

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: P883804

Luminaire Tested: **NAV-SB4B-827-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883804
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-SB4B-827-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 450mA 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: 18380 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G3

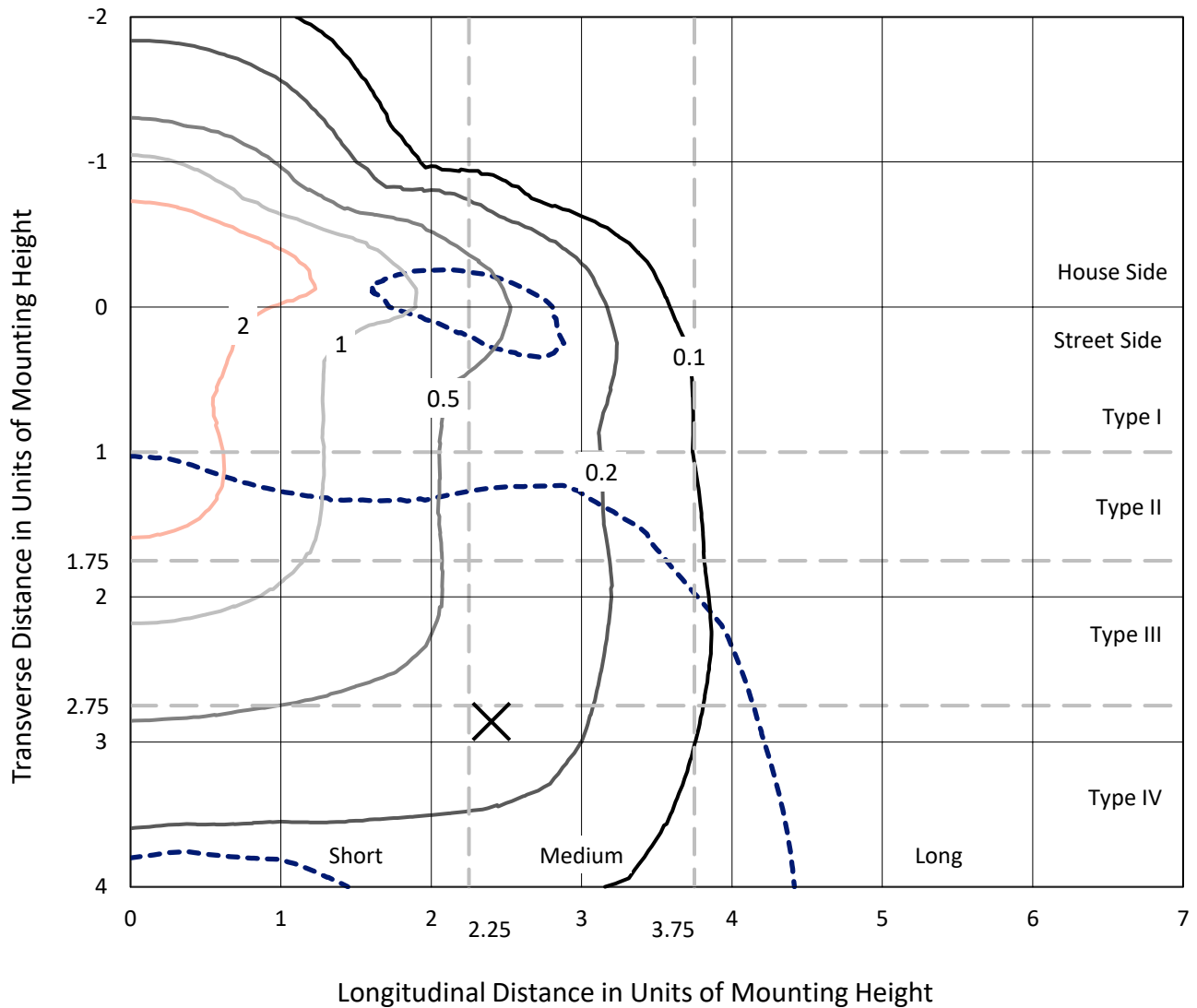
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

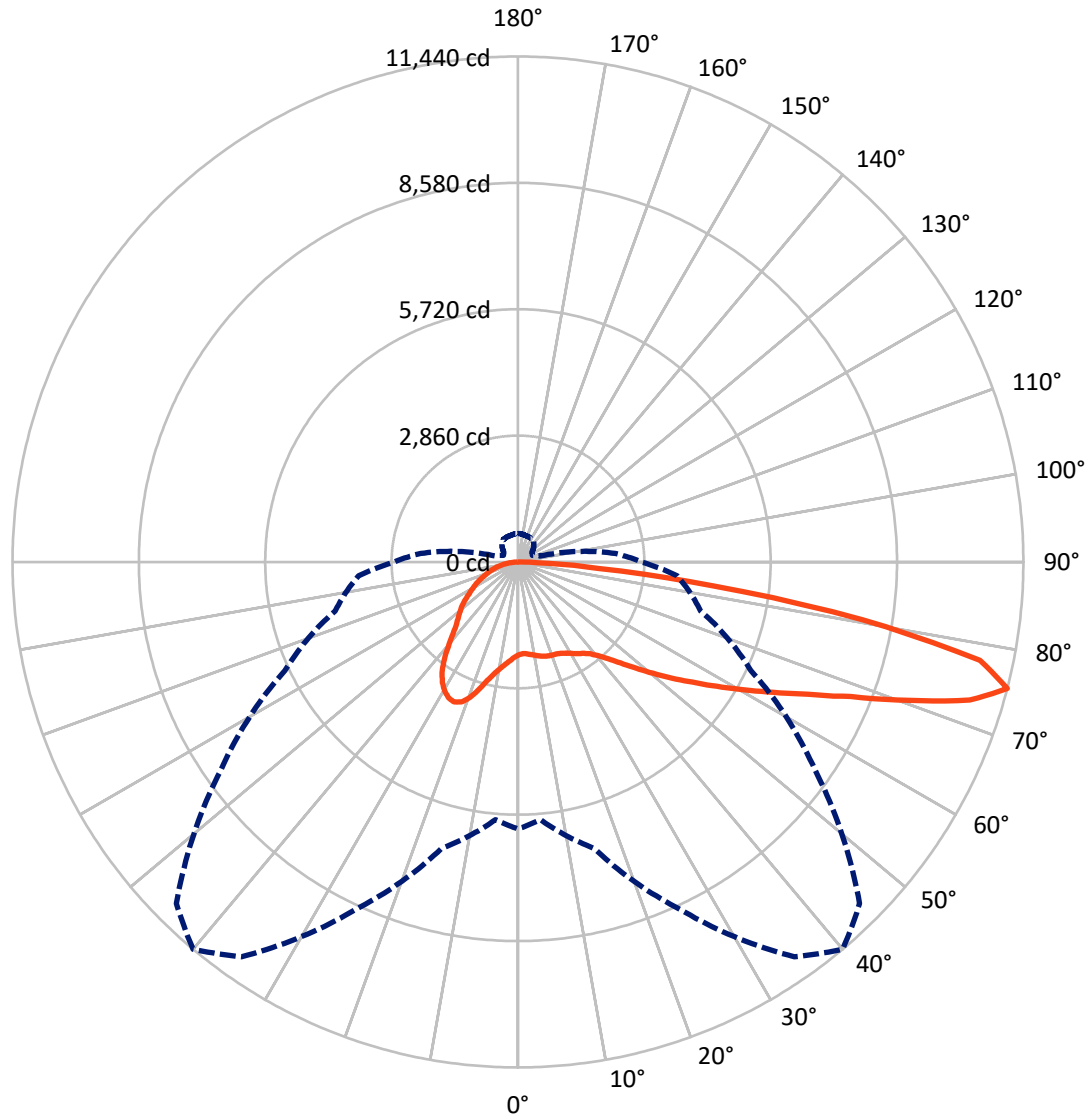
✕ Max cd
 - - - 1/2 Max cd



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	5694.7	0.0	5694.7
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	12685.3	0.0	12685.3
	% Fixture	69.0	0.0	69.0
Total	Lumens	18380.0	0.0	18380.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.8	1.1
10°-20°	704.4	3.8
20°-30°	1286.2	7.0
30°-40°	1824.1	9.9
40°-50°	2463.1	13.4
50°-60°	3313.5	18.0
60°-70°	4205.6	22.9
70°-80°	3816.9	20.8
80°-90°	556.4	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°	18380.0	100.0
0°-180°	18380.0	100.0



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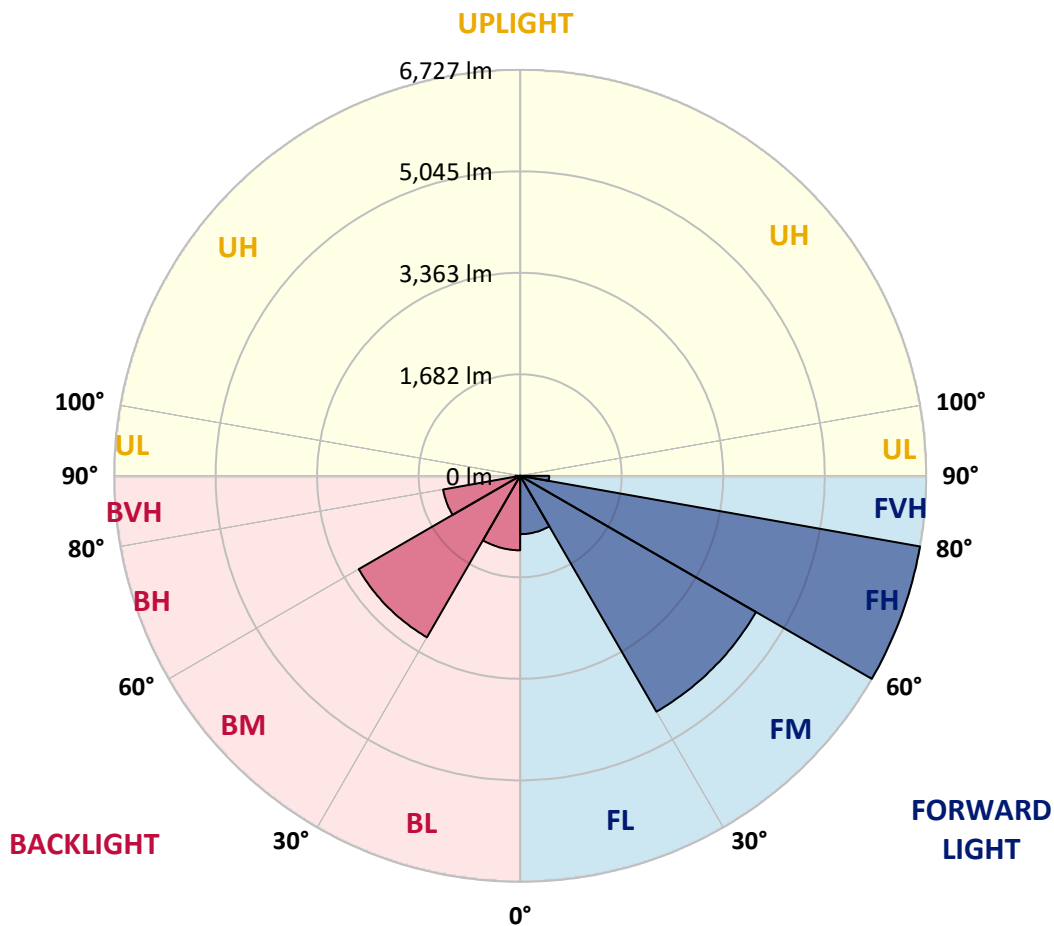
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	966.8	5.3			
FM (30°-60°)	4511.9	24.5			
FH (60°-80°)	6726.8	36.6			G3/7500
FVH (80°-90°)	479.8	2.6			G3/500
BL (0°-30°)	1233.5	6.7	B3/2500		
BM (30°-60°)	3088.9	16.8	B3/5000		
BH (60°-80°)	1295.7	7.0	B3/2500		G3/2500
