

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: P882784

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

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882784
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-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: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16704 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G3

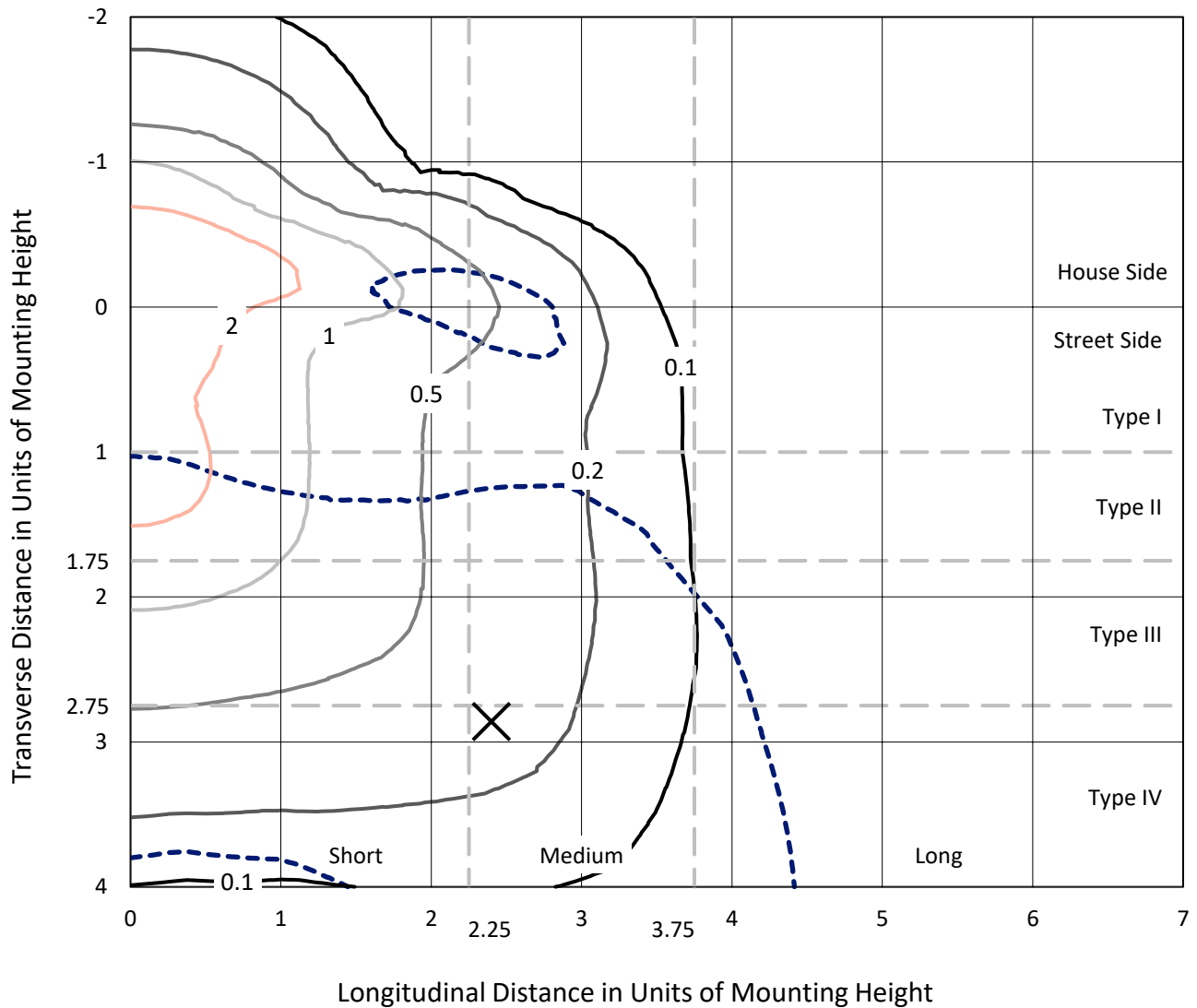
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

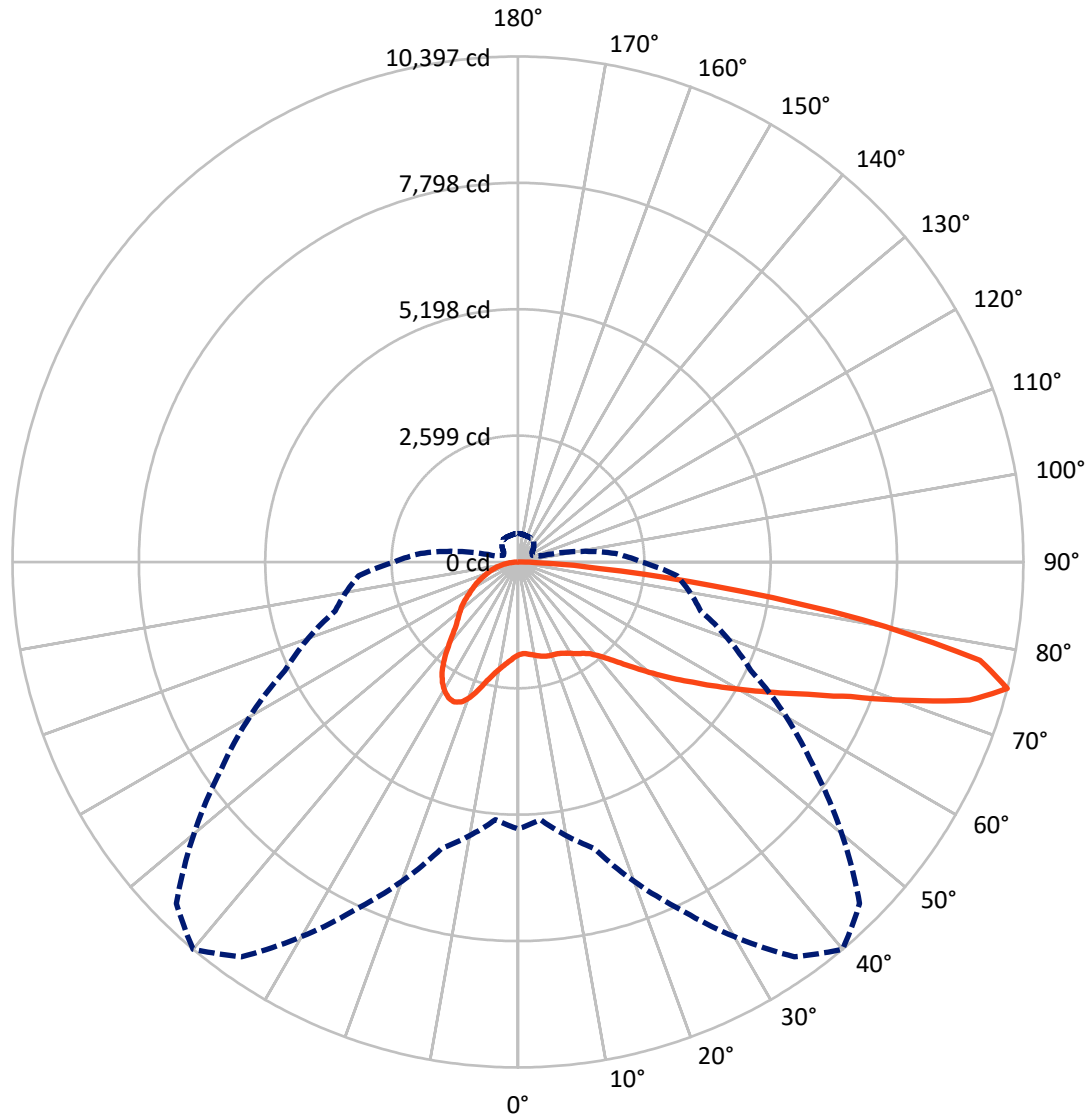
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 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	5175.5	0.0	5175.5
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	11528.5	0.0	11528.5
	% Fixture	69.0	0.0	69.0
Total	Lumens	16704.0	0.0	16704.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.7	1.1
10°-20°	640.2	3.8
20°-30°	1168.9	7.0
30°-40°	1657.8	9.9
40°-50°	2238.5	13.4
50°-60°	3011.4	18.0
60°-70°	3822.1	22.9
70°-80°	3468.8	20.8
80°-90°	505.6	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°	16704.0	100.0
0°-180°	16704.0	100.0

Coefficient of Utilization



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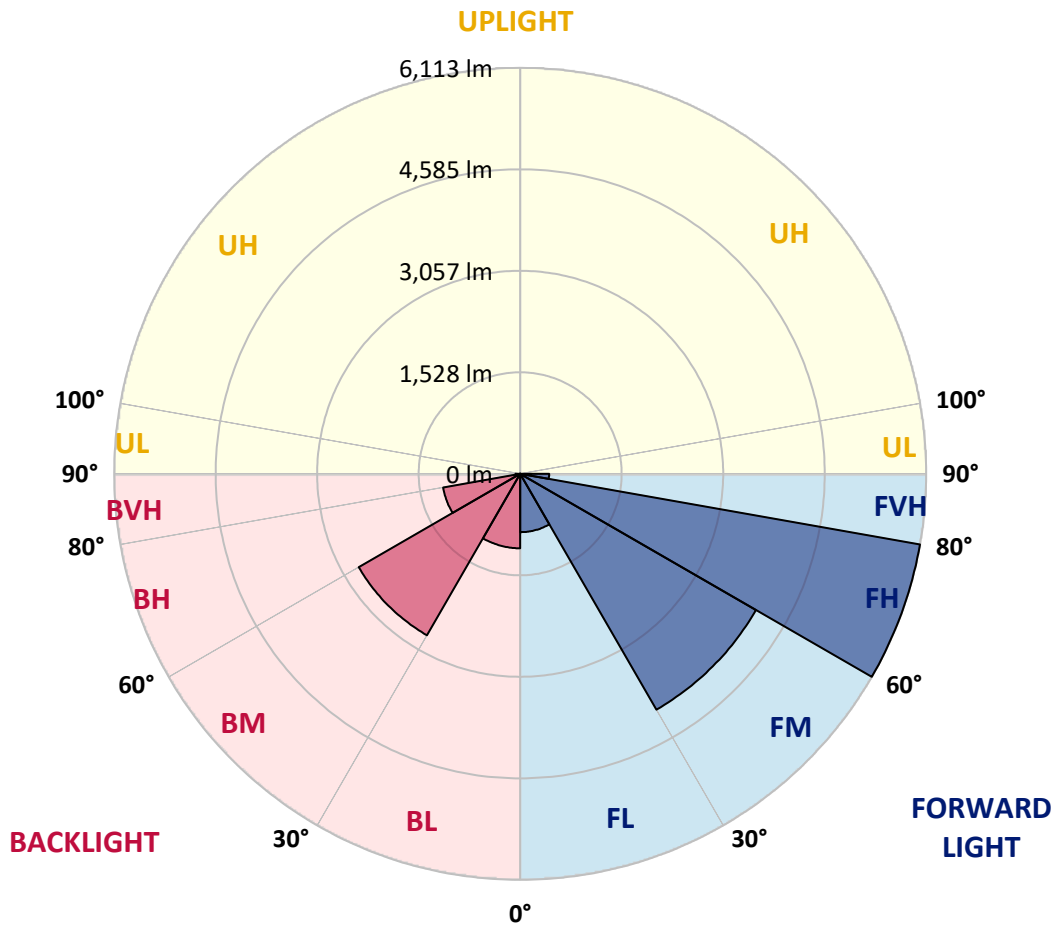
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	878.6	5.3			
FM (30°-60°)	4100.5	24.5			
FH (60°-80°)	6113.4	36.6			G3/7500
FVH (80°-90°)	436.0	2.6			G3/500
BL (0°-30°)	1121.1	6.7	B3/2500		
BM (30°-60°)	2807.2	16.8	B3/5000		
BH (60°-80°)	1177.6	7.0	B3/2500		G3/2500
