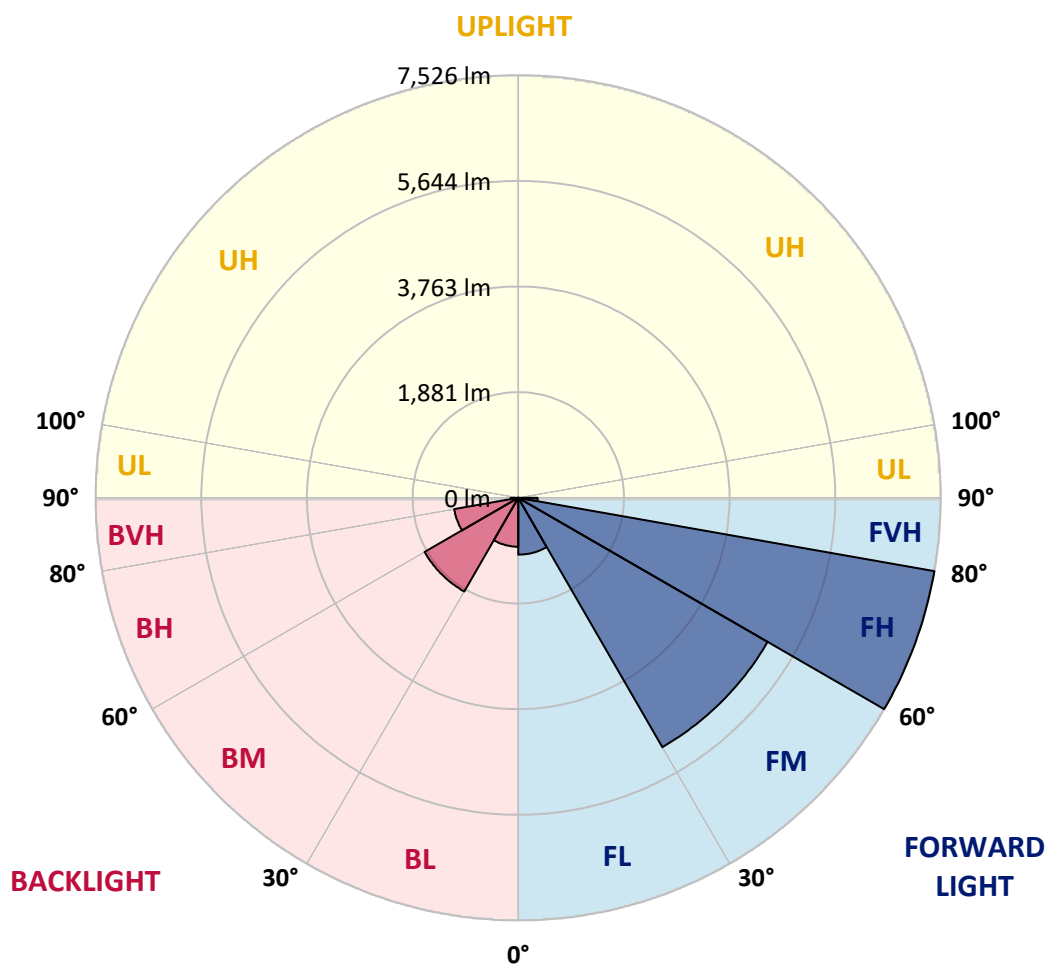
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1012.3	5.6			
FM	(30°-60°)	5127.6	28.3			
FH	(60°-80°)	7525.8	41.6			G4/12000
FVH	(80°-90°)	344.5	1.9			G3/500
BL	(0°-30°)	871.3	4.8	B2/1000		
BM	(30°-60°)	1926.9	10.6	B2/2500		
BH	(60°-80°)	1158.4	6.4	B3/2500		G3/2500
BVH	(80°-90°)	135.7	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°	45°	46°	55°	65°	75°	85°
0°	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2
2.5°	1897.7	1910.1	1898.7	1888.2	1883.4	1871.0	1870.0	1862.4	1857.7	1844.3	1840.5
5°	2030.2	2046.5	2027.4	2006.4	1987.4	1956.8	1953.0	1931.1	1906.3	1877.7	1861.5
7.5°	2180.0	2194.3	2172.4	2140.9	2107.5	2057.0	2056.0	2016.0	1976.8	1928.2	1900.6
10°	2310.7	2329.7	2300.1	2257.3	2215.2	2158.0	2151.4	2105.6	2056.0	1993.1	1951.1
12.5°	2426.1	2439.4	2410.8	2358.3	2309.6	2252.4	2243.9	2193.3	2138.0	2066.5	2013.1
15°	2517.6	2534.7	2496.6	2440.3	2388.9	2332.6	2324.9	2279.2	2223.8	2148.5	2079.8
17.5°	2577.7	2591.9	2552.9	2489.9	2440.3	2393.6	2387.8	2349.7	2301.1	2224.8	2151.4
20°	2600.5	2615.8	2574.8	2510.9	2465.1	2428.8	2426.1	2398.4	2365.0	2295.4	2221.0
22.5°	2623.4	2637.7	2584.3	2517.6	2477.5	2454.7	2453.6	2435.6	2422.2	2365.0	2292.5
25°	2715.9	2719.7	2648.2	2551.9	2494.6	2474.7	2473.7	2472.7	2478.4	2433.7	2369.8
27.5°	2796.0	2795.1	2734.1	2643.5	2554.8	2512.8	2511.9	2521.4	2539.5	2502.3	2449.9
30°	2913.4	2902.8	2830.3	2735.9	2654.9	2590.1	2584.3	2575.7	2590.1	2560.4	2530.0
32.5°	3162.2	3128.8	3011.6	2843.8	2737.9	2688.3	2680.7	2627.3	2632.9	2614.9	2599.6
35°	3518.9	3475.1	3318.6	3047.8	2840.9	2770.3	2766.5	2698.7	2687.3	2671.1	2676.8
37.5°	3943.3	3888.8	3706.7	3343.4	3018.2	2865.7	2860.0	2798.9	2752.1	2735.0	2767.4
40°	4369.5	4300.9	4150.2	3703.8	3279.5	3024.9	3006.7	2914.3	2860.9	2832.3	2901.0
42.5°	4783.4	4726.2	4597.4	4108.2	3601.8	3257.6	3217.6	3059.2	3019.1	2992.5	3116.4
45°	5149.6	5098.0	5003.6	4540.2	3979.5	3574.2	3535.1	3276.6	3264.2	3264.2	3443.6
47.5°	5447.2	5435.7	5335.5	4980.8	4424.8	3934.7	3866.9	3579.0	3612.3	3663.9	3907.9
50°	5777.1	5745.6	5638.8	5414.7	4948.4	4347.5	4292.3	3949.9	4074.9	4215.9	4579.3