BVH (80°-90°)	76.6	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°	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8
2.5°	2069.6	2081.3	2078.4	2074.5	2074.5	2075.5	2074.5	2081.3	2088.1	2095.0	2105.7
5°	2091.1	2102.8	2096.9	2092.0	2088.1	2087.2	2084.2	2083.3	2087.2	2095.9	2110.6
7.5°	2133.0	2144.7	2135.9	2127.1	2119.3	2115.4	2111.5	2105.7	2102.8	2107.6	2128.1
10°	2179.8	2191.5	2180.7	2165.1	2152.5	2147.6	2143.7	2137.8	2133.9	2136.9	2159.3
12.5°	2226.6	2238.3	2223.6	2202.2	2185.6	2182.7	2177.8	2175.9	2174.9	2173.9	2196.3
15°	2270.4	2280.2	2261.7	2236.3	2218.8	2213.9	2209.0	2211.9	2216.8	2222.7	2248.0
17.5°	2304.5	2314.3	2287.0	2253.9	2237.3	2235.3	2232.4	2242.2	2255.8	2270.4	2301.6
20°	2335.7	2345.5	2310.4	2265.6	2246.1	2246.1	2247.0	2267.5	2287.0	2308.4	2351.3
22.5°	2379.6	2387.4	2344.5	2283.1	2254.8	2256.8	2264.6	2285.0	2309.4	2338.7	2398.1
25°	2444.9	2450.8	2398.1	2316.2	2284.1	2289.9	2296.7	2306.5	2329.9	2364.0	2443.9
27.5°	2550.2	2555.1	2485.9	2374.7	2326.0	2335.7	2345.5	2338.7	2349.4	2378.6	2481.0
30°	2698.4	2701.3	2613.6	2466.4	2397.2	2402.0	2404.0	2375.7	2355.2	2378.6	2507.3
32.5°	2873.9	2872.9	2768.6	2577.5	2478.1	2473.2	2456.6	2401.1	2353.3	2373.8	2530.7
35°	3145.8	3135.1	3000.6	2733.5	2569.7	2539.5	2500.5	2429.3	2363.0	2368.9	2551.2
37.5°	3596.2	3563.1	3376.9	2988.9	2706.2	2629.2	2571.7	2475.1	2384.5	2366.9	2575.6
40°	4104.1	4062.2	3857.5	3338.9	2910.9	2787.1	2694.5	2540.5	2419.6	2375.7	2611.6
42.5°	4706.6	4647.1	4426.8	3751.2	3170.2	2990.8	2851.4	2623.3	2471.2	2404.0	2660.4
