

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: P883594

Luminaire Tested: **NAV-SB4A-735-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883594
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-735-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18020 lumens
Efficiency: N/A
Efficacy: 158.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G3

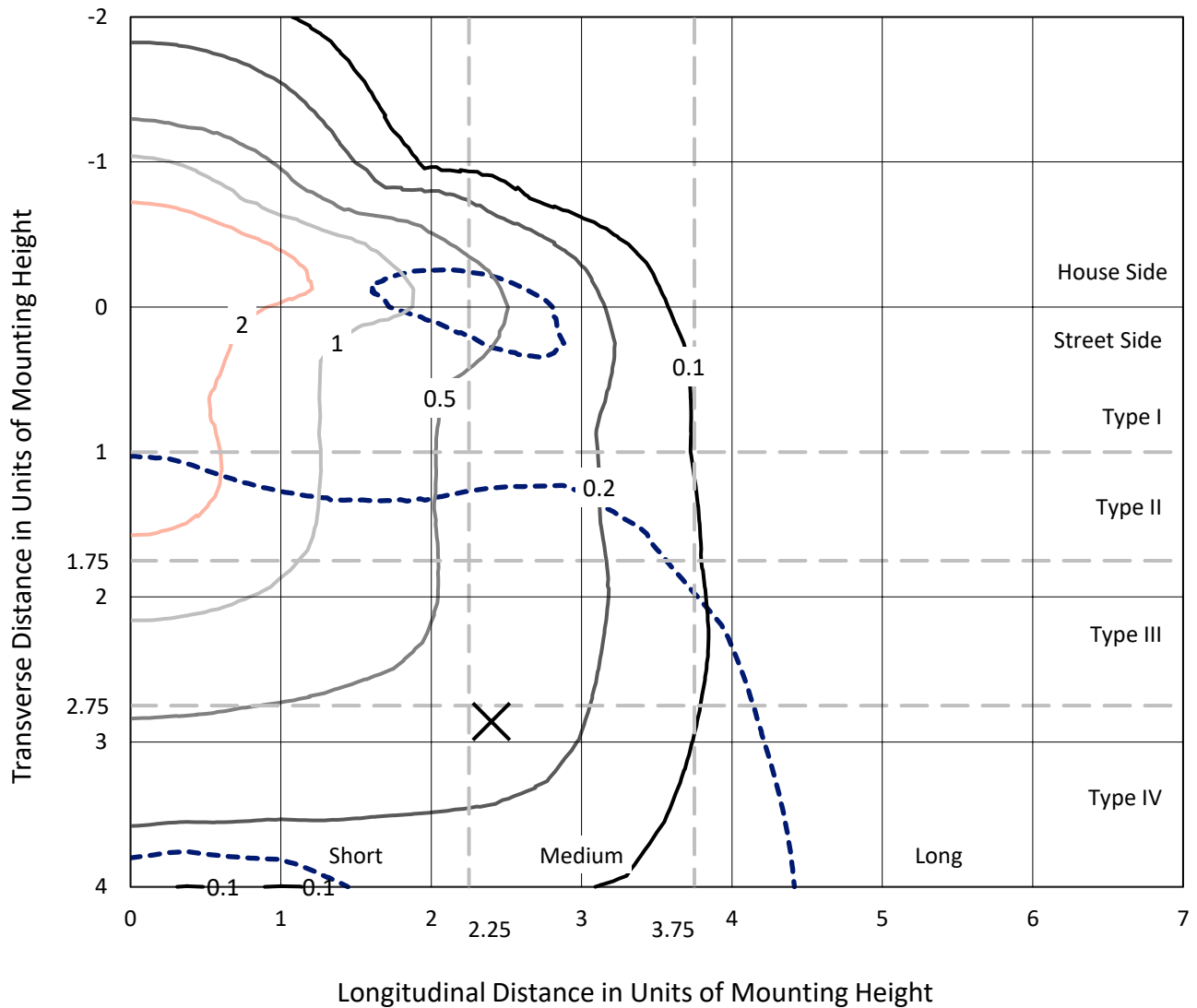
Input Watts (W): 114
Input Voltage (V): 120.0
Input Current (Ain): 0.952
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.206
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

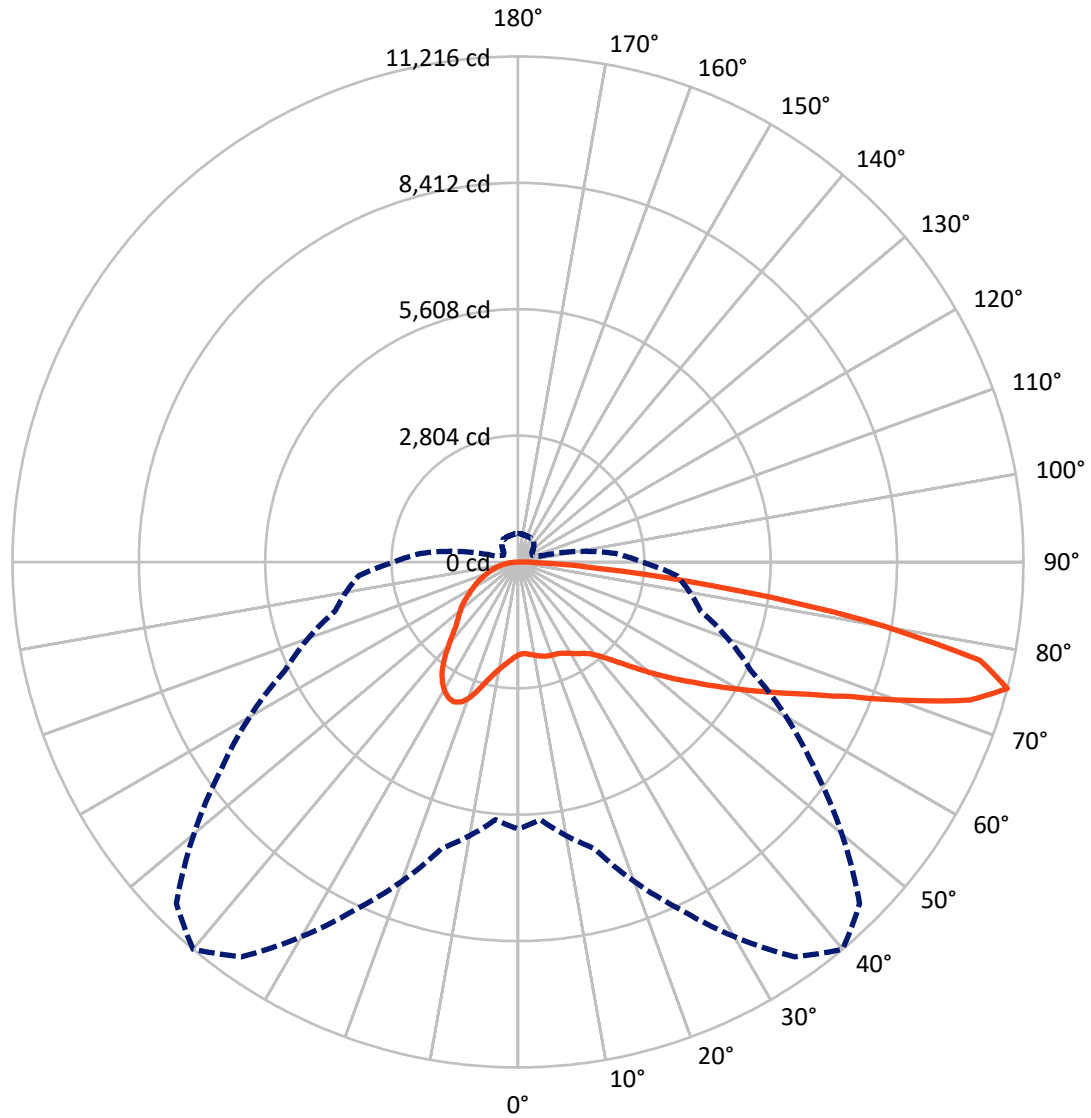
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5583.2	0.0	5583.2
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	12436.8	0.0	12436.8
	% Fixture	69.0	0.0	69.0
Total	Lumens	18020.0	0.0	18020.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.7	1.1
10°-20°	690.6	3.8
20°-30°	1261.0	7.0
30°-40°	1788.4	9.9
40°-50°	2414.9	13.4
50°-60°	3248.6	18.0
60°-70°	4123.3	22.9
70°-80°	3742.1	20.8
80°-90°	545.5	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°	18020.0	100.0
0°-180°	18020.0	100.0



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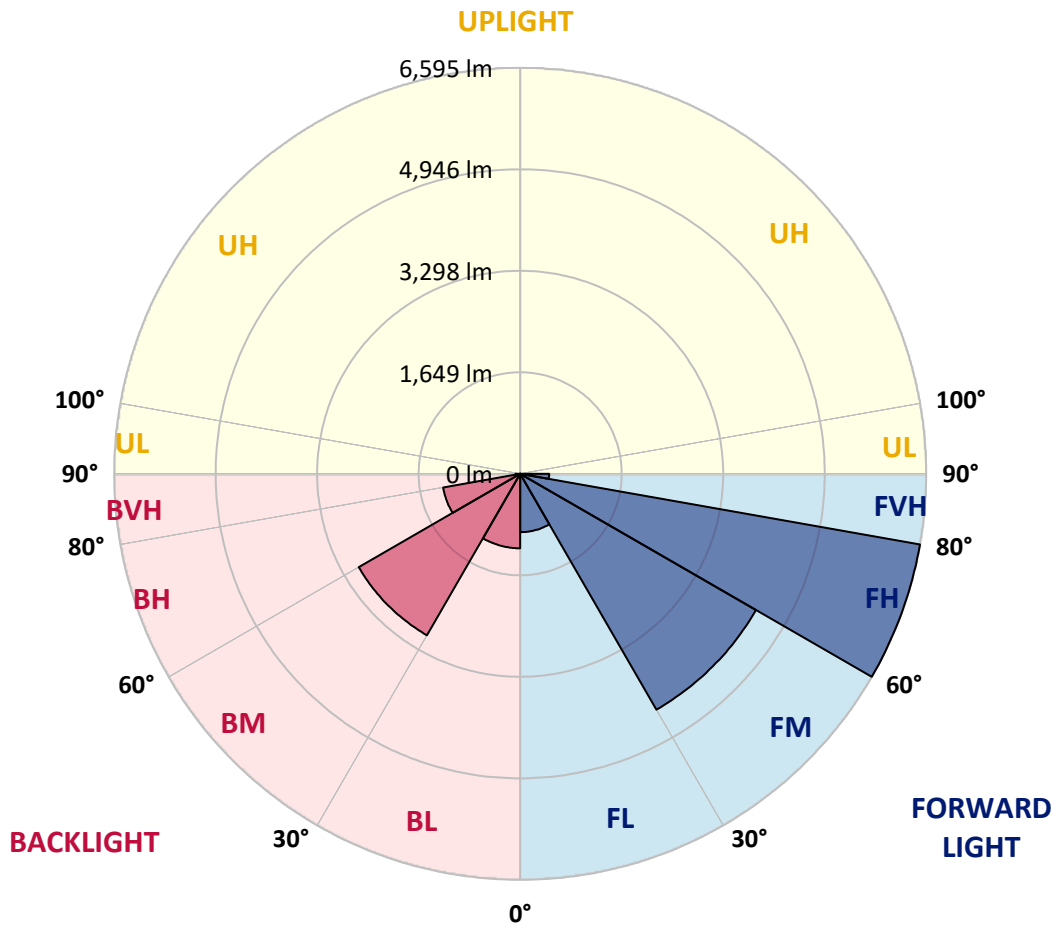
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	947.9	5.3			
FM (30°-60°)	4423.5	24.5			
FH (60°-80°)	6595.0	36.6			G3/7500
FVH (80°-90°)	470.4	2.6			G3/500
BL (0°-30°)	1209.4	6.7	B3/2500		
BM (30°-60°)	3028.4	16.8	B3/5000		