52.5°	6080.3	6097.5	5978.3	5866.7	5539.6	4808.2	4710.9	4387.6	4657.5	4891.1	5366.1
55°	6392.1	6393.1	6359.7	6344.4	6159.4	5317.4	5210.6	4914.1	5343.1	5633.1	6283.5
57.5°	6684.9	6686.8	6736.4	6870.9	6878.5	5904.8	5783.8	5560.6	6105.1	6400.7	7229.4
60°	6946.2	6959.5	7094.9	7409.6	7510.8	6578.1	6463.6	6324.5	6892.8	7190.4	8224.1
62.5°	7034.0	7082.5	7383.9	7831.2	8135.4	7404.0	7291.4	7208.4	7720.5	7997.2	9055.7
65°	6885.1	6996.8	7579.5	8179.3	8778.1	8385.2	8273.7	8183.1	8580.7	8841.0	9738.4
67.5°	6519.9	6663.9	7568.0	8544.5	9558.2	9565.8	9461.9	9249.2	9502.9	9603.0	9960.6
70°	5557.8	5773.2	6901.4	8680.8	10453.7	11180.3	11080.1	10532.8	10423.1	9938.7	9335.1
72.5°	3580.8	3870.8	5081.8	7558.5	10652.9	12699.4	12693.7	11691.5	10714.0	9286.4	7486.9
75°	1306.5	1483.8	2361.2	4744.3	8942.1	12622.2	12659.4	11493.1	9780.3	7173.2	4664.2
77.5°	475.9	520.7	770.5	1823.4	5499.5	10127.5	10204.7	9188.2	6961.5	3599.9	1848.1
80°	249.9	274.6	394.8	707.6	2356.4	6014.5	6135.6	5460.5	3271.9	1084.2	554.0
82.5°	138.3	149.8	221.2	384.3	1061.4	2571.9	2644.4	2157.1	1151.1	459.6	228.9
85°	74.4	79.1	103.9	209.8	518.8	891.6	911.6	644.6	458.7	269.9	110.6
87.5°	21.9	26.8	34.3	66.7	203.2	200.3	205.0	127.8	181.2	136.3	36.3
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°	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2	1826.2
2.5°	1834.7	1831.9	1821.4	1816.6	1811.0	1809.9	1814.8	1815.7	1816.6	1817.6	1821.4
5°	1852.0	1842.4	1832.9	1827.2	1829.0	1830.0	1839.6	1846.2	1850.9	1854.8	1856.7
7.5°	1885.3	1877.7	1861.5	1860.5	1863.3	1872.0	1884.4	1899.6	1908.2	1914.9	1916.7
10°	1934.9	1920.6	1901.6	1904.3	1910.1	1922.5	1948.2	1960.6	1975.0	1987.4	1984.5
12.5°	1985.4	1973.0	1951.1	1953.0	1962.6	1984.5	2009.3	2024.6	2034.1	2043.6	2047.4
15°	2051.2	2029.3	2005.5	2005.5	2022.6	2046.5	2057.9	2070.3	2076.0	2086.5	2090.4
17.5°	2119.0	2090.4	2058.9	2057.0	2078.0	2089.4	2096.0	2098.0	2099.9	2111.3	2115.2
20°	2186.6	2155.2	2110.4	2106.6	2111.3	2109.4	2108.4	2106.6	2109.4	2123.7	2129.4
22.5°	2253.5	2217.2	2155.2	2138.0	2124.7	2106.6	2105.6	2104.6	2106.6	2120.8	2130.4