BVH (80°-90°)	69.6	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°	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1
2.5°	1880.9	1891.5	1888.9	1885.3	1885.3	1886.2	1885.3	1891.5	1897.7	1903.9	1913.7
5°	1900.4	1911.0	1905.7	1901.3	1897.7	1896.8	1894.2	1893.3	1896.8	1904.8	1918.1
7.5°	1938.5	1949.1	1941.1	1933.2	1926.1	1922.5	1919.0	1913.7	1911.0	1915.4	1934.0
10°	1981.0	1991.6	1981.9	1967.7	1956.2	1951.8	1948.2	1942.9	1939.4	1942.0	1962.4
12.5°	2023.5	2034.2	2020.9	2001.4	1986.3	1983.7	1979.2	1977.5	1976.6	1975.7	1996.1
15°	2063.4	2072.3	2055.4	2032.4	2016.4	2012.0	2007.6	2010.2	2014.7	2020.0	2043.0
17.5°	2094.4	2103.3	2078.5	2048.3	2033.3	2031.5	2028.8	2037.7	2050.1	2063.4	2091.7
20°	2122.8	2131.6	2099.7	2059.0	2041.2	2041.2	2042.1	2060.7	2078.5	2097.9	2136.9
22.5°	2162.6	2169.7	2130.7	2074.9	2049.2	2051.0	2058.1	2076.7	2098.8	2125.4	2179.5
25°	2222.0	2227.3	2179.5	2105.0	2075.8	2081.1	2087.3	2096.2	2117.4	2148.4	2221.1
27.5°	2317.7	2322.1	2259.2	2158.2	2113.9	2122.8	2131.6	2125.4	2135.2	2161.7	2254.8
30°	2452.3	2455.0	2375.3	2241.5	2178.6	2183.0	2184.8	2159.1	2140.5	2161.7	2278.7
32.5°	2611.8	2610.9	2516.1	2342.5	2252.1	2247.7	2232.6	2182.1	2138.7	2157.3	2299.9
35°	2859.0	2849.2	2727.0	2484.2	2335.4	2307.9	2272.5	2207.8	2147.6	2152.9	2318.6
37.5°	3268.3	3238.2	3069.0	2716.3	2459.4	2389.4	2337.2	2249.4	2167.1	2151.1	2340.7
40°	3729.9	3691.8	3505.7	3034.4	2645.5	2533.0	2448.8	2308.8	2198.9	2159.1	2373.5
