

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: P882804

Luminaire Tested: **NAV-SB2D-835-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882804
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-SB2D-835-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA 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: 17346 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G3

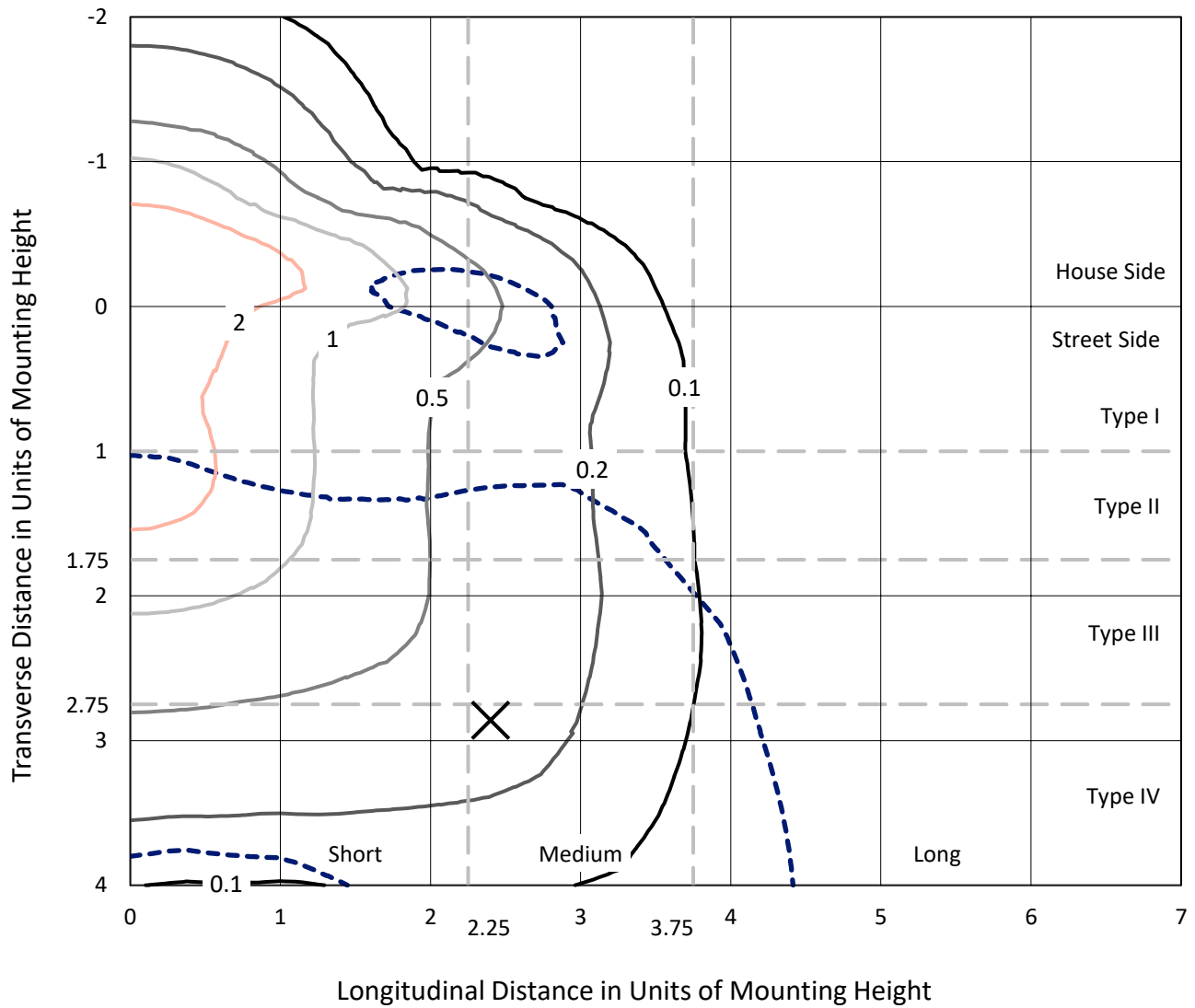
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

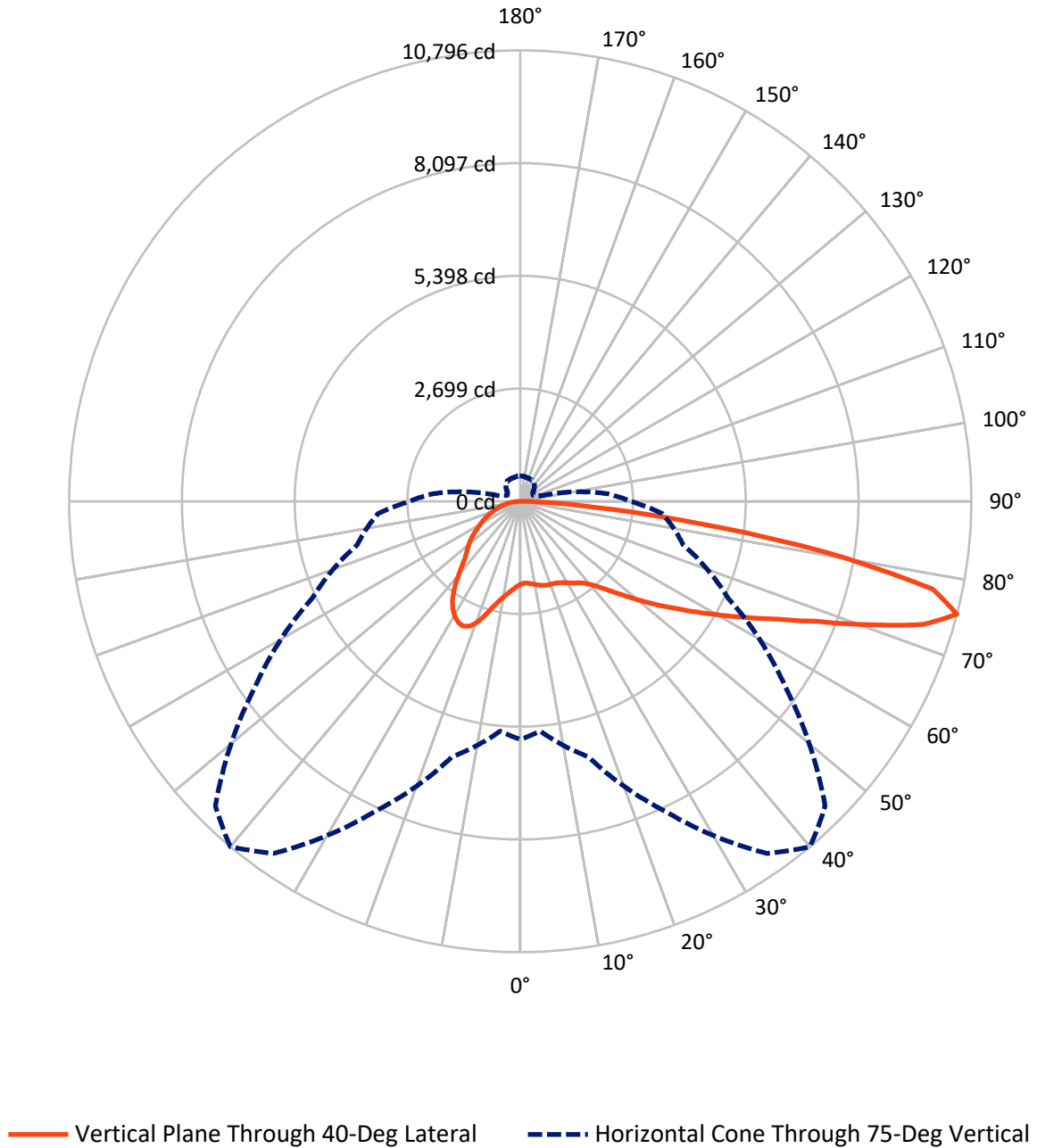
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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	5374.4	0.0	5374.4
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	11971.6	0.0	11971.6
	% Fixture	69.0	0.0	69.0
Total	Lumens	17346.0	0.0	17346.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.0	1.1
10°-20°	664.8	3.8
20°-30°	1213.8	7.0
30°-40°	1721.5	9.9
40°-50°	2324.5	13.4
50°-60°	3127.1	18.0
60°-70°	3969.0	22.9
70°-80°	3602.2	20.8
80°-90°	525.1	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°	17346.0	100.0
0°-180°	17346.0	100.0

Coefficient of Utilization



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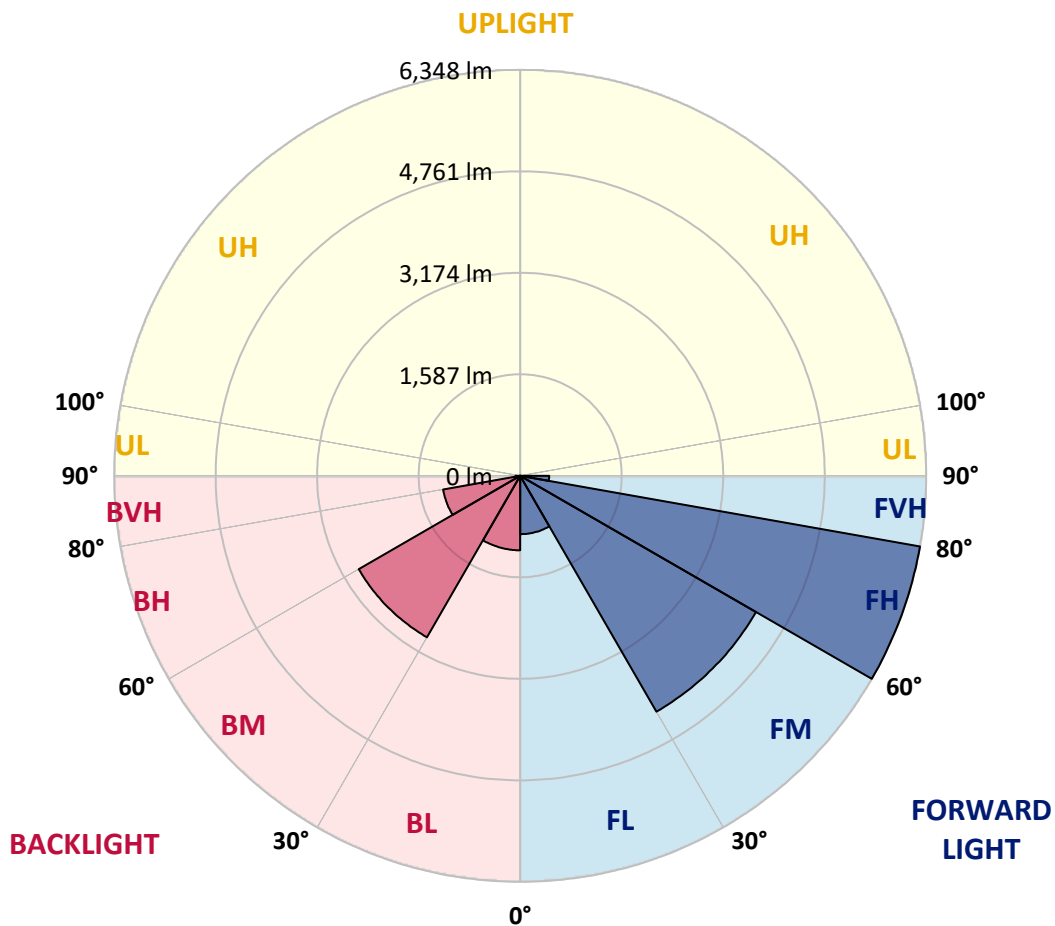
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	912.4	5.3			
FM (30°-60°)	4258.0	24.5			
FH (60°-80°)	6348.4	36.6			G3/7500
FVH (80°-90°)	452.8	2.6			G3/500
BL (0°-30°)	1164.1	6.7	B3/2500		
BM (30°-60°)	2915.1	16.8	B3/5000		
BH (60°-80°)	1222.8	7.0	B3/2500		G3/2500
