

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: P963154

Luminaire Tested: **NAV-SB2D-830-U-T4W**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963154
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-830-U-T4W
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18706.3 lumens
Efficiency: N/A
Efficacy: 126.7 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

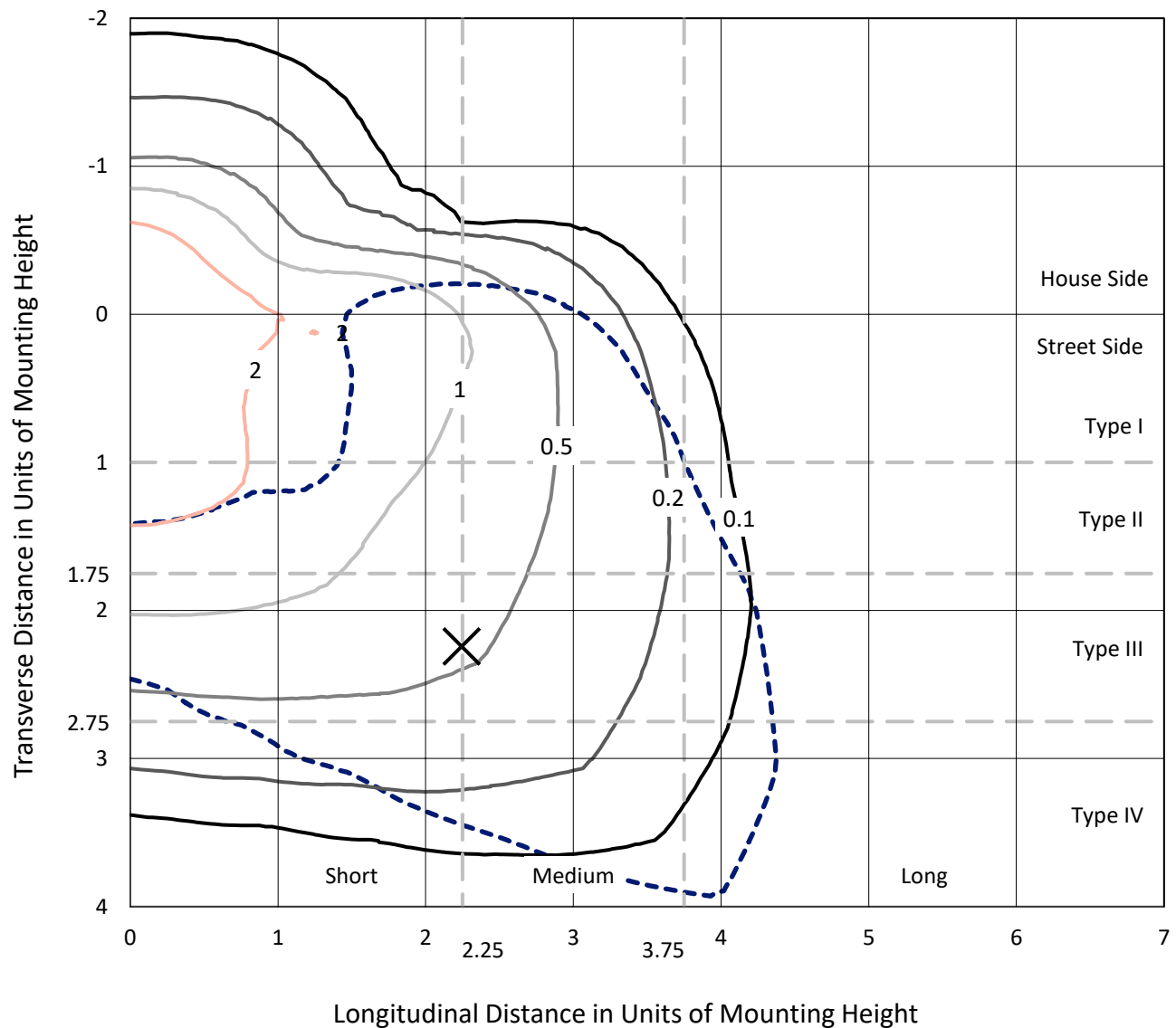


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Iso-Footcandle Lines of Horizontal Illumination

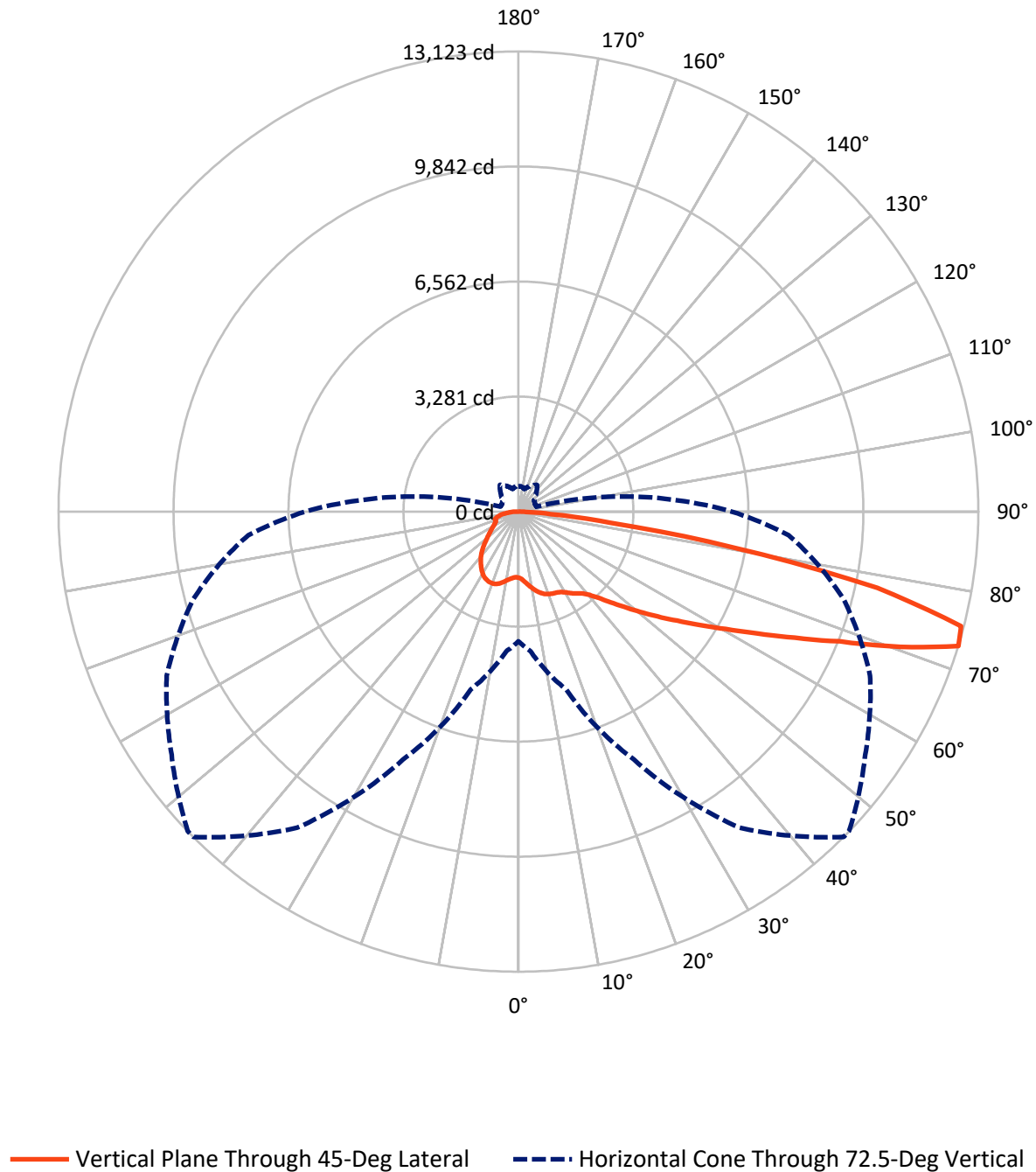
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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	4228.8	0.0	4228.8
	% Fixture	22.6	0.0	22.6
Street Side	Lumens	14477.4	0.0	14477.4
	% Fixture	77.4	0.0	77.4
Total	Lumens	18706.3	0.0	18706.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.1	1.0
10°-20°	640.4	3.4
20°-30°	1114.0	6.0
30°-40°	1596.9	8.5
40°-50°	2248.6	12.0
50°-60°	3444.2	18.4
60°-70°	4989.4	26.7
70°-80°	3984.4	21.3
80°-90°	496.2	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°	18706.3	100.0
0°-180°	18706.3	100.0

Coefficient of Utilization



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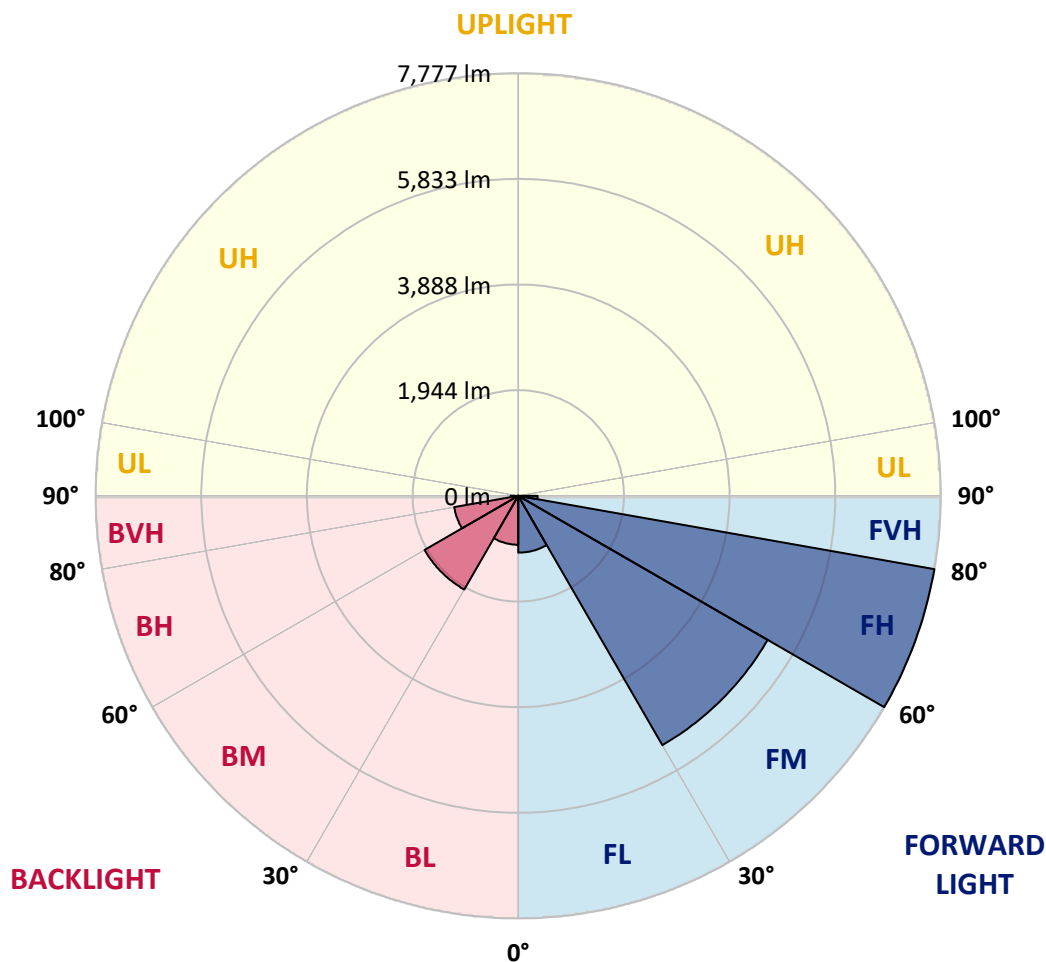
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1046.1	5.6			
FM	(30°-60°)	5298.6	28.3			
FH	(60°-80°)	7776.7	41.6			G4/12000
FVH	(80°-90°)	356.0	1.9			G3/500
BL	(0°-30°)	900.4	4.8	B2/1000		
BM	(30°-60°)	1991.2	10.6	B2/2500		
