

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: P883831

Luminaire Tested: **NAV-SB4B-835-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883831
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-SB4B-835-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 450mA 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: 19031 lumens
Efficiency: N/A
Efficacy: 129.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

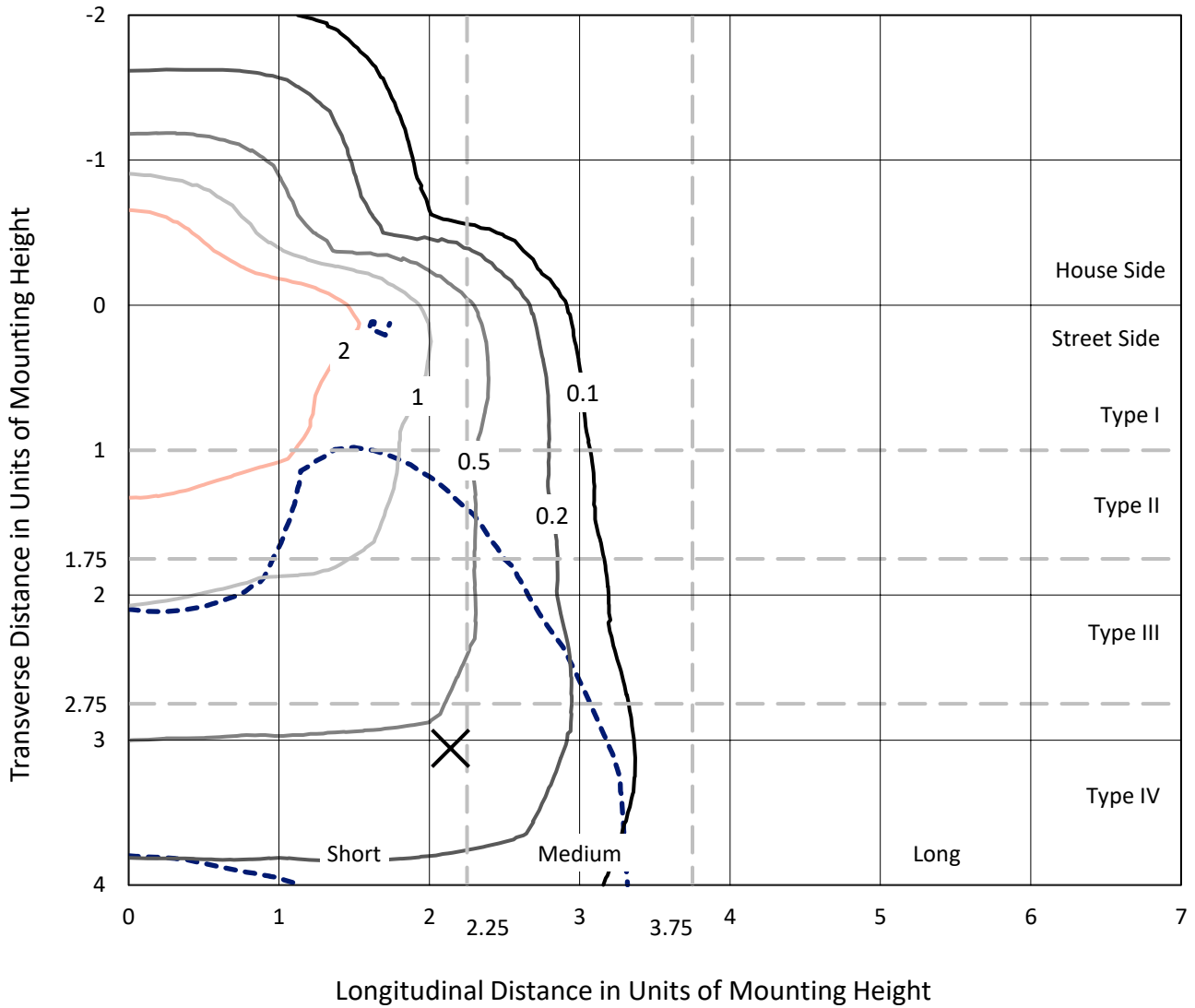
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

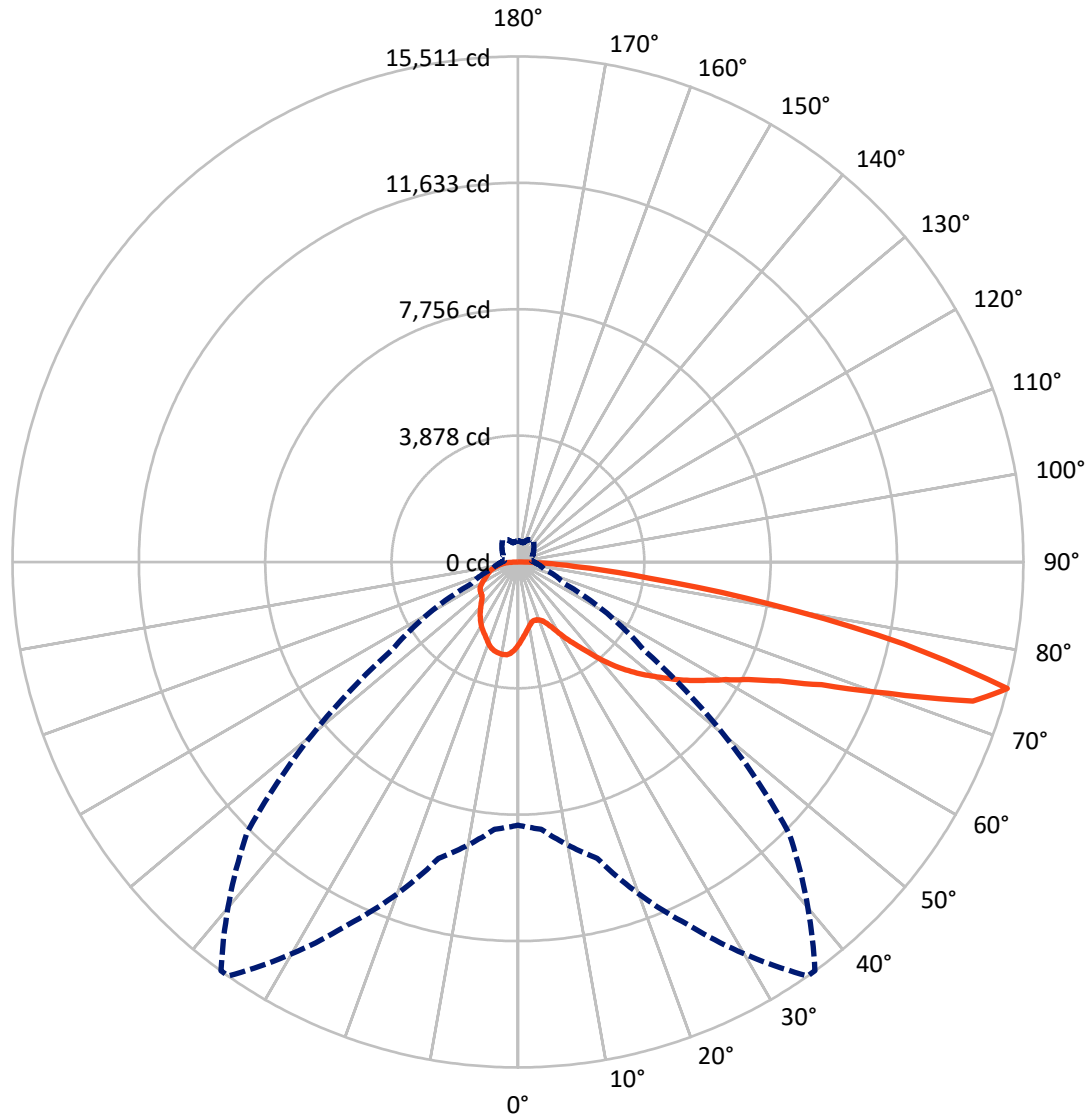
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 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	4528.9	0.0	4528.9
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	14502.1	0.0	14502.1
	% Fixture	76.2	0.0	76.2
Total	Lumens	19031.0	0.0	19031.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.1	1.3
10°-20°	692.6	3.6
20°-30°	1163.0	6.1
30°-40°	1807.5	9.5
40°-50°	2682.8	14.1
50°-60°	3703.8	19.5
60°-70°	4493.5	23.6
70°-80°	3713.6	19.5
80°-90°	534.1	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°	19031.0	100.0
0°-180°	19031.0	100.0

Coefficient of Utilization



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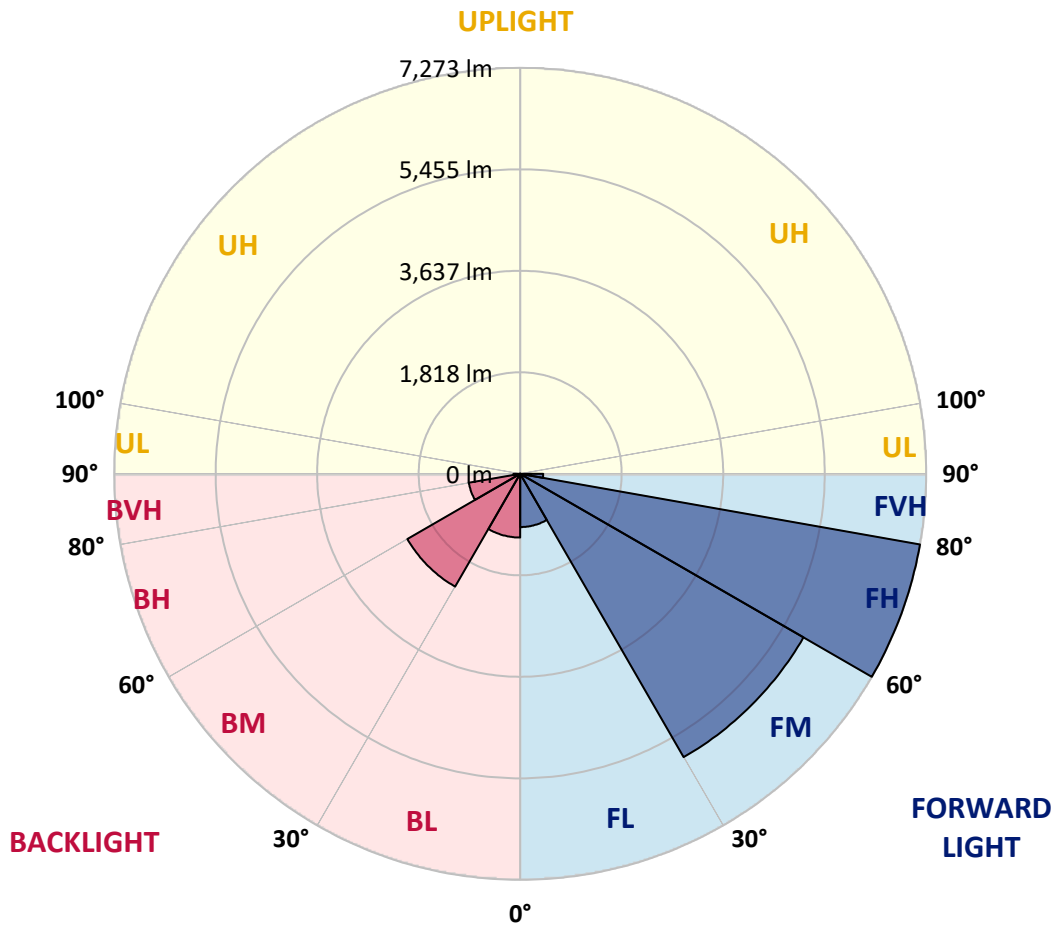
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	954.4	5.0			
FM (30°-60°)	5860.5	30.8			
FH (60°-80°)	7273.4	38.2			G3/7500
FVH (80°-90°)	413.9	2.2			G3/500
BL (0°-30°)	1141.3	6.0	B3/2500		
BM (30°-60°)	2333.6	12.3	B2/2500		
