

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: P963104

Luminaire Tested: **NAV-SB2D-827-U-SL4**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963104
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17979.5 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G3

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



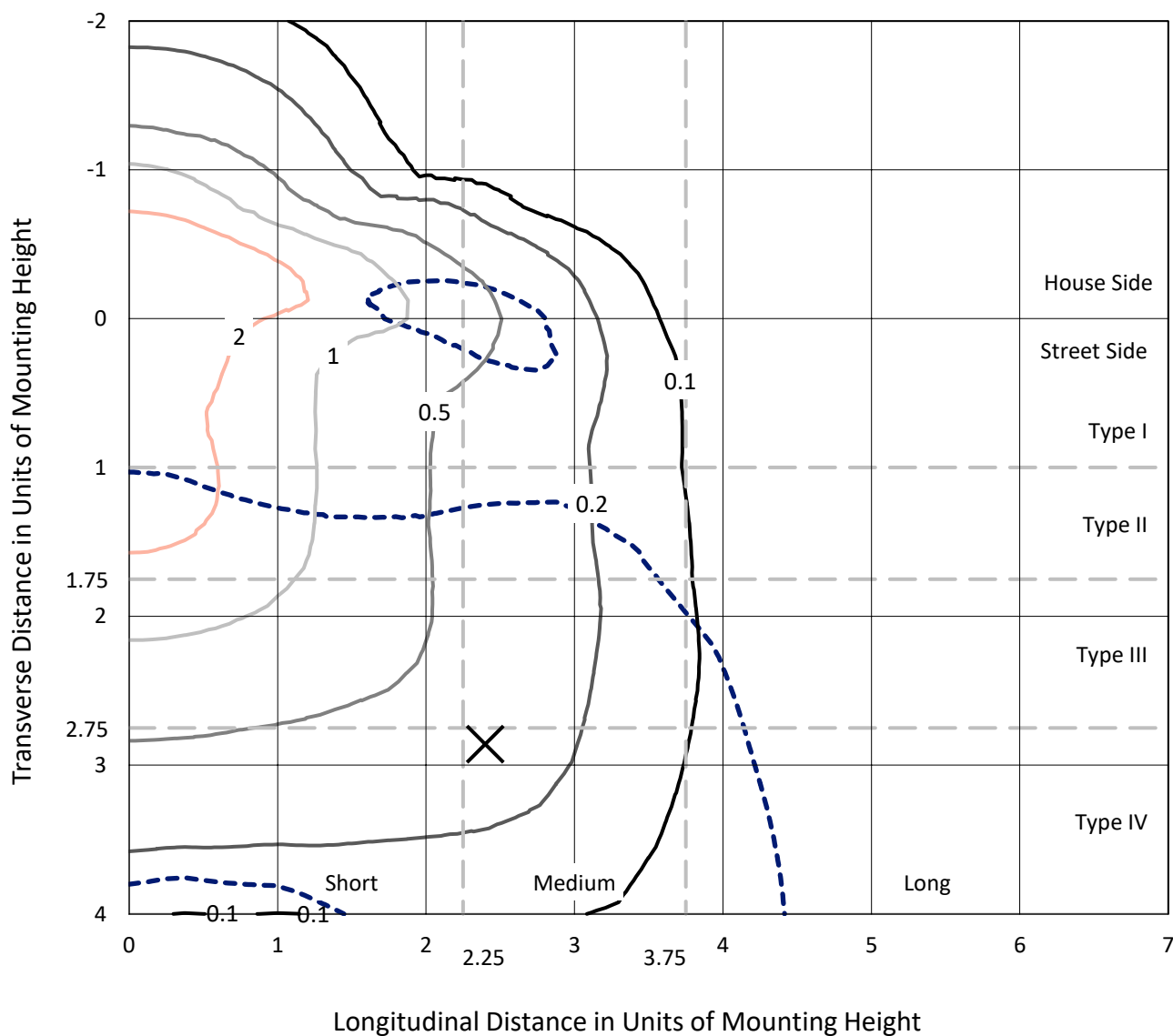
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

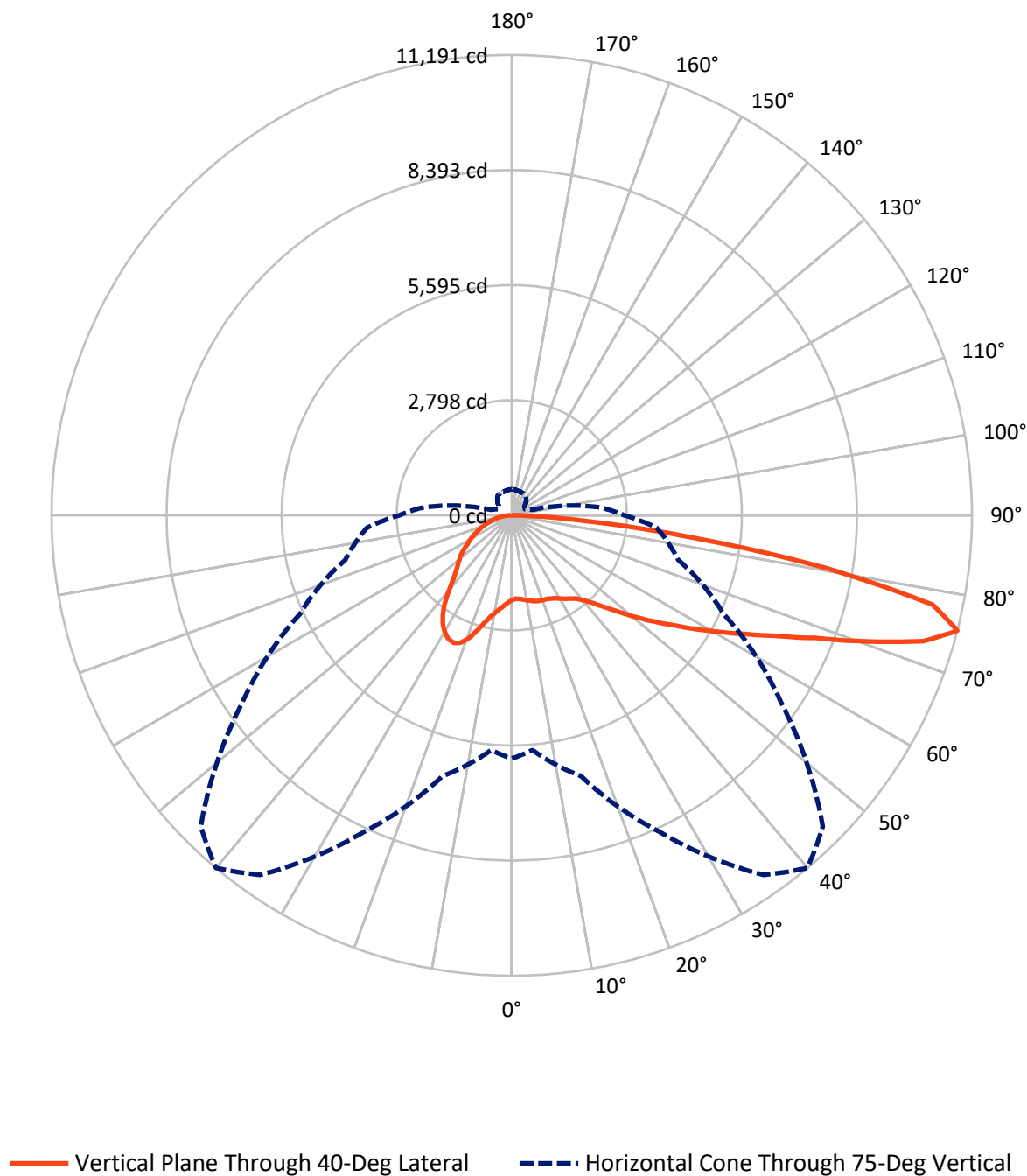
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5570.6	0.0	5570.6
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	12408.9	0.0	12408.9
	% Fixture	69.0	0.0	69.0
Total	Lumens	17979.5	0.0	17979.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.2	1.1
10°-20°	689.0	3.8
20°-30°	1258.1	7.0
30°-40°	1784.4	9.9
40°-50°	2409.4	13.4
50°-60°	3241.3	18.0
60°-70°	4114.0	22.9
70°-80°	3733.7	20.8
80°-90°	544.3	3.0
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°	17979.5	100.0
0°-180°	17979.5	100.0

Coefficient of Utilization



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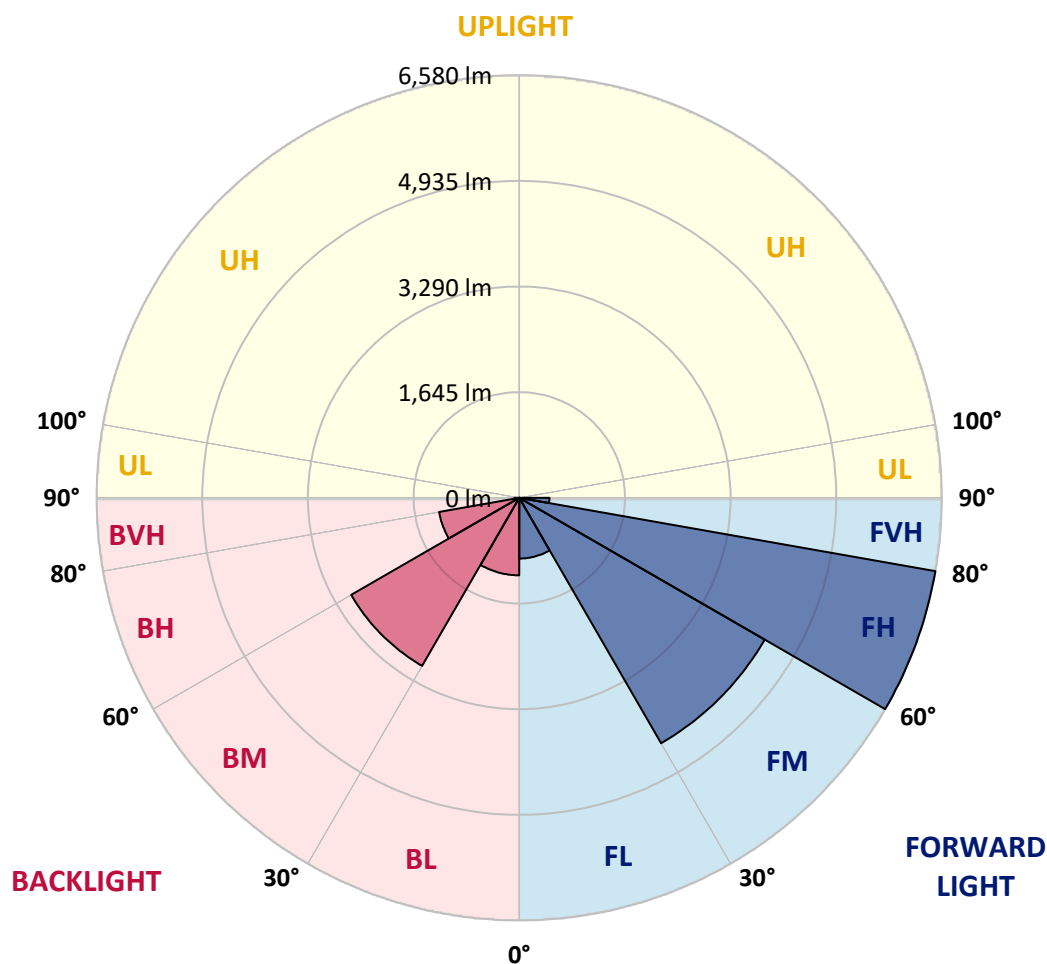
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	945.7	5.3			
FM	(30°-60°)	4413.6	24.5			
FH	(60°-80°)	6580.2	36.6			G3/7500
FVH	(80°-90°)	469.3	2.6			G3/500
BL	(0°-30°)	1206.7	6.7	B3/2500		
BM	(30°-60°)	3021.6	16.8	B3/5000		
BH	(60°-80°)	1267.5	7.0	B3/2500		G3/2500
BVH	(80°-90°)	74.9	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9
