

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: P883821

Luminaire Tested: **NAV-SB4B-830-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883821
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-830-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 19736 lumens
Efficiency: N/A
Efficacy: 134.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

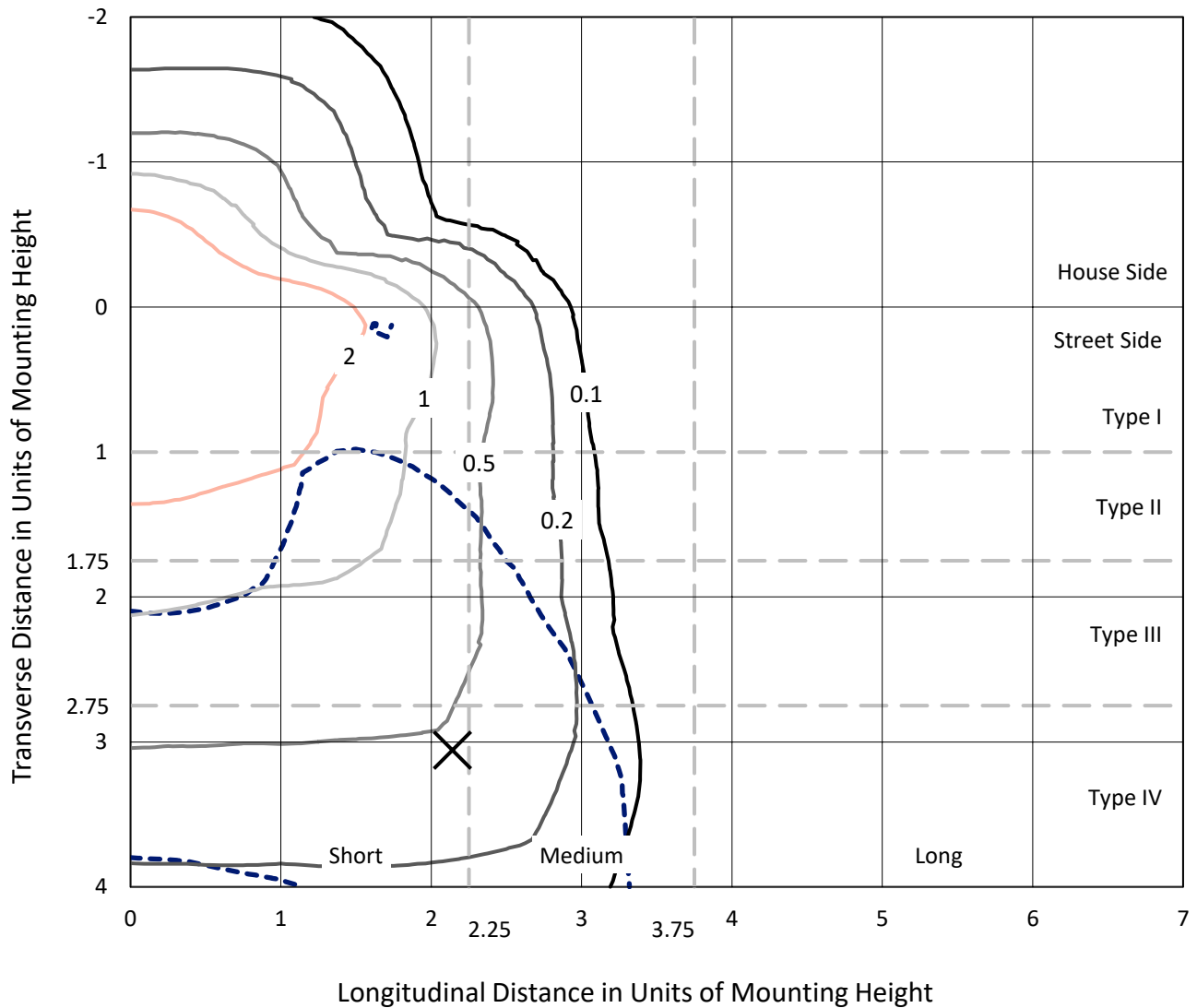
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

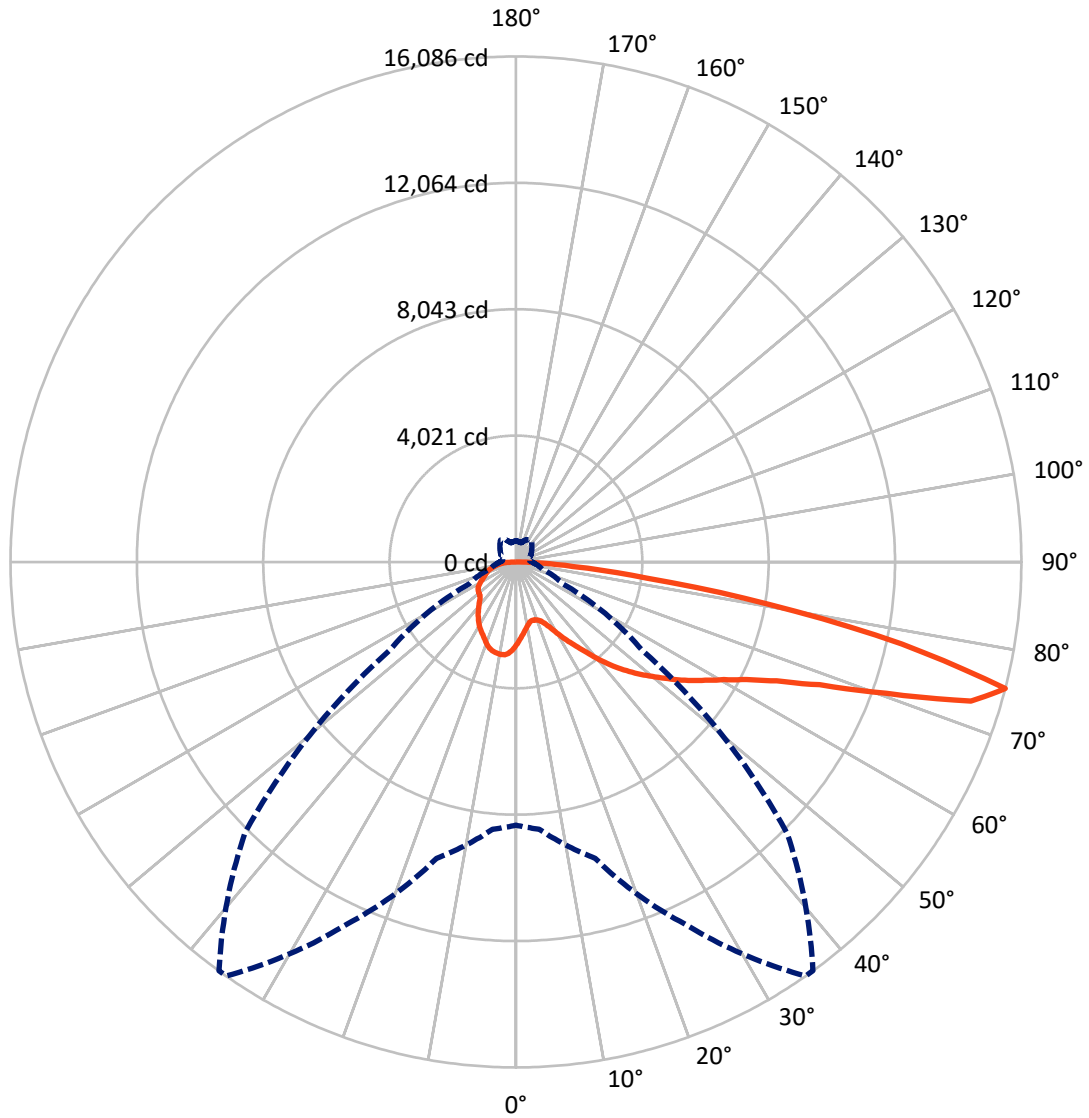
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 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	4696.7	0.0	4696.7
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	15039.3	0.0	15039.3
	% Fixture	76.2	0.0	76.2
Total	Lumens	19736.0	0.0	19736.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.0	1.3
10°-20°	718.2	3.6
20°-30°	1206.1	6.1
30°-40°	1874.5	9.5
40°-50°	2782.2	14.1
50°-60°	3841.0	19.5
60°-70°	4660.0	23.6
70°-80°	3851.1	19.5
80°-90°	553.9	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°	19736.0	100.0
0°-180°	19736.0	100.0

Coefficient of Utilization



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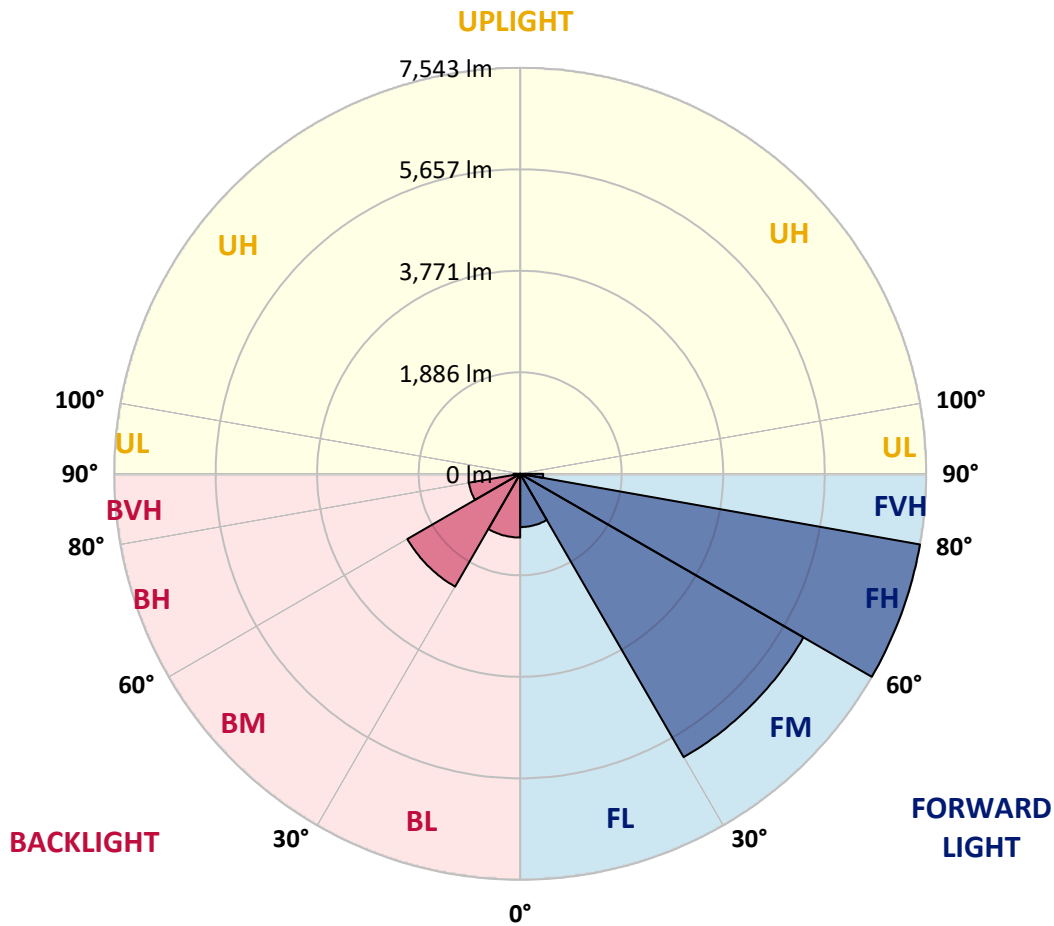
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	989.7	5.0			
FM (30°-60°)	6077.6	30.8			
FH (60°-80°)	7542.8	38.2			G4/12000
FVH (80°-90°)	429.2	2.2			G3/500
BL (0°-30°)	1183.6	6.0	B3/2500		
BM (30°-60°)	2420.0	12.3	B2/2500		
BH (60°-80°)	968.3	4.9	B2/1000		G2/1000