BH (60°-80°)	933.7	4.9	B2/1000		G2/1000
BVH (80°-90°)	120.3	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°	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0
2.5°	2338.5	2352.9	2359.1	2356.0	2371.4	2369.3	2390.9	2417.7	2454.7	2490.7	2543.2
5°	2158.4	2173.9	2187.2	2199.6	2229.4	2238.7	2272.6	2324.1	2392.0	2460.9	2547.3
7.5°	1990.7	2004.1	2024.7	2047.3	2097.7	2107.0	2163.6	2243.8	2338.5	2439.3	2558.6
10°	1853.9	1867.3	1888.9	1914.6	1977.4	1988.7	2060.7	2167.7	2291.2	2418.7	2571.0
12.5°	1795.3	1799.4	1811.7	1837.4	1892.0	1899.2	1978.4	2100.8	2244.9	2403.3	2589.5
15°	1792.2	1800.4	1801.4	1814.8	1860.1	1863.2	1936.2	2057.6	2216.1	2400.2	2617.3
17.5°	1823.0	1829.2	1820.0	1828.2	1866.3	1871.4	1929.0	2037.0	2206.8	2413.6	2664.6
20°	1905.4	1910.5	1882.7	1871.4	1899.2	1903.3	1959.9	2050.4	2216.1	2441.4	2729.4
22.5°	2080.2	2083.3	2015.4	1969.1	1971.2	1973.3	2022.6	2104.9	2252.1	2491.8	2811.7
25°	2352.9	2350.8	2242.8	2153.3	2101.9	2090.5	2123.5	2193.4	2312.8	2558.6	2917.7
27.5°	2671.8	2656.4	2548.4	2414.6	2302.5	2286.0	2278.8	2308.6	2399.2	2647.1	3047.3
30°	3031.9	3017.5	2901.2	2726.3	2571.0	2544.2	2476.3	2460.9	2527.8	2767.5	3227.4
32.5°	3427.0	3417.7	3278.8	3066.9	2859.1	2828.2	2714.0	2672.8	2725.3	2949.6	3478.4
35°	3758.2	3750.0	3634.8	3416.7	3162.6	3124.5	3008.2	2961.9	2988.7	3183.1	3806.6
37.5°	4057.6	4053.5	3954.7	3782.9	3520.6	3474.3	3343.6	3328.2	3323.0	3490.7	4204.7
40°	4335.4	4325.1	4222.2	4131.7	3937.2	3895.1	3779.8	3766.5	3727.4	3869.3	4655.4