BH	(60°-80°)	1197.1	6.4	B3/2500		G3/2500
BVH	(80°-90°)	140.2	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°	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1
2.5°	1961.0	1973.8	1962.0	1951.2	1946.3	1933.5	1932.4	1924.5	1919.6	1905.8	1901.9
5°	2098.0	2114.8	2095.0	2073.4	2053.6	2022.1	2018.1	1995.5	1969.8	1940.3	1923.5
7.5°	2252.6	2267.5	2244.9	2212.3	2177.8	2125.5	2124.6	2083.2	2042.8	1992.5	1964.0
10°	2387.7	2407.4	2376.9	2332.5	2289.1	2230.0	2223.1	2175.9	2124.6	2059.5	2016.2
12.5°	2506.9	2520.7	2491.2	2436.9	2386.7	2327.6	2318.8	2266.5	2209.3	2135.4	2080.2
15°	2601.6	2619.3	2579.8	2521.7	2468.5	2410.4	2402.5	2355.1	2298.0	2220.1	2149.2
17.5°	2663.6	2678.4	2638.0	2573.0	2521.7	2473.4	2467.5	2428.1	2377.8	2299.0	2223.1
20°	2687.2	2703.0	2660.7	2594.7	2547.3	2509.9	2506.9	2478.3	2443.9	2372.0	2295.1
22.5°	2710.9	2725.7	2670.5	2601.6	2560.1	2536.5	2535.5	2516.8	2502.9	2443.9	2369.0
25°	2806.6	2810.4	2736.5	2637.0	2577.9	2557.2	2556.2	2555.2	2561.2	2514.8	2448.8
27.5°	2889.3	2888.2	2825.2	2731.6	2640.0	2596.6	2595.6	2605.4	2624.2	2585.8	2531.5
30°	3010.5	2999.7	2924.7	2827.2	2743.4	2676.4	2670.5	2661.6	2676.4	2645.8	2614.4
32.5°	3267.7	3233.2	3112.0	2938.6	2829.2	2778.0	2770.1	2714.8	2720.8	2702.0	2686.3
35°	3636.2	3590.9	3429.3	3149.4	2935.6	2862.6	2858.7	2788.7	2776.9	2760.2	2766.1
37.5°	4074.8	4018.6	3830.3	3454.9	3118.9	2961.2	2955.3	2892.2	2844.0	2826.2	2859.7
40°	4515.2	4444.3	4288.6	3827.5	3388.9	3125.7	3107.1	3011.4	2956.3	2926.7	2997.7