BVH (80°-90°)	72.3	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°	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5
2.5°	1953.2	1964.2	1961.5	1957.8	1957.8	1957.8	1957.8	1964.2	1970.7	1977.1	1987.2
5°	1973.4	1984.5	1978.9	1974.3	1970.7	1970.7	1967.0	1966.1	1969.7	1978.0	1991.8
7.5°	2013.0	2024.0	2015.7	2007.5	2000.1	1996.4	1992.7	1987.2	1984.5	1989.1	2008.4
10°	2057.1	2068.2	2058.1	2043.3	2031.4	2026.8	2023.1	2017.6	2013.9	2016.7	2037.8
12.5°	2101.3	2112.3	2098.5	2078.3	2062.7	2059.9	2055.3	2053.5	2052.5	2051.6	2072.8
15°	2142.7	2151.9	2134.4	2110.5	2093.9	2089.3	2084.7	2087.5	2092.1	2097.6	2121.5
17.5°	2174.9	2184.1	2158.3	2127.1	2111.4	2109.6	2106.8	2116.0	2128.9	2142.7	2172.1
20°	2204.3	2213.5	2180.4	2138.1	2119.7	2119.7	2120.6	2139.9	2158.3	2178.6	2219.1
22.5°	2245.7	2253.1	2212.6	2154.7	2128.0	2129.8	2137.2	2156.5	2179.5	2207.1	2263.2
25°	2307.4	2312.9	2263.2	2185.9	2155.6	2161.1	2167.5	2176.7	2198.8	2231.0	2306.5
27.5°	2406.7	2411.3	2346.0	2241.1	2195.1	2204.3	2213.5	2207.1	2217.2	2244.8	2341.4
30°	2546.6	2549.3	2466.5	2327.6	2262.3	2266.9	2268.7	2242.1	2222.7	2244.8	2366.3
32.5°	2712.2	2711.3	2612.8	2432.5	2338.7	2334.1	2318.4	2266.0	2220.9	2240.2	2388.3
35°	2968.9	2958.7	2831.8	2579.7	2425.1	2396.6	2359.8	2292.7	2230.1	2235.6	2407.7
37.5°	3393.9	3362.6	3186.9	2820.7	2553.9	2481.3	2427.0	2335.9	2250.3	2233.8	2430.7
40°	3873.2	3833.7	3640.5	3151.0	2747.1	2630.3	2542.9	2397.5	2283.5	2242.1	2464.7