BVH (80°-90°)	124.7	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0
2.5°	2425.1	2440.0	2446.4	2443.2	2459.2	2457.1	2479.5	2507.3	2545.7	2583.0	2637.4
5°	2238.4	2254.4	2268.3	2281.1	2312.0	2321.6	2356.8	2410.2	2480.6	2552.1	2641.7
7.5°	2064.5	2078.4	2099.7	2123.2	2175.4	2185.1	2243.7	2327.0	2425.1	2529.7	2653.4
10°	1922.6	1936.5	1958.9	1985.5	2050.6	2062.4	2137.0	2248.0	2376.0	2508.3	2666.2
12.5°	1861.8	1866.0	1878.8	1905.5	1962.1	1969.5	2051.7	2178.6	2328.0	2492.3	2685.4
15°	1858.6	1867.1	1868.2	1882.0	1929.0	1932.2	2007.9	2133.8	2298.1	2489.1	2714.2
17.5°	1890.6	1897.0	1887.4	1895.9	1935.4	1940.7	2000.5	2112.5	2288.5	2503.0	2763.3
20°	1975.9	1981.3	1952.5	1940.7	1969.5	1973.8	2032.5	2126.4	2298.1	2531.8	2830.5
22.5°	2157.3	2160.5	2090.1	2042.1	2044.2	2046.4	2097.6	2182.9	2335.5	2584.1	2915.9
25°	2440.0	2437.9	2325.9	2233.1	2179.7	2168.0	2202.1	2274.7	2398.4	2653.4	3025.8
27.5°	2770.8	2754.8	2642.8	2504.1	2387.8	2370.7	2363.2	2394.2	2488.1	2745.2	3160.2
30°	3144.2	3129.3	3008.7	2827.3	2666.2	2638.5	2568.1	2552.1	2621.4	2870.0	3346.9
32.5°	3553.9	3544.3	3400.3	3180.5	2965.0	2933.0	2814.5	2771.9	2826.3	3058.9	3607.3
35°	3897.5	3888.9	3769.4	3543.2	3279.7	3240.2	3119.7	3071.7	3099.4	3301.0	3947.6
37.5°	4207.9	4203.7	4101.2	3923.1	3651.0	3603.0	3467.5	3451.5	3446.1	3620.1	4360.5
40°	4496.0	4485.3	4378.6	4284.7	4083.1	4039.4	3919.9	3906.0	3865.4	4012.7	4827.8
42.5°	4815.0	4787.3	4632.6	4588.8	4534.4	4498.1	4426.6	4428.8	4339.2	4455.5	5322.9