2.5°	2024.5	2036.0	2033.1	2029.3	2029.3	2030.2	2029.3	2036.0	2042.6	2049.3	2059.8
5°	2045.5	2057.0	2051.2	2046.4	2042.6	2041.7	2038.8	2037.9	2041.7	2050.3	2064.6
7.5°	2086.5	2098.0	2089.4	2080.8	2073.2	2069.4	2065.5	2059.8	2057.0	2061.7	2081.8
10°	2132.3	2143.7	2133.2	2118.0	2105.6	2100.8	2096.9	2091.3	2087.4	2090.3	2112.2
12.5°	2178.0	2189.5	2175.2	2154.2	2137.9	2135.2	2130.4	2128.4	2127.5	2126.6	2148.5
15°	2221.0	2230.5	2212.4	2187.6	2170.4	2165.6	2160.9	2163.8	2168.5	2174.2	2199.0
17.5°	2254.3	2263.9	2237.2	2204.8	2188.6	2186.6	2183.8	2193.3	2206.6	2221.0	2251.5
20°	2284.8	2294.4	2260.0	2216.2	2197.1	2197.1	2198.1	2218.1	2237.2	2258.2	2300.1
22.5°	2327.8	2335.4	2293.4	2233.4	2205.7	2207.6	2215.2	2235.2	2259.1	2287.7	2345.9
25°	2391.6	2397.4	2345.9	2265.8	2234.3	2240.0	2246.7	2256.2	2279.1	2312.5	2390.7
27.5°	2494.6	2499.4	2431.7	2323.0	2275.3	2284.8	2294.4	2287.7	2298.2	2326.9	2426.9
30°	2639.6	2642.4	2556.7	2412.6	2344.9	2349.7	2351.6	2324.0	2303.9	2326.9	2452.7
32.5°	2811.3	2810.2	2708.3	2521.3	2424.1	2419.3	2403.1	2348.8	2302.0	2322.0	2475.6
35°	3077.3	3066.8	2935.2	2673.9	2513.7	2484.2	2446.1	2376.4	2311.6	2317.3	2495.6
37.5°	3517.9	3485.4	3303.3	2923.8	2647.3	2571.9	2515.7	2421.3	2332.5	2315.4	2519.4
40°	4014.7	3973.7	3773.4	3266.2	2847.4	2726.4	2635.8	2485.1	2366.8	2324.0	2554.7
42.5°	4604.0	4545.9	4330.3	3669.5	3101.1	2925.7	2789.3	2566.2	2417.4	2351.6	2602.4
45°	5327.8	5250.6	4945.4	4124.4	3420.6	3186.9	3004.8	2689.2	2494.6	2405.0	2673.9