BH (60°-80°)	1270.3	7.0	B3/2500		G3/2500
BVH (80°-90°)	75.1	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°	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6
2.5°	2029.1	2040.5	2037.7	2033.8	2033.8	2034.8	2033.8	2040.5	2047.2	2053.9	2064.4
5°	2050.1	2061.6	2055.8	2051.1	2047.2	2046.3	2043.4	2042.5	2046.3	2054.9	2069.2
7.5°	2091.2	2102.7	2094.1	2085.5	2077.8	2074.0	2070.2	2064.4	2061.6	2066.3	2086.4
10°	2137.1	2148.5	2138.0	2122.7	2110.3	2105.5	2101.7	2096.0	2092.2	2095.0	2117.0
12.5°	2182.9	2194.4	2180.1	2159.1	2142.8	2139.9	2135.2	2133.2	2132.3	2131.3	2153.3
15°	2226.0	2235.5	2217.4	2192.5	2175.3	2170.5	2165.7	2168.6	2173.4	2179.1	2204.0
17.5°	2259.4	2269.0	2242.2	2209.7	2193.5	2191.5	2188.7	2198.2	2211.6	2226.0	2256.5
20°	2290.0	2299.6	2265.1	2221.2	2202.1	2202.1	2203.0	2223.1	2242.2	2263.2	2305.3
22.5°	2333.0	2340.6	2298.6	2238.4	2210.7	2212.6	2220.2	2240.3	2264.2	2292.9	2351.2
25°	2397.0	2402.8	2351.2	2270.9	2239.3	2245.1	2251.8	2261.3	2284.3	2317.7	2396.1
27.5°	2500.3	2505.0	2437.2	2328.2	2280.4	2290.0	2299.6	2292.9	2303.4	2332.0	2432.4
30°	2645.5	2648.4	2562.4	2418.1	2350.2	2355.0	2356.9	2329.2	2309.1	2332.0	2458.2
32.5°	2817.6	2816.6	2714.3	2527.0	2429.5	2424.8	2408.5	2354.0	2307.2	2327.3	2481.1
35°	3084.2	3073.7	2941.8	2679.9	2519.4	2489.7	2451.5	2381.7	2316.8	2322.5	2501.2
37.5°	3525.8	3493.3	3310.7	2930.3	2653.2	2577.7	2521.3	2426.7	2337.8	2320.6	2525.1
40°	4023.7	3982.6	3781.9	3273.5	2853.9	2732.5	2641.7	2490.7	2372.2	2329.2	2560.5