42.5°	4943.0	4883.8	4750.8	4245.2	3722.0	3366.2	3324.8	3161.3	3119.9	3092.3	3220.3
45°	5321.3	5268.1	5170.5	4691.6	4112.2	3693.4	3653.0	3386.0	3373.2	3373.2	3558.4
47.5°	5628.8	5616.9	5513.5	5146.9	4572.4	4065.9	3996.0	3698.3	3732.8	3786.0	4038.3
50°	5969.7	5937.2	5826.8	5595.3	5113.4	4492.6	4435.4	4081.7	4210.7	4356.6	4732.0
52.5°	6283.0	6300.9	6177.7	6062.4	5724.3	4968.5	4868.0	4534.0	4812.8	5054.3	5545.0
55°	6605.3	6606.3	6571.8	6556.1	6364.8	5494.7	5384.4	5078.0	5521.4	5821.0	6493.0
57.5°	6907.9	6909.8	6961.1	7100.0	7107.9	6101.8	5976.7	5746.0	6308.7	6614.2	7470.5
60°	7177.9	7191.7	7331.6	7656.7	7761.2	6797.5	6679.2	6535.4	7122.7	7430.1	8498.4
62.5°	7268.5	7318.8	7630.2	8092.4	8406.7	7650.9	7534.6	7448.9	7978.0	8263.9	9357.6
65°	7114.8	7230.0	7832.2	8452.0	9070.8	8664.8	8549.6	8455.9	8866.9	9135.9	10063.2
67.5°	6737.4	6886.2	7820.3	8829.5	9877.0	9884.8	9777.5	9557.7	9819.8	9923.2	10292.8
70°	5743.1	5965.8	7131.5	8970.4	10802.3	11553.2	11449.7	10884.1	10770.7	10270.1	9646.4
72.5°	3700.2	3999.9	5251.4	7810.5	11008.2	13123.0	13117.0	12081.4	11071.3	9596.2	7736.6
75°	1350.0	1533.3	2439.9	4902.5	9240.4	13043.1	13081.6	11876.4	10106.6	7412.4	4819.8
77.5°	491.7	538.0	796.2	1884.2	5683.0	10465.2	10545.1	9494.6	7193.7	3720.0	1909.8
80°	258.2	283.8	408.0	731.2	2435.0	6215.1	6340.2	5642.5	3381.0	1120.4	572.6
82.5°	142.9	154.7	228.6	397.1	1096.8	2657.7	2732.5	2229.1	1189.4	475.0	236.5
85°	76.9	81.8	107.4	216.8	536.1	921.4	942.1	666.1	474.0	278.9	114.3