42.5°	4277.4	4223.4	4023.1	3409.2	2881.1	2718.1	2591.4	2384.1	2245.9	2184.8	2417.8
45°	4949.8	4878.1	4594.6	3831.8	3177.9	2960.9	2791.7	2498.4	2317.7	2234.4	2484.2
47.5°	5629.4	5647.1	5244.0	4315.5	3534.1	3260.3	3042.4	2670.3	2422.2	2314.1	2591.4
50°	6351.4	6363.8	5889.8	4851.5	3938.1	3598.8	3324.1	2862.5	2567.5	2427.5	2751.8
52.5°	6914.9	6916.7	6476.4	5412.3	4358.9	3970.9	3628.0	3082.2	2735.8	2578.1	2965.3
55°	7267.5	7263.1	6887.4	5943.0	4842.6	4361.6	3964.7	3332.1	2941.4	2755.3	3233.7
57.5°	7523.6	7510.3	7170.9	6399.3	5358.3	4823.2	4345.6	3615.6	3184.1	2966.2	3587.2
60°	7621.0	7613.0	7363.2	6793.5	5900.5	5333.5	4785.1	3932.8	3459.7	3215.1	4041.7
62.5°	7658.2	7673.3	7551.9	7175.4	6480.8	5898.7	5267.9	4312.0	3769.7	3496.9	4521.0
65°	7789.3	7816.8	7792.0	7675.1	7136.4	6560.5	5908.5	4762.9	4108.2	3799.0	5021.6
67.5°	8048.9	8076.4	8087.0	8273.1	7937.3	7385.3	6707.6	5324.6	4504.2	4112.6	5398.1
70°	8042.7	8034.7	8222.6	8748.8	8940.2	8527.3	7784.9	6015.7	4976.4	4373.1	5446.0
72.5°	7320.7	7256.9	7700.7	8743.5	9774.8	9719.8	9100.6	6906.9	5384.0	4405.0	4725.7
75°	5492.1	5321.9	6106.0	7879.7	9913.9	10396.7	9936.9	7459.8	5287.4	3892.0	3288.7
77.5°	2348.7	2177.7	3101.7	5833.1	8872.9	9719.0	9169.7	6508.2	4220.7	2573.7	1615.1
80°	614.9	614.0	937.3	2644.6	6034.3	7177.1	6296.5	4203.0	2411.6	919.6	445.6
82.5°	254.3	248.1	344.6	1028.6	2948.5	4027.6	3286.9	1874.7	870.9	249.0	148.0
85°	94.8	93.9	167.4	355.3	1040.1	1661.2	1202.2	479.3	217.1	121.4	66.4
87.5°	26.6	25.7	36.3	123.1	253.4	384.5	205.5	78.9	61.1	47.8	19.5
