

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: P882811

Luminaire Tested: **NAV-SB2D-835-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882811
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17296 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

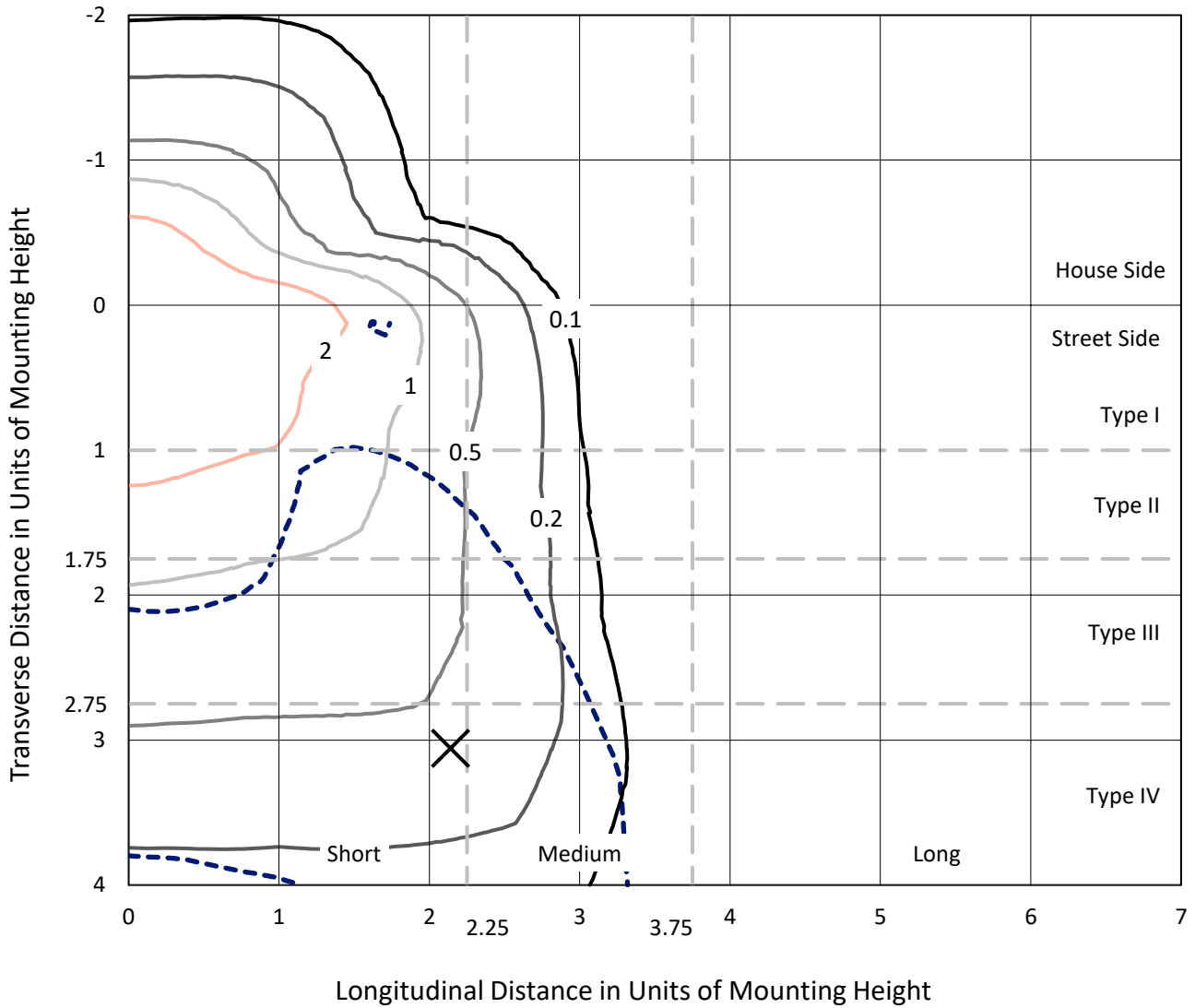
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

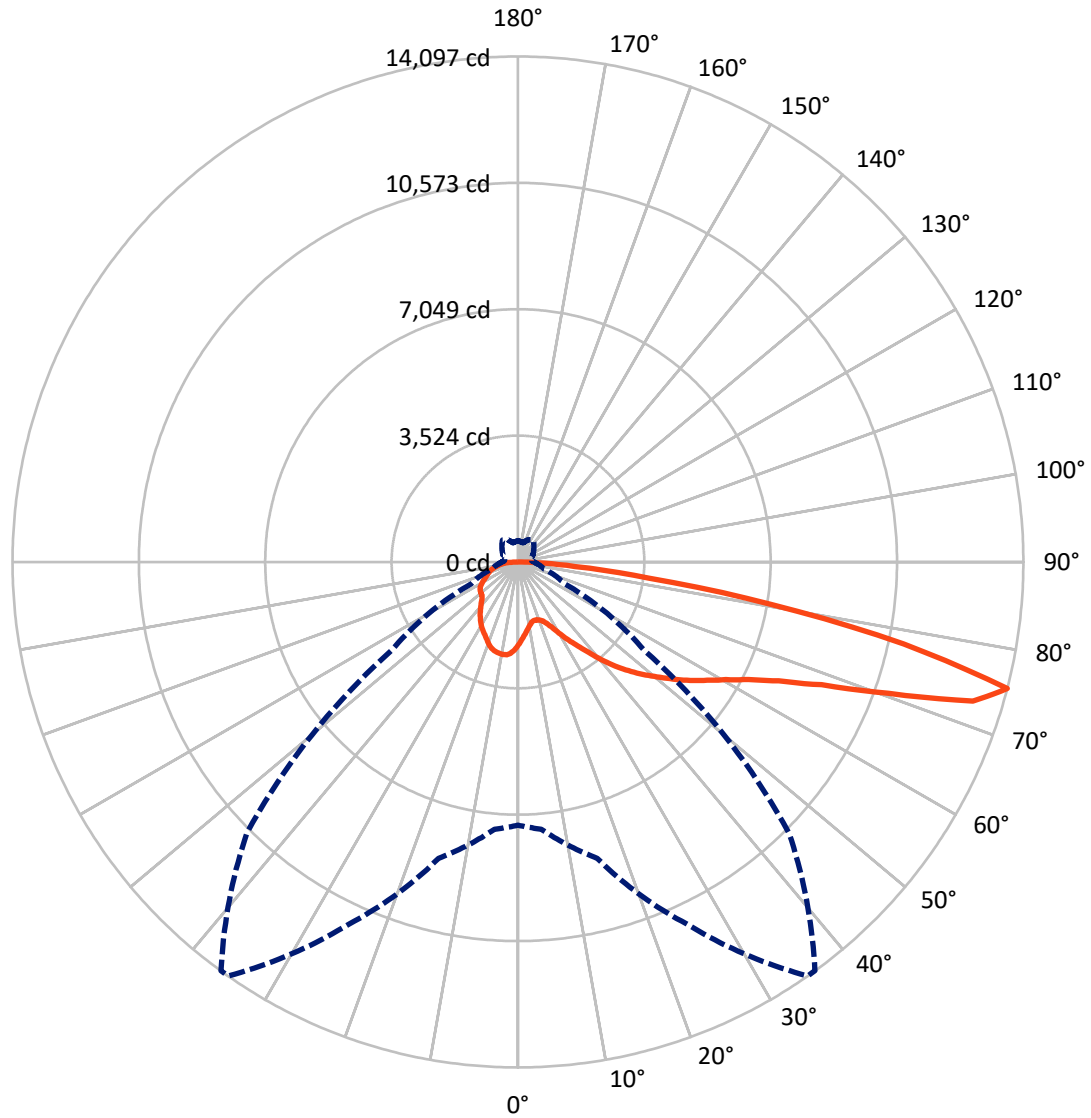
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4116.0	0.0	4116.0
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	13180.0	0.0	13180.0
	% Fixture	76.2	0.0	76.2
Total	Lumens	17296.0	0.0	17296.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.2	1.3
10°-20°	629.4	3.6
20°-30°	1057.0	6.1
30°-40°	1642.7	9.5
40°-50°	2438.2	14.1
50°-60°	3366.1	19.5
60°-70°	4083.9	23.6
70°-80°	3375.0	19.5
80°-90°	485.4	2.8
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°	17296.0	100.0
0°-180°	17296.0	100.0



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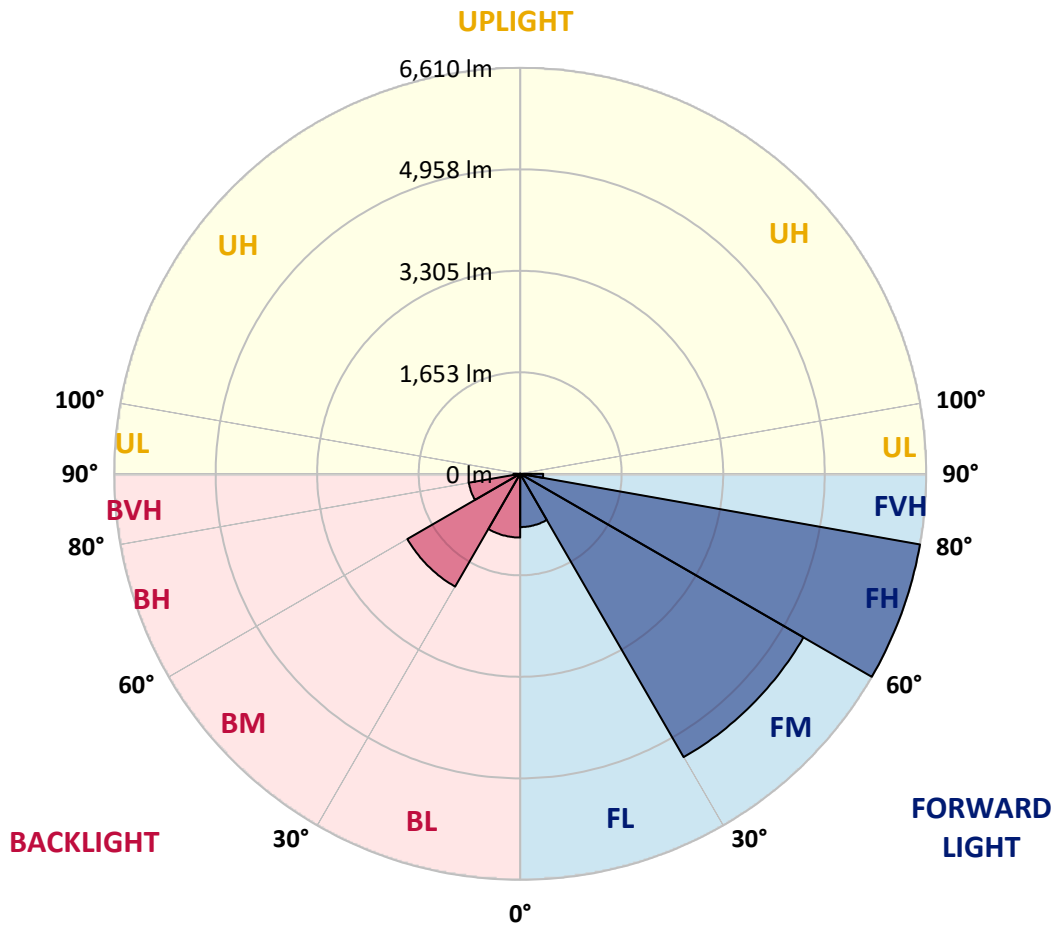
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	867.4	5.0			
FM (30°-60°)	5326.2	30.8			
FH (60°-80°)	6610.3	38.2			G3/7500
FVH (80°-90°)	376.1	2.2			G3/500
BL (0°-30°)	1037.3	6.0	B3/2500		
BM (30°-60°)	2120.8	12.3	B2/2500		
BH (60°-80°)	848.6	4.9	B2/1000		G2/1000
BVH (80°-90°)	109.3	0.6			G2/225
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 Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8