47.5°	6059.3	6078.4	5644.4	4645.0	3804.0	3509.3	3274.7	2874.2	2607.2	2490.9	2789.3
50°	6836.4	6849.8	6339.6	5222.0	4238.8	3873.6	3578.0	3081.1	2763.6	2612.9	2961.9
52.5°	7442.9	7444.9	6970.9	5825.6	4691.7	4274.0	3905.0	3317.6	2944.7	2775.0	3191.7
55°	7822.5	7817.7	7413.3	6396.8	5212.4	4694.6	4267.4	3586.6	3166.0	2965.7	3480.7
57.5°	8098.0	8083.8	7718.6	6887.9	5767.5	5191.4	4677.5	3891.7	3427.3	3192.7	3861.2
60°	8203.0	8194.4	7925.4	7312.2	6351.0	5740.7	5150.4	4233.0	3723.8	3460.6	4350.4
62.5°	8243.0	8259.2	8128.6	7723.3	6975.6	6349.2	5670.2	4641.2	4057.6	3763.9	4866.3
65°	8384.1	8413.7	8387.0	8261.1	7681.4	7061.4	6359.6	5126.6	4421.8	4089.0	5405.0
67.5°	8663.5	8693.1	8704.5	8904.8	8543.4	7949.3	7219.8	5731.2	4848.1	4426.7	5810.3
70°	8656.8	8648.3	8850.5	9416.9	9622.9	9178.5	8379.4	6475.0	5356.4	4707.0	5861.9
72.5°	7879.7	7811.0	8288.8	9411.1	10521.2	10462.1	9795.5	7434.3	5795.0	4741.3	5086.6
75°	5911.4	5728.3	6572.3	8481.4	10670.9	11190.6	10695.7	8029.4	5691.1	4189.2	3539.8
77.5°	2528.1	2344.0	3338.6	6278.5	9550.4	10461.2	9869.8	7005.3	4543.0	2770.3	1738.4
80°	661.8	660.8	1008.9	2846.5	6495.0	7725.2	6777.3	4523.9	2595.7	989.8	479.7
82.5°	273.7	267.0	370.9	1107.1	3173.6	4335.1	3537.9	2017.8	937.4	267.9	159.3
85°	102.0	101.1	180.2	382.4	1119.5	1788.0	1294.1	515.9	233.6	130.7	71.5
87.5°	28.6	27.7	39.1	132.5	272.8	413.9	221.2	84.9	65.8	51.5	21.0