25°	2331.6	2287.7	2204.8	2153.3	2108.4	2083.7	2086.5	2087.5	2089.4	2100.8	2116.1
27.5°	2416.4	2367.9	2250.6	2148.5	2067.4	2050.3	2045.5	2048.4	2055.0	2073.2	2091.3
30°	2501.4	2444.1	2292.5	2129.4	2016.0	1992.1	1976.8	1983.6	2004.5	2022.6	2042.6
32.5°	2578.6	2521.4	2325.9	2087.5	1950.2	1913.0	1893.0	1901.6	1922.5	1929.2	1953.0
35°	2669.2	2604.3	2340.2	2020.7	1878.6	1821.4	1794.7	1782.4	1792.8	1786.2	1807.1
37.5°	2770.3	2702.6	2338.3	1933.0	1794.7	1729.0	1691.8	1645.0	1623.1	1600.2	1614.5
40°	2920.0	2822.7	2315.4	1827.2	1690.7	1630.7	1563.9	1484.8	1435.2	1390.4	1393.3
42.5°	3124.1	2989.6	2273.4	1710.8	1573.5	1517.2	1426.6	1334.1	1255.9	1181.5	1174.9
45°	3428.3	3208.0	2221.0	1586.8	1446.7	1391.3	1293.1	1189.2	1100.4	1005.1	993.6
47.5°	3866.9	3501.7	2171.4	1445.7	1313.1	1262.6	1173.9	1077.6	972.7	880.2	869.7
50°	4469.6	3923.2	2125.6	1308.4	1181.5	1143.4	1072.9	974.6	868.8	794.4	789.6
52.5°	5236.3	4496.4	2106.6	1175.8	1058.5	1044.3	988.0	896.4	796.3	733.4	728.6
55°	6116.6	5182.0	2106.6	1049.0	950.8	955.5	916.5	831.6	744.8	688.5	682.8
57.5°	7014.9	5876.2	2068.4	931.7	859.3	879.2	854.4	780.0	701.8	643.7	634.2
60°	7842.6	6457.9	1913.9	824.9	778.2	809.6	793.5	729.5	634.2	585.5	577.9
62.5°	8478.7	6786.0	1616.4	740.0	711.5	747.6	739.0	662.8	621.8	601.8	595.0
65°	8797.2	6732.6	1235.9	664.7	655.2	711.5	693.3	690.4	658.0	635.1	627.5
67.5°	8601.7	6272.9	896.4	609.4	622.7	678.0	747.6	759.1	699.0	654.2	646.6
70°	7744.4	5441.4	667.6	556.9	581.7	679.0	852.5	794.4	685.6	633.2	624.6
72.5°	5891.5	4057.7	517.8	501.6	528.3	683.8	899.2	778.2	647.5	700.0	694.2
75°	3369.2	2227.6	415.7	433.9	461.6	638.9	875.5	736.2	618.0	642.8	642.8
77.5°	1284.5	856.4	343.3	367.2	370.9	557.9	837.3	733.4	588.3	574.1	523.6
80°	445.4	334.8	284.1	291.8	287.0	495.9	803.0	638.0	481.5	431.0	416.8
82.5°	182.1	166.9	225.1	215.6	204.1	385.3	648.4	521.6	393.8	348.1	344.3
85°	79.1	105.9	148.7	130.7	118.3	267.0	519.7	441.6	332.8	287.0	286.1
87.5°	16.2	40.1	62.9	59.1	61.0	178.4	369.1	313.8	235.5	176.4	138.3
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)