42.5°	4643.0	4616.3	4467.1	4424.9	4372.4	4337.5	4268.5	4270.6	4184.2	4296.3	5132.7
45°	4894.0	4878.6	4725.3	4700.6	4757.2	4742.8	4802.5	4817.9	4650.2	4743.8	5628.6
47.5°	5163.6	5149.2	5019.5	5002.1	5155.4	5159.5	5370.4	5375.5	5104.9	5208.9	6125.5
50°	5495.9	5475.3	5346.7	5368.3	5540.1	5555.6	5941.4	5906.4	5523.7	5681.1	6618.3
52.5°	5715.0	5727.4	5699.6	5734.6	5969.1	5983.5	6503.1	6413.6	5938.3	6147.1	7101.9
55°	5876.5	5901.2	5987.7	6067.9	6421.8	6436.2	7032.9	6896.1	6281.9	6579.2	7556.6
57.5°	6084.4	6049.4	6210.9	6367.3	6851.9	6889.9	7548.4	7361.1	6586.4	6951.6	7868.3
60°	6382.7	6358.0	6483.5	6715.0	7333.3	7394.0	8093.6	7779.8	6809.7	7246.9	7929.0
62.5°	6987.7	6925.9	6945.5	7150.2	7940.3	8020.6	8708.9	8145.1	6920.8	7362.1	7603.9
65°	7892.0	7786.0	7687.2	7829.2	8795.3	8874.5	9403.3	8432.1	6879.6	7138.9	6740.7
67.5°	9030.9	8925.9	8804.5	8938.3	10054.5	10117.3	10260.3	8593.6	6555.6	6278.8	5215.0
70°	9970.2	9931.1	10076.1	10626.5	12065.8	12067.9	11359.1	8459.9	5667.7	4451.6	3017.5
72.5°	9845.7	9822.0	10586.4	12288.1	14600.8	14546.3	12399.2	7447.5	3817.9	2008.2	1130.7
75°	8077.2	8230.5	9414.6	12258.2	15511.3	15504.1	11762.4	4734.6	1579.2	832.3	584.4
77.5°	4331.3	4574.1	6112.1	9050.4	12109.1	12291.2	8269.6	1656.4	678.0	532.9	404.3
80°	1412.6	1624.5	2436.2	4608.0	7868.3	7834.4	3544.2	650.2	464.0	377.6	279.8
82.5°	599.8	624.5	1088.5	2175.9	4038.1	3975.3	1128.6	373.5	326.1	258.2	172.8
85°	234.6	262.3	480.5	1006.2	1749.0	1710.9	407.4	185.2	208.8	168.7	102.9