45°	5075.3	5059.3	4900.4	4874.8	4933.4	4918.5	4980.4	4996.4	4822.5	4919.6	5837.1
47.5°	5354.9	5339.9	5205.5	5187.4	5346.3	5350.6	5569.3	5574.7	5294.1	5401.8	6352.4
50°	5699.5	5678.1	5544.8	5567.2	5745.4	5761.4	6161.5	6125.2	5728.3	5891.5	6863.5
52.5°	5926.7	5939.5	5910.7	5947.0	6190.3	6205.2	6744.0	6651.2	6158.3	6374.8	7364.9
55°	6094.2	6119.8	6209.5	6292.7	6659.7	6674.6	7293.5	7151.6	6514.6	6822.9	7836.5
57.5°	6309.8	6273.5	6441.0	6603.2	7105.7	7145.2	7828.0	7633.8	6830.4	7209.2	8159.8
60°	6619.2	6593.6	6723.7	6963.8	7605.0	7667.9	8393.5	8068.0	7061.9	7515.4	8222.7
62.5°	7246.5	7182.5	7202.8	7415.1	8234.5	8317.7	9031.5	8446.8	7177.2	7634.9	7885.6
65°	8184.3	8074.4	7972.0	8119.3	9121.1	9203.2	9751.6	8744.5	7134.5	7403.4	6990.5
67.5°	9365.4	9256.6	9130.7	9269.4	10427.0	10492.1	10640.4	8912.0	6798.4	6511.4	5408.2
70°	10339.5	10299.0	10449.4	11020.2	12512.8	12515.0	11779.9	8773.3	5877.7	4616.6	3129.3
72.5°	10210.4	10185.9	10978.6	12743.3	15141.7	15085.2	12858.5	7723.4	3959.3	2082.6	1172.5
75°	8376.4	8535.4	9763.4	12712.3	16085.9	16078.5	12198.1	4910.0	1637.7	863.1	606.0
77.5°	4491.7	4743.5	6338.6	9385.7	12557.6	12746.5	8575.9	1717.7	703.1	552.7	419.3
80°	1464.9	1684.7	2526.5	4778.7	8159.8	8124.6	3675.5	674.3	481.2	391.6	290.2
82.5°	622.0	647.6	1128.8	2256.5	4187.7	4122.6	1170.4	387.3	338.2	267.8	179.2
85°	243.3	272.1	498.3	1043.4	1813.8	1774.3	422.5	192.0	216.6	175.0	106.7
87.5°	80.0	97.1	178.2	357.4	564.4	544.1	103.5	66.1	93.9	80.0	38.4