42.5°	4441.8	4385.7	4177.8	3540.2	2991.9	2822.6	2691.0	2475.7	2332.2	2268.7	2510.7
45°	5140.1	5065.6	4771.2	3979.0	3300.1	3074.7	2898.9	2594.4	2406.7	2320.3	2579.7
47.5°	5845.7	5864.1	5445.5	4481.4	3669.9	3385.6	3159.3	2772.9	2515.3	2403.1	2691.0
50°	6595.5	6608.4	6116.2	5038.0	4089.4	3737.1	3451.9	2972.5	2666.2	2520.8	2857.5
52.5°	7180.7	7182.5	6725.3	5620.3	4526.4	4123.5	3767.4	3200.7	2841.0	2677.2	3079.3
55°	7546.8	7542.2	7152.1	6171.4	5028.8	4529.2	4117.0	3460.2	3054.4	2861.2	3358.0
57.5°	7812.7	7798.9	7446.5	6645.2	5564.2	5008.5	4512.6	3754.6	3306.5	3080.2	3725.1
60°	7913.9	7905.6	7646.2	7054.6	6127.3	5538.5	4969.0	4083.9	3592.6	3338.7	4197.1
62.5°	7952.6	7968.2	7842.2	7451.1	6729.9	6125.4	5470.4	4477.7	3914.6	3631.3	4694.8
65°	8088.7	8117.2	8091.5	7970.0	7410.7	6812.7	6135.5	4946.0	4266.1	3945.0	5214.6
67.5°	8358.3	8386.8	8397.8	8591.0	8242.4	7669.2	6965.4	5529.3	4677.3	4270.7	5605.6
70°	8351.8	8343.6	8538.6	9085.1	9283.8	8855.1	8084.1	6246.9	5167.7	4541.2	5655.3
72.5°	7602.0	7535.8	7996.7	9079.6	10150.5	10093.4	9450.3	7172.4	5590.9	4574.3	4907.3
75°	5703.1	5526.5	6340.7	8182.6	10294.9	10796.3	10318.8	7746.5	5490.6	4041.6	3415.1
77.5°	2438.9	2261.4	3220.9	6057.3	9213.9	10092.5	9522.1	6758.4	4382.9	2672.6	1677.2
80°	638.5	637.6	973.4	2746.2	6266.2	7453.0	6538.5	4364.5	2504.3	955.0	462.8
82.5°	264.0	257.6	357.9	1068.1	3061.8	4182.4	3413.2	1946.7	904.4	258.5	153.6
85°	98.4	97.5	173.9	368.9	1080.1	1725.0	1248.5	497.7	225.4	126.0	69.0
87.5°	27.6	26.7	37.7	127.9	263.1	399.3	213.4	81.9	63.5	49.7	20.2