87.5°	77.2	93.6	171.8	344.7	544.2	524.7	99.8	63.8	90.5	77.2	37.0
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°	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0	2536.0
2.5°	2557.6	2574.1	2593.6	2622.4	2647.1	2667.7	2689.3	2702.7	2707.8	2723.3	2722.2
5°	2576.1	2612.1	2660.5	2707.8	2754.1	2781.9	2806.6	2818.9	2830.2	2838.5	2840.5
7.5°	2607.0	2653.3	2729.4	2791.2	2830.2	2852.9	2869.3	2865.2	2869.3	2871.4	2874.5
10°	2633.7	2698.6	2789.1	2847.7	2877.6	2878.6	2874.5	2860.1	2852.9	2853.9	2856.0
12.5°	2665.6	2737.7	2835.4	2884.8	2893.0	2870.4	2852.9	2828.2	2818.9	2814.8	2812.8
15°	2708.8	2791.2	2885.8	2904.3	2883.7	2854.9	2825.1	2785.0	2764.4	2747.9	2753.1
17.5°	2761.3	2851.9	2924.9	2911.5	2867.3	2820.0	2771.6	2710.9	2668.7	2651.2	2652.3
20°	2834.4	2915.6	2954.7	2896.1	2829.2	2757.2	2674.9	2600.8	2561.7	2544.2	2542.2
22.5°	2922.8	3001.0	2983.5	2869.3	2774.7	2659.5	2556.6	2502.1	2482.5	2470.2	2472.2
25°	3028.8	3095.7	3004.1	2830.2	2685.2	2529.8	2450.6	2433.1	2423.9	2414.6	2414.6
27.5°	3166.7	3202.7	3019.5	2772.6	2545.3	2392.0	2363.2	2366.3	2363.2	2347.7	2350.8
30°	3348.8	3341.6	3034.0	2679.0	2384.8	2267.5	2269.5	2282.9	2285.0	2274.7	2279.8
32.5°	3588.5	3515.4	3041.2	2557.6	2231.5	2158.4	2160.5	2174.9	2185.2	2167.7	2175.9
35°	3878.6	3718.1	3029.8	2405.4	2113.2	2054.5	2039.1	2043.2	2046.3	2029.8	2041.2
37.5°	4217.1	3945.5	2979.4	2236.6	2015.4	1952.7	1919.8	1892.0	1875.5	1860.1	1870.4
40°	4588.5	4193.4	2886.8	2072.0	1906.4	1844.7	1795.3	1742.8	1687.2	1666.7	1675.9