42.5°	4614.4	4556.1	4340.1	3677.8	3108.1	2932.3	2795.6	2571.9	2422.8	2356.9	2608.3
45°	5339.8	5262.4	4956.6	4133.6	3428.3	3194.1	3011.6	2695.2	2500.3	2410.4	2679.9
47.5°	6072.9	6092.0	5657.1	4655.5	3812.5	3517.2	3282.1	2880.7	2613.0	2496.4	2795.6
50°	6851.8	6865.2	6353.9	5233.7	4248.3	3882.3	3586.0	3088.0	2769.8	2618.8	2968.6
52.5°	7459.7	7461.6	6986.6	5838.7	4702.3	4283.7	3913.8	3325.1	2951.4	2781.3	3198.9
55°	7840.1	7835.3	7430.1	6411.2	5224.2	4705.2	4277.0	3594.6	3173.1	2972.4	3488.5
57.5°	8116.3	8101.9	7735.9	6903.4	5780.4	5203.1	4688.0	3900.4	3435.0	3199.9	3869.9
60°	8221.4	8212.8	7943.3	7328.7	6365.3	5753.7	5162.0	4242.6	3732.2	3468.4	4360.2
62.5°	8261.6	8277.8	8146.9	7740.7	6991.4	6363.4	5682.9	4651.7	4066.7	3772.4	4877.2
65°	8403.0	8432.6	8405.9	8279.7	7698.6	7077.4	6373.9	5138.1	4431.8	4098.3	5417.2
67.5°	8683.0	8712.7	8724.1	8924.9	8562.6	7967.2	7236.0	5744.1	4859.1	4436.6	5823.4
70°	8676.4	8667.8	8870.4	9438.1	9644.5	9199.2	8398.2	6489.6	5368.5	4717.6	5875.0
72.5°	7897.4	7828.6	8307.4	9432.4	10544.9	10485.6	9817.5	7451.1	5808.1	4752.0	5098.0
75°	5924.7	5741.2	6587.1	8500.5	10694.9	11215.8	10719.8	8047.5	5704.0	4198.6	3547.8
77.5°	2533.7	2349.2	3346.1	6292.7	9571.9	10484.6	9892.1	7021.0	4553.2	2776.5	1742.3
80°	663.3	662.3	1011.2	2852.9	6509.7	7742.6	6792.6	4534.1	2601.6	992.1	480.7
82.5°	274.3	267.6	371.8	1109.6	3180.8	4344.9	3545.9	2022.4	939.5	268.6	159.6
85°	102.3	101.3	180.6	383.3	1122.1	1792.0	1297.0	517.1	234.2	130.9	71.7