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°	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5	1983.5
2.5°	1990.0	1994.6	2002.9	2009.3	2017.6	2026.8	2039.7	2047.9	2056.2	2061.7	2058.1
5°	1998.3	2008.4	2029.5	2050.7	2075.5	2098.5	2125.2	2144.5	2160.2	2164.8	2166.6
7.5°	2016.7	2033.2	2069.1	2105.0	2144.5	2182.3	2220.9	2254.0	2280.7	2290.8	2291.7
10°	2048.9	2070.9	2121.5	2172.1	2224.6	2282.5	2332.2	2380.1	2417.8	2433.4	2434.3
12.5°	2089.3	2116.9	2183.2	2253.1	2325.8	2405.8	2470.2	2529.1	2576.0	2597.2	2597.2
15°	2141.8	2177.7	2262.3	2356.1	2462.9	2574.2	2656.1	2721.4	2773.8	2799.6	2797.7
17.5°	2198.8	2246.7	2353.4	2495.1	2647.8	2794.1	2889.7	2937.6	2991.9	3016.7	3015.8
20°	2254.0	2312.9	2465.6	2671.7	2875.0	3030.5	3107.8	3120.7	3124.3	3127.1	3134.5
22.5°	2311.1	2390.2	2606.4	2894.3	3112.4	3220.0	3231.1	3175.9	3098.6	3062.7	3072.8
25°	2373.6	2478.5	2790.4	3140.0	3316.6	3329.5	3244.9	3110.5	2964.3	2897.1	2907.2
27.5°	2434.3	2580.6	3011.2	3374.6	3463.8	3350.7	3168.5	2978.1	2801.4	2730.6	2738.9
30°	2495.1	2697.5	3255.0	3579.8	3531.0	3298.2	3048.0	2835.5	2657.9	2583.4	2591.7
32.5°	2556.7	2833.6	3535.6	3727.9	3519.0	3186.9	2898.0	2675.4	2519.0	2440.8	2450.9
35°	2626.6	3001.1	3801.5	3808.8	3439.0	3023.1	2700.2	2484.0	2347.9	2285.3	2299.1
37.5°	2717.7	3213.6	4036.1	3829.1	3299.2	2783.0	2454.6	2257.7	2145.5	2116.9	2137.2
40°	2830.9	3469.4	4215.5	3796.9	3092.1	2491.4	2185.9	2028.6	1965.1	1971.6	1993.7