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°	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0	2630.0
2.5°	2652.4	2669.4	2689.7	2719.6	2745.2	2766.5	2788.9	2802.8	2808.1	2824.1	2823.1
5°	2671.6	2708.9	2759.1	2808.1	2856.1	2884.9	2910.6	2923.4	2935.1	2943.6	2945.8
7.5°	2703.6	2751.6	2830.5	2894.6	2935.1	2958.6	2975.6	2971.4	2975.6	2977.8	2981.0
10°	2731.3	2798.5	2892.4	2953.2	2984.2	2985.2	2981.0	2966.0	2958.6	2959.6	2961.8
12.5°	2764.4	2839.1	2940.4	2991.6	3000.2	2976.7	2958.6	2933.0	2923.4	2919.1	2917.0
15°	2809.2	2894.6	2992.7	3011.9	2990.6	2960.7	2929.8	2888.1	2866.8	2849.7	2855.1
17.5°	2863.6	2957.5	3033.3	3019.4	2973.5	2924.4	2874.3	2811.3	2767.6	2749.5	2750.5
20°	2939.4	3023.6	3064.2	3003.4	2934.0	2859.3	2774.0	2697.2	2656.6	2638.5	2636.4
22.5°	3031.1	3112.2	3094.1	2975.6	2877.5	2758.0	2651.3	2594.7	2574.5	2561.7	2563.8
25°	3141.0	3210.4	3115.4	2935.1	2784.7	2623.6	2541.4	2523.3	2513.7	2504.1	2504.1
27.5°	3284.0	3321.3	3131.4	2875.3	2639.6	2480.6	2450.7	2453.9	2450.7	2434.7	2437.9
30°	3472.8	3465.4	3146.3	2778.3	2473.1	2351.5	2353.6	2367.5	2369.6	2359.0	2364.3
32.5°	3721.4	3645.7	3153.8	2652.4	2314.1	2238.4	2240.5	2255.5	2266.1	2248.0	2256.5
35°	4022.3	3855.8	3142.1	2494.5	2191.5	2130.6	2114.6	2118.9	2122.1	2105.0	2116.8
37.5°	4373.3	4091.6	3089.8	2319.5	2090.1	2025.0	1990.9	1962.1	1945.0	1929.0	1939.7
40°	4758.5	4348.8	2993.8	2148.8	1977.0	1913.0	1861.8	1807.4	1749.7	1728.4	1738.0