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°	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1	1910.1
2.5°	1916.3	1920.8	1928.7	1934.9	1942.9	1951.8	1964.2	1972.1	1980.1	1985.4	1981.9
5°	1924.3	1934.0	1954.4	1974.8	1998.7	2020.9	2046.6	2065.2	2080.2	2084.7	2086.4
7.5°	1942.0	1958.0	1992.5	2027.1	2065.2	2101.5	2138.7	2170.6	2196.3	2206.0	2206.9
10°	1973.0	1994.3	2043.0	2091.7	2142.2	2198.1	2245.9	2292.0	2328.3	2343.4	2344.2
12.5°	2012.0	2038.6	2102.4	2169.7	2239.7	2316.8	2378.8	2435.5	2480.7	2501.1	2501.1
15°	2062.5	2097.1	2178.6	2268.9	2371.7	2478.9	2557.8	2620.7	2671.2	2696.0	2694.2
17.5°	2117.4	2163.5	2266.3	2402.7	2549.8	2690.7	2782.8	2828.9	2881.1	2905.1	2904.2
20°	2170.6	2227.3	2374.4	2572.8	2768.6	2918.3	2992.8	3005.2	3008.7	3011.4	3018.5
22.5°	2225.5	2301.7	2509.9	2787.2	2997.2	3100.9	3111.5	3058.3	2983.9	2949.4	2959.1
25°	2285.8	2386.8	2687.1	3023.8	3193.9	3206.3	3124.8	2995.4	2854.6	2789.9	2799.6
27.5°	2344.2	2485.1	2899.7	3249.7	3335.6	3226.7	3051.2	2867.8	2697.7	2629.5	2637.5
30°	2402.7	2597.6	3134.5	3447.3	3400.3	3176.2	2935.2	2730.5	2559.5	2487.8	2495.7
32.5°	2462.1	2728.7	3404.7	3589.9	3388.8	3069.0	2790.8	2576.4	2425.8	2350.4	2360.2
35°	2529.4	2890.0	3660.8	3667.9	3311.7	2911.3	2600.3	2392.1	2261.0	2200.7	2214.0
37.5°	2617.1	3094.7	3886.7	3687.4	3177.0	2680.0	2363.7	2174.1	2066.1	2038.6	2058.1
40°	2726.1	3340.9	4059.5	3656.3	2977.7	2399.2	2105.0	1953.5	1892.4	1898.6	1919.9