45°	5446.5	5367.5	5055.6	4216.2	3496.8	3258.0	3071.8	2749.1	2550.2	2458.6	2733.5
47.5°	6194.2	6213.7	5770.1	4748.5	3888.7	3587.4	3347.6	2938.2	2665.2	2546.3	2851.4
50°	6988.7	7002.4	6480.8	5338.3	4333.2	3959.8	3657.6	3149.7	2825.1	2671.1	3027.9
52.5°	7608.7	7610.7	7126.2	5955.4	4796.3	4369.3	3992.0	3391.5	3010.3	2836.8	3262.8
55°	7996.7	7991.8	7578.5	6539.3	5328.5	4799.2	4362.5	3666.4	3236.5	3031.8	3558.2
57.5°	8278.4	8263.8	7890.4	7041.3	5895.9	5307.1	4781.6	3978.4	3503.6	3263.8	3947.2
60°	8385.7	8376.9	8102.0	7475.2	6492.5	5868.6	5265.2	4327.4	3806.8	3537.7	4447.3
62.5°	8426.6	8443.2	8309.6	7895.3	7131.0	6490.6	5796.5	4744.6	4148.0	3847.7	4974.7
65°	8570.9	8601.1	8573.8	8445.1	7852.4	7218.8	6501.3	5240.8	4520.4	4180.2	5525.5
67.5°	8856.5	8886.7	8898.4	9103.2	8733.7	8126.4	7380.6	5858.9	4956.1	4525.3	5939.8
70°	8849.7	8840.9	9047.6	9626.6	9837.2	9382.9	8566.0	6619.2	5475.7	4811.9	5992.4
72.5°	8055.2	7985.0	8473.4	9620.8	10755.5	10695.1	10013.7	7599.9	5924.2	4847.0	5199.9
75°	6043.1	5855.9	6718.7	8670.3	10908.6	11439.9	10933.9	8208.2	5817.9	4282.5	3618.6
77.5°	2584.3	2396.2	3413.0	6418.4	9763.1	10694.1	10089.7	7161.3	4644.2	2831.9	1777.2
80°	676.5	675.6	1031.4	2909.9	6639.7	7897.3	6928.3	4624.7	2653.5	1011.9	490.3
82.5°	279.8	273.0	379.2	1131.8	3244.3	4431.7	3616.7	2062.8	958.3	273.9	162.8
85°	104.3	103.3	184.2	390.9	1144.5	1827.8	1322.9	527.4	238.8	133.6	73.1
87.5°	29.2	28.3	40.0	135.5	278.8	423.1	226.2	86.8	67.3	52.6	21.4