42.5°	5161.8	4613.4	2877.5	1985.5	1846.8	1794.6	1740.1	1661.2	1574.8	1531.0	1536.4
45°	5580.0	4884.4	2763.3	1824.4	1713.5	1691.1	1628.1	1533.2	1439.3	1383.8	1379.5
47.5°	5989.7	5140.4	2595.8	1662.3	1588.6	1613.2	1564.1	1476.6	1372.1	1284.6	1275.0
50°	6381.2	5380.5	2321.6	1498.0	1487.3	1589.7	1542.8	1416.9	1297.4	1185.3	1175.7
52.5°	6769.6	5574.7	1970.6	1348.6	1432.9	1583.3	1515.0	1376.3	1230.2	1112.8	1100.0
55°	7099.3	5674.9	1632.4	1220.6	1353.9	1528.9	1482.0	1328.3	1135.2	1010.4	999.7
57.5°	7287.1	5593.9	1350.7	1094.7	1245.1	1439.3	1425.4	1225.9	1022.1	926.1	913.3
60°	7206.0	5265.2	1120.3	984.8	1141.6	1342.2	1327.2	1124.5	935.7	845.0	832.2
62.5°	6758.9	4639.0	937.8	888.7	1047.7	1243.0	1229.1	1046.6	869.5	782.1	768.2
65°	5858.5	3773.7	795.9	808.7	952.8	1123.5	1143.7	981.6	817.3	731.9	718.0
67.5°	4468.3	2733.4	685.0	739.4	859.9	1006.1	1064.8	934.6	773.5	692.4	679.6
70°	2546.7	1552.4	591.1	672.2	777.8	897.3	1004.0	897.3	726.6	659.4	650.8
72.5°	965.6	712.7	511.1	604.9	698.8	805.5	936.8	838.6	672.2	622.0	613.5
75°	515.3	434.2	430.0	526.0	608.1	715.9	852.5	781.0	631.6	657.2	678.6
77.5°	351.0	307.3	359.6	450.2	508.9	616.7	762.8	693.5	547.3	545.2	502.5
80°	243.3	217.7	292.3	362.8	393.7	518.5	665.8	595.3	446.0	416.1	398.0
82.5°	146.2	141.9	218.7	271.0	278.5	400.1	551.6	499.3	364.9	317.9	320.1
85°	80.0	84.3	139.8	159.0	162.2	279.5	432.1	386.2	280.6	235.8	237.9
87.5°	22.4	28.8	51.2	62.9	77.9	145.1	257.1	229.4	140.8	98.2	98.2
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)