42.5°	2867.8	3616.5	4180.8	3576.6	2700.4	2109.5	1878.2	1810.9	1840.1	1864.9	1888.0
45°	3052.1	3902.6	4256.1	3441.1	2386.8	1864.1	1744.5	1760.4	1782.5	1785.2	1802.9
47.5°	3287.8	4192.4	4305.8	3236.4	2066.9	1691.3	1659.4	1662.9	1658.5	1639.9	1654.1
50°	3581.9	4474.1	4350.1	2965.3	1795.0	1583.2	1540.7	1528.3	1467.1	1406.9	1414.9
52.5°	3916.8	4732.8	4368.7	2628.6	1583.2	1492.8	1423.7	1345.8	1231.5	1212.9	1219.1
55°	4288.9	4972.0	4320.8	2214.9	1405.1	1376.8	1272.2	1178.3	1165.9	1150.0	1152.6
57.5°	4733.7	5229.8	4223.4	1753.3	1222.6	1241.2	1139.3	1150.0	1127.8	1103.0	1098.6
60°	5220.1	5496.5	4052.4	1332.5	1033.9	1072.0	1104.8	1103.9	1097.7	1077.3	1070.2
62.5°	5657.7	5671.9	3715.7	1020.6	868.2	940.9	1030.4	1029.5	1024.2	1012.6	1008.2
65°	5918.2	5645.3	3154.0	803.6	731.8	832.8	929.4	936.5	937.3	936.5	936.5
67.5°	5872.1	5334.4	2383.2	639.7	619.3	722.9	829.3	839.0	846.1	847.9	849.6
70°	5351.2	4651.3	1554.0	510.3	519.2	626.4	734.5	744.2	750.4	757.5	761.0
72.5°	4171.1	3419.8	889.5	412.9	431.5	543.1	640.5	652.1	655.6	668.9	674.2
75°	2541.8	2011.1	480.2	325.1	354.4	464.2	547.5	560.8	567.0	583.0	584.7
77.5°	1208.4	870.9	273.8	253.4	285.3	379.2	462.5	477.5	460.7	469.6	462.5
80°	408.4	323.4	172.8	193.1	217.9	295.9	370.3	385.4	350.0	348.2	344.6
82.5°	142.6	131.1	109.9	128.5	140.9	211.7	280.0	299.5	260.5	259.6	247.2
85°	55.8	53.2	61.1	70.0	84.2	130.2	184.3	194.0	160.4	129.3	127.6
87.5°	11.5	12.4	15.1	15.9	25.7	45.2	66.4	81.5	64.7	54.9	50.5
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)