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°	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8	2101.8
2.5°	2108.6	2113.5	2122.2	2129.1	2137.8	2147.6	2161.2	2170.0	2178.8	2184.6	2180.7
5°	2117.4	2128.1	2150.5	2172.9	2199.3	2223.6	2251.9	2272.4	2288.9	2293.8	2295.8
7.5°	2136.9	2154.4	2192.4	2230.5	2272.4	2312.3	2353.3	2388.4	2416.7	2427.4	2428.4
10°	2171.0	2194.4	2248.0	2301.6	2357.2	2418.6	2471.2	2521.9	2561.9	2578.5	2579.5
12.5°	2213.9	2243.1	2313.3	2387.4	2464.4	2549.2	2617.5	2679.9	2729.6	2752.0	2752.0
15°	2269.5	2307.5	2397.2	2496.6	2609.7	2727.6	2814.4	2883.6	2939.2	2966.5	2964.5
17.5°	2329.9	2380.6	2493.7	2643.8	2805.6	2960.6	3062.0	3112.7	3170.2	3196.5	3195.6
20°	2388.4	2450.8	2612.6	2831.0	3046.4	3211.2	3293.0	3306.7	3310.6	3313.5	3321.3
22.5°	2448.8	2532.7	2761.8	3066.9	3297.9	3412.0	3423.7	3365.2	3283.3	3245.3	3256.0
25°	2515.1	2626.2	2956.7	3327.2	3514.3	3528.0	3438.3	3296.0	3141.0	3069.8	3080.5
27.5°	2579.5	2734.5	3190.7	3575.8	3670.3	3550.4	3357.4	3155.6	2968.4	2893.4	2902.1
30°	2643.8	2858.3	3449.0	3793.1	3741.5	3494.8	3229.7	3004.5	2816.3	2737.4	2746.2
32.5°	2709.1	3002.5	3746.4	3950.1	3728.8	3376.9	3070.8	2834.9	2669.1	2586.3	2597.0
35°	2783.2	3180.0	4028.1	4035.9	3644.0	3203.4	2861.2	2632.1	2487.8	2421.5	2436.2
37.5°	2879.7	3405.2	4276.7	4057.3	3495.8	2948.9	2600.9	2392.3	2273.4	2243.1	2264.6
40°	2999.6	3676.2	4466.8	4023.2	3276.5	2639.9	2316.2	2149.5	2082.3	2089.1	2112.5