2.5°	2125.3	2138.4	2144.0	2141.2	2155.2	2153.3	2173.0	2197.3	2230.9	2263.7	2311.4
5°	1961.7	1975.7	1987.8	1999.1	2026.2	2034.6	2065.4	2112.2	2173.9	2236.6	2315.1
7.5°	1809.3	1821.4	1840.1	1860.7	1906.5	1914.9	1966.3	2039.3	2125.3	2216.9	2325.4
10°	1684.9	1697.1	1716.7	1740.1	1797.1	1807.4	1872.8	1970.1	2082.3	2198.2	2336.6
12.5°	1631.6	1635.3	1646.6	1669.9	1719.5	1726.0	1798.0	1909.3	2040.2	2184.2	2353.4
15°	1628.8	1636.3	1637.2	1649.4	1690.5	1693.3	1759.7	1870.0	2014.0	2181.4	2378.7
17.5°	1656.8	1662.5	1654.0	1661.5	1696.1	1700.8	1753.2	1851.3	2005.6	2193.5	2421.7
20°	1731.6	1736.3	1711.1	1700.8	1726.0	1729.8	1781.2	1863.5	2014.0	2218.8	2480.6
22.5°	1890.6	1893.4	1831.7	1789.6	1791.5	1793.4	1838.2	1913.0	2046.7	2264.6	2555.4
25°	2138.4	2136.5	2038.3	1957.0	1910.2	1899.9	1929.9	1993.4	2101.9	2325.4	2651.7
27.5°	2428.2	2414.2	2316.0	2194.5	2092.6	2077.6	2071.1	2098.2	2180.5	2405.8	2769.5
30°	2755.5	2742.4	2636.7	2477.8	2336.6	2312.3	2250.6	2236.6	2297.3	2515.2	2933.1
32.5°	3114.5	3106.1	2979.9	2787.3	2598.4	2570.4	2466.6	2429.2	2476.9	2680.7	3161.3
35°	3415.6	3408.1	3303.4	3105.2	2874.2	2839.6	2734.0	2691.9	2716.2	2892.9	3459.6
37.5°	3687.7	3684.0	3594.2	3438.0	3199.6	3157.5	3038.8	3024.8	3020.1	3172.5	3821.4
40°	3940.1	3930.8	3837.3	3755.0	3578.3	3540.0	3435.2	3423.1	3387.6	3516.6	4230.9
42.5°	4219.7	4195.4	4059.8	4021.5	3973.8	3942.0	3879.4	3881.2	3802.7	3904.6	4664.8
45°	4447.9	4433.8	4294.5	4272.1	4323.5	4310.4	4364.6	4378.7	4226.3	4311.3	5115.5