87.5°	22.7	27.6	35.5	69.0	209.9	206.9	211.9	132.0	187.3	140.9	37.4
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°	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1	1887.1
2.5°	1895.9	1893.0	1882.2	1877.3	1871.3	1870.3	1875.2	1876.3	1877.3	1878.2	1882.2
5°	1913.7	1903.8	1894.0	1888.0	1890.1	1891.0	1900.9	1907.8	1912.8	1916.6	1918.6
7.5°	1948.2	1940.3	1923.5	1922.6	1925.6	1934.4	1947.2	1963.0	1971.8	1978.8	1980.7
10°	1999.5	1984.6	1964.9	1967.9	1973.8	1986.7	2013.2	2026.0	2040.8	2053.6	2050.7
12.5°	2051.6	2038.8	2016.2	2018.1	2028.0	2050.7	2076.3	2092.0	2102.0	2111.8	2115.7
15°	2119.7	2096.9	2072.3	2072.3	2090.1	2114.8	2126.6	2139.4	2145.3	2156.1	2160.1
17.5°	2189.6	2160.1	2127.5	2125.5	2147.3	2159.1	2165.9	2168.0	2169.9	2181.7	2185.7
20°	2259.6	2227.1	2180.8	2176.8	2181.7	2179.8	2178.7	2176.8	2179.8	2194.5	2200.5
22.5°	2328.6	2291.1	2227.1	2209.3	2195.5	2176.8	2175.9	2174.8	2176.8	2191.6	2201.5
25°	2409.4	2364.1	2278.3	2225.1	2178.7	2153.1	2156.1	2157.1	2159.1	2171.0	2186.6
27.5°	2497.1	2446.8	2325.6	2220.1	2136.4	2118.7	2113.8	2116.7	2123.6	2142.4	2161.0
30°	2584.7	2525.7	2369.0	2200.5	2083.2	2058.6	2042.8	2049.7	2071.4	2090.1	2110.8
32.5°	2664.6	2605.4	2403.4	2157.1	2015.3	1976.8	1956.1	1964.9	1986.7	1993.5	2018.1
35°	2758.2	2691.2	2418.3	2088.1	1941.2	1882.2	1854.5	1841.7	1852.6	1845.7	1867.3
37.5°	2862.6	2792.7	2416.2	1997.4	1854.5	1786.6	1748.1	1699.9	1677.2	1653.5	1668.3
40°	3017.4	2916.8	2392.7	1888.0	1747.2	1685.1	1616.1	1534.3	1483.1	1436.7	1439.7