42.5°	4977.4	4448.6	2774.7	1914.6	1780.9	1730.5	1678.0	1601.9	1518.5	1476.3	1481.5
45°	5380.7	4709.9	2664.6	1759.3	1652.3	1630.7	1570.0	1478.4	1387.9	1334.4	1330.2
47.5°	5775.7	4956.8	2503.1	1602.9	1531.9	1555.6	1508.2	1423.9	1323.0	1238.7	1229.4
50°	6153.3	5188.3	2238.7	1444.4	1434.2	1532.9	1487.7	1366.3	1251.0	1143.0	1133.7
52.5°	6527.8	5375.5	1900.2	1300.4	1381.7	1526.7	1460.9	1327.2	1186.2	1073.0	1060.7
55°	6845.7	5472.2	1574.1	1177.0	1305.6	1474.3	1429.0	1280.9	1094.7	974.3	964.0
57.5°	7026.8	5394.0	1302.5	1055.6	1200.6	1387.9	1374.5	1182.1	985.6	893.0	880.7
60°	6948.6	5077.2	1080.2	949.6	1100.8	1294.2	1279.8	1084.4	902.3	814.8	802.5
62.5°	6517.5	4473.3	904.3	857.0	1010.3	1198.6	1185.2	1009.3	838.5	754.1	740.7
65°	5649.2	3638.9	767.5	779.8	918.7	1083.3	1102.9	946.5	788.1	705.8	692.4
67.5°	4308.6	2635.8	660.5	713.0	829.2	970.2	1026.7	901.2	745.9	667.7	655.4
70°	2455.8	1496.9	570.0	648.1	750.0	865.2	968.1	865.2	700.6	635.8	627.6
72.5°	931.1	687.2	492.8	583.3	673.9	776.7	903.3	808.6	648.1	599.8	591.6
75°	496.9	418.7	414.6	507.2	586.4	690.3	822.0	753.1	609.1	633.7	654.3
77.5°	338.5	296.3	346.7	434.2	490.7	594.7	735.6	668.7	527.8	525.7	484.6
80°	234.6	209.9	281.9	349.8	379.6	500.0	642.0	574.1	430.0	401.2	383.7
82.5°	140.9	136.8	210.9	261.3	268.5	385.8	531.9	481.5	351.9	306.6	308.6
85°	77.2	81.3	134.8	153.3	156.4	269.5	416.7	372.4	270.6	227.4	229.4
87.5°	21.6	27.8	49.4	60.7	75.1	139.9	247.9	221.2	135.8	94.7	94.7
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)