47.5°	4692.8	4679.7	4561.9	4546.0	4685.4	4689.1	4880.8	4885.4	4639.5	4734.0	5567.1
50°	4994.8	4976.1	4859.3	4878.9	5035.0	5049.1	5399.7	5367.9	5020.1	5163.1	6014.9
52.5°	5194.0	5205.2	5180.0	5211.8	5425.0	5438.0	5910.2	5828.9	5396.9	5586.7	6454.4
55°	5340.8	5363.2	5441.8	5514.7	5836.4	5849.4	6391.8	6267.4	5709.2	5979.4	6867.7
57.5°	5529.7	5497.9	5644.7	5786.8	6227.2	6261.8	6860.2	6690.0	5986.0	6317.9	7151.0
60°	5800.8	5778.4	5892.5	6102.8	6664.8	6719.9	7355.8	7070.6	6188.9	6586.2	7206.2
62.5°	6350.6	6294.5	6312.3	6498.3	7216.4	7289.4	7914.9	7402.5	6289.8	6691.0	6910.7
65°	7172.5	7076.2	6986.4	7115.5	7993.4	8065.4	8546.0	7663.4	6252.4	6488.1	6126.2
67.5°	8207.6	8112.2	8001.8	8123.4	9137.9	9194.9	9324.9	7810.2	5957.9	5706.4	4739.6
70°	9061.2	9025.7	9157.5	9657.8	10965.8	10967.7	10323.5	7688.6	5151.0	4045.8	2742.4
72.5°	8948.1	8926.6	9621.3	11167.8	13269.7	13220.2	11268.8	6768.6	3469.8	1825.1	1027.6
75°	7340.8	7480.1	8556.3	11140.7	14097.2	14090.7	10690.0	4302.9	1435.2	756.4	531.1
77.5°	3936.4	4157.1	5554.9	8225.3	11005.1	11170.6	7515.6	1505.4	616.2	484.3	367.5
80°	1283.8	1476.4	2214.1	4187.9	7151.0	7120.1	3221.1	590.9	421.7	343.2	254.3
82.5°	545.1	567.6	989.2	1977.6	3669.9	3612.9	1025.7	339.4	296.4	234.7	157.1
85°	213.2	238.4	436.7	914.4	1589.5	1554.9	370.3	168.3	189.8	153.3	93.5
87.5°	70.1	85.1	156.1	313.2	494.6	476.9	90.7	58.0	82.3	70.1	33.7