87.5°	28.7	27.7	39.2	132.9	273.3	414.8	221.7	85.1	65.9	51.6	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°	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6	2060.6
2.5°	2067.3	2072.1	2080.7	2087.4	2096.0	2105.5	2118.9	2127.5	2136.1	2141.9	2138.0
5°	2075.9	2086.4	2108.4	2130.4	2156.2	2180.1	2207.8	2227.9	2244.1	2248.9	2250.8
7.5°	2095.0	2112.2	2149.5	2186.8	2227.9	2267.1	2307.2	2341.6	2369.3	2379.8	2380.8
10°	2128.5	2151.4	2204.0	2256.5	2311.0	2371.2	2422.8	2472.5	2511.7	2528.0	2528.9
12.5°	2170.5	2199.2	2268.0	2340.6	2416.2	2499.3	2566.2	2627.4	2676.1	2698.1	2698.1
15°	2225.0	2262.3	2350.2	2447.7	2558.6	2674.2	2759.3	2827.1	2881.6	2908.4	2906.5
17.5°	2284.3	2334.0	2444.8	2592.0	2750.7	2902.6	3002.0	3051.7	3108.1	3133.9	3133.0
20°	2341.6	2402.8	2561.4	2775.5	2986.7	3148.3	3228.5	3241.9	3245.7	3248.6	3256.3
22.5°	2400.9	2483.1	2707.7	3006.8	3233.3	3345.1	3356.6	3299.3	3219.0	3181.7	3192.2
25°	2465.9	2574.8	2898.8	3262.0	3445.5	3458.9	3371.0	3231.4	3079.4	3009.7	3020.2
27.5°	2528.9	2680.9	3128.2	3505.7	3598.4	3480.9	3291.6	3093.8	2910.3	2836.7	2845.3
30°	2592.0	2802.3	3381.5	3718.8	3668.2	3426.4	3166.4	2945.6	2761.2	2683.8	2692.4
32.5°	2656.0	2943.7	3673.0	3872.7	3655.8	3310.7	3010.6	2779.3	2616.9	2535.6	2546.1
35°	2728.7	3117.7	3949.2	3956.8	3572.6	3140.6	2805.1	2580.5	2439.1	2374.1	2388.4
37.5°	2823.3	3338.5	4192.9	3977.9	3427.3	2891.2	2550.0	2345.4	2228.8	2199.2	2220.2
40°	2940.9	3604.2	4379.3	3944.4	3212.3	2588.2	2270.9	2107.4	2041.5	2048.2	2071.1