42.5°	3228.2	3089.4	2349.3	1767.8	1626.0	1567.8	1474.2	1378.6	1297.9	1221.0	1214.0
45°	3542.6	3315.0	2295.1	1639.8	1494.9	1437.8	1336.3	1228.9	1137.1	1038.6	1026.8
47.5°	3996.0	3618.5	2243.8	1493.9	1356.9	1304.7	1213.1	1113.6	1005.1	909.6	898.7
50°	4618.8	4054.1	2196.5	1352.0	1221.0	1181.5	1108.6	1007.1	897.7	820.8	815.9
52.5°	5411.0	4646.3	2176.8	1215.0	1093.8	1079.0	1020.9	926.3	822.9	757.8	752.9
55°	6320.6	5354.8	2176.8	1083.9	982.5	987.4	947.0	859.3	769.6	711.5	705.6
57.5°	7248.8	6072.2	2137.4	962.8	887.9	908.6	882.9	806.1	725.3	665.1	655.3
60°	8104.2	6673.4	1977.7	852.4	804.1	836.6	819.9	753.9	655.3	605.1	597.2
62.5°	8761.5	7012.3	1670.3	764.6	735.1	772.5	763.7	684.9	642.5	621.8	614.9
65°	9090.6	6957.1	1277.1	686.9	677.0	735.1	716.4	713.4	680.0	656.3	648.4
67.5°	8888.6	6482.2	926.3	629.7	643.5	700.7	772.5	784.4	722.3	676.0	668.1
70°	8002.7	5622.8	689.8	575.5	601.2	701.6	881.0	820.8	708.5	654.4	645.4
72.5°	6088.0	4193.0	535.0	518.3	545.9	706.5	929.3	804.1	669.1	723.3	717.4
75°	3481.5	2301.9	429.7	448.3	476.9	660.2	904.7	760.8	638.6	664.2	664.2
77.5°	1327.4	884.9	354.8	379.4	383.3	576.5	865.2	757.8	608.0	593.3	541.0
80°	460.2	345.8	293.7	301.6	296.6	512.4	829.7	659.3	497.6	445.5	430.6
82.5°	188.2	172.4	232.6	222.7	210.8	398.1	670.0	539.0	407.0	359.7	355.8
85°	81.8	109.4	153.8	135.0	122.2	275.9	537.1	456.2	343.9	296.6	295.6
87.5°	16.7	41.4	65.1	61.1	63.0	184.3	381.4	324.2	243.4	182.3	142.9
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)