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°	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9	2055.9
2.5°	2062.6	2067.4	2076.0	2082.7	2091.3	2100.8	2114.2	2122.8	2131.3	2137.0	2133.2
5°	2071.2	2081.8	2103.7	2125.6	2151.4	2175.2	2202.8	2222.8	2239.1	2243.8	2245.8
7.5°	2090.3	2107.5	2144.7	2181.8	2222.8	2262.0	2302.0	2336.4	2364.0	2374.5	2375.4
10°	2123.7	2146.6	2199.0	2251.5	2305.8	2365.9	2417.4	2467.0	2506.1	2522.3	2523.2
12.5°	2165.6	2194.2	2262.9	2335.4	2410.7	2493.7	2560.4	2621.4	2670.1	2692.1	2692.1
15°	2220.0	2257.2	2344.9	2442.2	2552.8	2668.2	2753.0	2820.8	2875.1	2901.9	2899.9
17.5°	2279.1	2328.7	2439.3	2586.2	2744.5	2896.1	2995.3	3044.9	3101.1	3126.9	3125.9
20°	2336.4	2397.4	2555.6	2769.2	2980.0	3141.2	3221.3	3234.7	3238.5	3241.4	3248.9
22.5°	2395.4	2477.5	2701.6	3000.1	3226.1	3337.6	3349.1	3291.9	3211.7	3174.5	3185.1
25°	2460.3	2569.1	2892.3	3254.7	3437.7	3451.1	3363.3	3224.1	3072.5	3002.9	3013.4
27.5°	2523.2	2674.8	3121.1	3497.8	3590.4	3473.0	3284.2	3086.8	2903.7	2830.3	2838.9
30°	2586.2	2796.0	3373.9	3710.5	3660.0	3418.7	3159.4	2939.0	2755.0	2677.7	2686.3
32.5°	2650.0	2937.1	3664.7	3864.0	3647.6	3303.3	3003.9	2773.1	2611.0	2529.9	2540.5
35°	2722.6	3110.7	3940.3	3948.0	3564.6	3133.5	2798.9	2574.7	2433.7	2368.8	2383.0
37.5°	2817.0	3330.9	4183.4	3968.9	3419.6	2884.7	2544.3	2340.2	2223.8	2194.2	2215.2
40°	2934.3	3596.1	4369.5	3935.6	3205.1	2582.4	2265.8	2102.7	2036.9	2043.5	2066.5
42.5°	3086.8	3892.6	4500.1	3849.7	2906.6	2270.6	2021.6	1949.1	1980.6	2007.4	2032.2