42.5°	3155.6	3979.3	4600.3	3935.5	2971.3	2321.1	2066.7	1992.6	2024.8	2052.1	2077.4
45°	3358.4	4294.2	4683.2	3786.3	2626.2	2051.1	1919.5	1937.0	1961.4	1964.3	1983.8
47.5°	3617.7	4613.0	4737.8	3561.1	2274.3	1861.0	1825.9	1829.8	1824.9	1804.4	1820.0
50°	3941.3	4923.0	4786.5	3262.8	1975.0	1742.1	1695.3	1681.6	1614.4	1548.1	1556.8
52.5°	4309.8	5207.7	4807.0	2892.4	1742.1	1642.6	1566.6	1480.8	1355.0	1334.6	1341.4
55°	4719.3	5470.9	4754.3	2437.1	1546.1	1514.9	1399.9	1296.6	1282.9	1265.4	1268.3
57.5°	5208.6	5754.5	4647.1	1929.2	1345.3	1365.8	1253.7	1265.4	1241.0	1213.7	1208.8
60°	5743.8	6048.0	4459.0	1466.2	1137.7	1179.6	1215.6	1214.7	1207.8	1185.4	1177.6
62.5°	6225.4	6241.0	4088.5	1123.0	955.4	1035.3	1133.8	1132.8	1126.9	1114.3	1109.4
65°	6512.0	6211.7	3470.5	884.2	805.2	916.4	1022.6	1030.4	1031.4	1030.4	1030.4
67.5°	6461.3	5869.6	2622.3	703.8	681.4	795.5	912.5	923.2	931.0	932.9	934.9
70°	5888.1	5118.0	1709.9	561.5	571.3	689.2	808.2	818.9	825.7	833.5	837.4
72.5°	4589.6	3762.9	978.7	454.3	474.8	597.6	704.8	717.5	721.4	736.0	741.9
75°	2796.8	2212.9	528.4	357.8	389.9	510.8	602.5	617.1	623.9	641.5	643.4
77.5°	1329.7	958.3	301.2	278.8	313.9	417.2	508.9	525.4	506.9	516.7	508.9
80°	449.4	355.8	190.1	212.5	239.8	325.6	407.5	424.1	385.1	383.1	379.2
82.5°	157.0	144.3	120.9	141.4	155.0	233.0	308.1	329.5	286.6	285.6	272.0
85°	61.4	58.5	67.3	77.0	92.6	143.3	202.8	213.5	176.4	142.3	140.4
87.5°	12.7	13.6	16.6	17.5	28.3	49.7	73.1	89.7	71.2	60.4	55.6
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)