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°	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8
2.5°	2324.4	2339.4	2357.2	2383.4	2405.8	2424.5	2444.1	2456.3	2461.0	2475.0	2474.0
5°	2341.3	2374.0	2417.9	2461.0	2503.0	2528.3	2550.7	2561.9	2572.2	2579.7	2581.6
7.5°	2369.3	2411.4	2480.6	2536.7	2572.2	2592.8	2607.8	2604.0	2607.8	2609.6	2612.4
10°	2393.6	2452.5	2534.8	2588.1	2615.2	2616.2	2612.4	2599.3	2592.8	2593.7	2595.6
12.5°	2422.6	2488.1	2576.9	2621.8	2629.3	2608.7	2592.8	2570.4	2561.9	2558.2	2556.3
15°	2461.9	2536.7	2622.7	2639.5	2620.8	2594.7	2567.5	2531.1	2512.4	2497.4	2502.1
17.5°	2509.6	2591.9	2658.2	2646.1	2605.9	2562.9	2518.9	2463.8	2425.4	2409.5	2410.5
20°	2576.0	2649.8	2685.4	2632.1	2571.3	2505.8	2431.0	2363.7	2328.2	2312.3	2310.4
22.5°	2656.4	2727.4	2711.5	2607.8	2521.7	2417.0	2323.5	2274.0	2256.2	2245.0	2246.8
25°	2752.7	2813.5	2730.2	2572.2	2440.4	2299.2	2227.2	2211.3	2202.9	2194.5	2194.5
27.5°	2878.0	2910.7	2744.3	2519.9	2313.2	2173.9	2147.7	2150.5	2147.7	2133.7	2136.5
30°	3043.5	3036.9	2757.4	2434.8	2167.4	2060.8	2062.6	2074.8	2076.7	2067.3	2072.0
32.5°	3261.3	3194.9	2763.9	2324.4	2028.0	1961.7	1963.5	1976.6	1986.0	1970.1	1977.6
35°	3525.0	3379.1	2753.6	2186.1	1920.5	1867.2	1853.2	1856.9	1859.7	1844.8	1855.1
37.5°	3832.6	3585.8	2707.8	2032.7	1831.7	1774.7	1744.7	1719.5	1704.5	1690.5	1699.9
40°	4170.2	3811.1	2623.6	1883.1	1732.6	1676.5	1631.6	1583.9	1533.4	1514.7	1523.1
42.5°	4523.6	4043.0	2521.7	1740.1	1618.5	1572.7	1525.0	1455.8	1380.1	1341.7	1346.4