42.5°	2978.1	3755.5	4341.5	3714.1	2804.2	2190.5	1950.4	1880.5	1910.9	1936.6	1960.5
45°	3169.4	4052.6	4419.7	3573.3	2478.5	1935.7	1811.5	1828.1	1851.1	1853.8	1872.2
47.5°	3414.2	4353.5	4471.2	3360.8	2146.4	1756.3	1723.2	1726.9	1722.3	1702.9	1717.7
50°	3719.6	4646.0	4517.2	3079.3	1863.9	1644.1	1599.9	1587.0	1523.5	1461.0	1469.3
52.5°	4067.4	4914.7	4536.6	2729.7	1644.1	1550.2	1478.5	1397.5	1278.8	1259.5	1265.9
55°	4453.8	5163.1	4486.9	2300.0	1459.1	1429.7	1321.1	1223.6	1210.7	1194.2	1196.9
57.5°	4915.6	5430.8	4385.7	1820.7	1269.6	1288.9	1183.1	1194.2	1171.2	1145.4	1140.8
60°	5420.7	5707.7	4208.1	1383.7	1073.6	1113.2	1147.3	1146.3	1139.9	1118.7	1111.4
62.5°	5875.2	5889.9	3858.5	1059.8	901.6	977.0	1070.0	1069.0	1063.5	1051.6	1047.0
65°	6145.7	5862.3	3275.2	834.4	759.9	864.8	965.1	972.4	973.4	972.4	972.4
67.5°	6097.8	5539.4	2474.8	664.2	643.1	750.7	861.1	871.2	878.6	880.4	882.3
70°	5556.9	4830.0	1613.7	529.9	539.1	650.4	762.7	772.8	779.2	786.6	790.3
72.5°	4331.4	3551.2	923.7	428.7	448.0	564.0	665.2	677.1	680.8	694.6	700.1
75°	2639.5	2088.4	498.6	337.6	368.0	482.1	568.6	582.4	588.8	605.4	607.2
77.5°	1254.9	904.4	284.3	263.1	296.2	393.8	480.2	495.9	478.4	487.6	480.2
80°	424.1	335.8	179.4	200.6	226.3	307.3	384.6	400.2	363.4	361.6	357.9
82.5°	148.1	136.2	114.1	133.4	146.3	219.9	290.7	311.0	270.5	269.6	256.7
85°	58.0	55.2	63.5	72.7	87.4	135.2	191.4	201.5	166.5	134.3	132.5
87.5°	12.0	12.9	15.6	16.6	26.7	46.9	69.0	84.6	67.2	57.0	52.4
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)