42.5°	3093.8	3901.4	4510.2	3858.4	2913.1	2275.7	2026.2	1953.6	1985.1	2011.9	2036.7
45°	3292.6	4210.1	4591.5	3712.2	2574.8	2010.9	1881.9	1899.1	1923.0	1925.8	1945.0
47.5°	3546.8	4522.6	4645.0	3491.4	2229.8	1824.5	1790.1	1794.0	1789.2	1769.1	1784.4
50°	3864.1	4826.6	4692.8	3198.9	1936.4	1707.9	1662.1	1648.7	1582.7	1517.7	1526.3
52.5°	4225.4	5105.7	4712.8	2835.7	1707.9	1610.4	1535.9	1451.8	1328.5	1308.4	1315.1
55°	4626.8	5363.7	4661.2	2389.4	1515.8	1485.2	1372.5	1271.2	1257.8	1240.6	1243.4
57.5°	5106.6	5641.8	4556.1	1891.4	1318.9	1339.0	1229.1	1240.6	1216.7	1189.9	1185.1
60°	5631.3	5929.5	4371.6	1437.5	1115.4	1156.5	1191.8	1190.9	1184.2	1162.2	1154.6
62.5°	6103.5	6118.8	4008.4	1101.0	936.6	1015.0	1111.5	1110.6	1104.9	1092.4	1087.7
65°	6384.5	6090.1	3402.5	866.9	789.5	898.4	1002.6	1010.2	1011.2	1010.2	1010.2
67.5°	6334.8	5754.6	2571.0	690.1	668.1	779.9	894.6	905.1	912.7	914.7	916.6
70°	5772.8	5017.7	1676.4	550.5	560.1	675.7	792.3	802.8	809.5	817.2	821.0
72.5°	4499.7	3689.2	959.6	445.4	465.5	585.9	691.0	703.4	707.3	721.6	727.3
75°	2742.1	2169.6	518.0	350.8	382.3	500.8	590.7	605.0	611.7	628.9	630.8
77.5°	1303.7	939.5	295.3	273.3	307.8	409.1	498.9	515.2	497.0	506.6	498.9
80°	440.6	348.9	186.4	208.4	235.1	319.2	399.5	415.8	377.5	375.6	371.8
82.5°	153.9	141.5	118.5	138.6	152.0	228.4	302.0	323.0	281.0	280.0	266.7
85°	60.2	57.3	65.9	75.5	90.8	140.5	198.8	209.3	173.0	139.5	137.6
87.5°	12.4	13.4	16.2	17.2	27.7	48.7	71.7	87.9	69.8	59.3	54.5
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)