45°	4890.1	4280.5	2421.7	1598.9	1501.6	1482.0	1426.8	1343.6	1261.3	1212.7	1209.0
47.5°	5249.2	4504.9	2274.9	1456.8	1392.2	1413.7	1370.7	1294.1	1202.4	1125.8	1117.3
50°	5592.3	4715.3	2034.6	1312.8	1303.4	1393.2	1352.0	1241.7	1137.0	1038.8	1030.4
52.5°	5932.7	4885.4	1727.0	1181.9	1255.7	1387.6	1327.7	1206.2	1078.1	975.2	964.0
55°	6221.6	4973.3	1430.6	1069.7	1186.5	1339.9	1298.7	1164.1	994.9	885.5	876.1
57.5°	6386.1	4902.3	1183.7	959.3	1091.2	1261.3	1249.2	1074.3	895.7	811.6	800.4
60°	6315.1	4614.3	981.8	863.0	1000.5	1176.2	1163.2	985.5	820.0	740.5	729.3
62.5°	5923.3	4065.4	821.9	778.9	918.2	1089.3	1077.1	917.2	762.0	685.4	673.2
65°	5134.2	3307.1	697.5	708.7	835.0	984.6	1002.3	860.2	716.2	641.4	629.3
67.5°	3915.8	2395.5	600.3	648.0	753.6	881.7	933.1	819.1	677.9	606.8	595.6
70°	2231.9	1360.4	518.0	589.1	681.6	786.3	879.8	786.3	636.7	577.8	570.4
72.5°	846.2	624.6	447.9	530.2	612.4	705.9	820.9	734.9	589.1	545.1	537.6
75°	451.6	380.6	376.8	461.0	533.0	627.4	747.1	684.4	553.5	576.0	594.7
77.5°	307.6	269.3	315.1	394.6	446.0	540.4	668.5	607.8	479.7	477.8	440.4
80°	213.2	190.7	256.2	317.9	345.0	454.4	583.4	521.7	390.8	364.7	348.8
82.5°	128.1	124.4	191.7	237.5	244.0	350.6	483.4	437.6	319.8	278.6	280.5
85°	70.1	73.9	122.5	139.3	142.1	245.0	378.7	338.5	245.9	206.6	208.5
87.5°	19.6	25.2	44.9	55.2	68.3	127.2	225.3	201.0	123.4	86.0	86.0
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)