45°	3285.2	4200.7	4581.1	3703.8	2569.1	2006.4	1877.7	1894.8	1918.7	1921.6	1940.6
47.5°	3538.8	4512.5	4634.5	3483.6	2224.8	1820.4	1786.1	1790.0	1785.1	1765.2	1780.4
50°	3855.4	4815.8	4682.2	3191.7	1932.0	1704.1	1658.3	1645.0	1579.2	1514.3	1522.9
52.5°	4215.9	5094.1	4702.3	2829.4	1704.1	1606.8	1532.5	1448.5	1325.5	1305.5	1312.2
55°	4616.4	5351.6	4650.7	2384.0	1512.4	1481.9	1369.4	1268.3	1254.9	1237.8	1240.7
57.5°	5095.2	5629.2	4545.9	1887.2	1316.0	1336.0	1226.3	1237.8	1213.9	1187.3	1182.4
60°	5618.6	5916.2	4361.8	1434.2	1112.8	1153.8	1189.1	1188.2	1181.5	1159.6	1152.0
62.5°	6089.7	6105.0	3999.4	1098.6	934.5	1012.7	1109.0	1108.1	1102.4	1090.0	1085.2
65°	6370.1	6076.4	3394.8	864.9	787.7	896.4	1000.3	1008.0	1008.9	1008.0	1008.0
67.5°	6320.6	5741.6	2565.2	688.5	666.6	778.2	892.6	903.0	910.7	912.6	914.5
70°	5759.8	5006.4	1672.6	549.3	558.8	674.2	790.6	801.0	807.7	815.4	819.2
72.5°	4489.6	3681.0	957.5	444.3	464.4	584.6	689.4	701.8	705.7	720.0	725.7
75°	2735.9	2164.7	516.9	349.9	381.4	499.7	589.4	603.6	610.3	627.5	629.3
77.5°	1300.7	937.4	294.7	272.8	307.1	408.2	497.7	514.0	495.9	505.4	497.7
80°	439.6	348.1	185.9	207.9	234.6	318.5	398.6	414.8	376.7	374.7	370.9
82.5°	153.5	141.1	118.3	138.3	151.6	228.0	301.3	322.4	280.3	279.4	266.1
85°	60.1	57.2	65.8	75.3	90.6	140.2	198.3	208.8	172.6	139.2	137.4
87.5°	12.4	13.3	16.2	17.1	27.7	48.6	71.5	87.7	69.6	59.1	54.3
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)