

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: P883990

Luminaire Tested: **NAV-SB4C-830-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883990  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4C-830-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

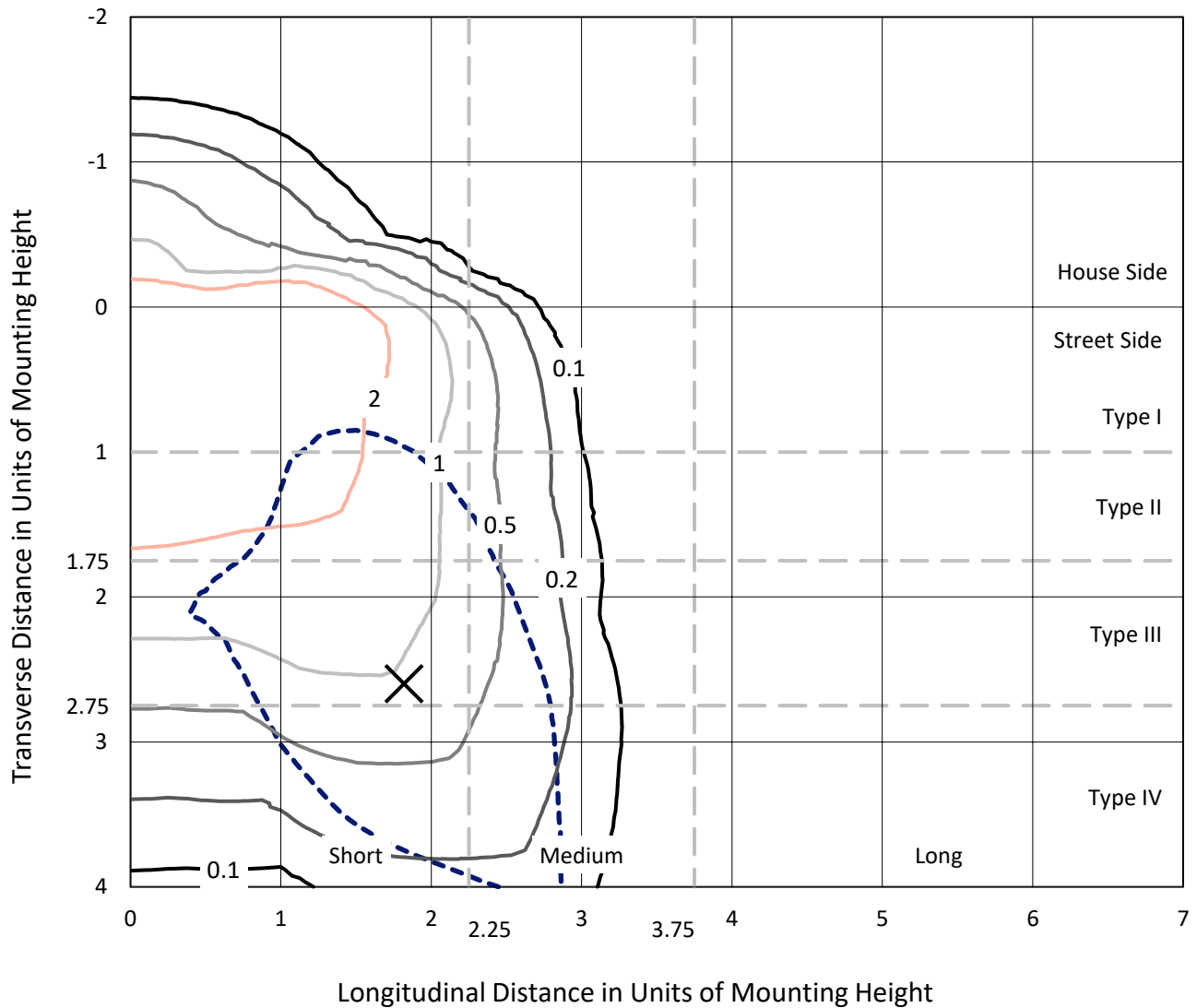
Lumens per Lamp: N/A  
Luminaire Lumens: 20107 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 200.7  
Input Voltage (V): 120.0  
Input Current (Ain): 1.714  
Voltage Rise (V): NR  
Power Factor: 0.994  
Total Harmonic Distortion (THDi): 9.472  
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

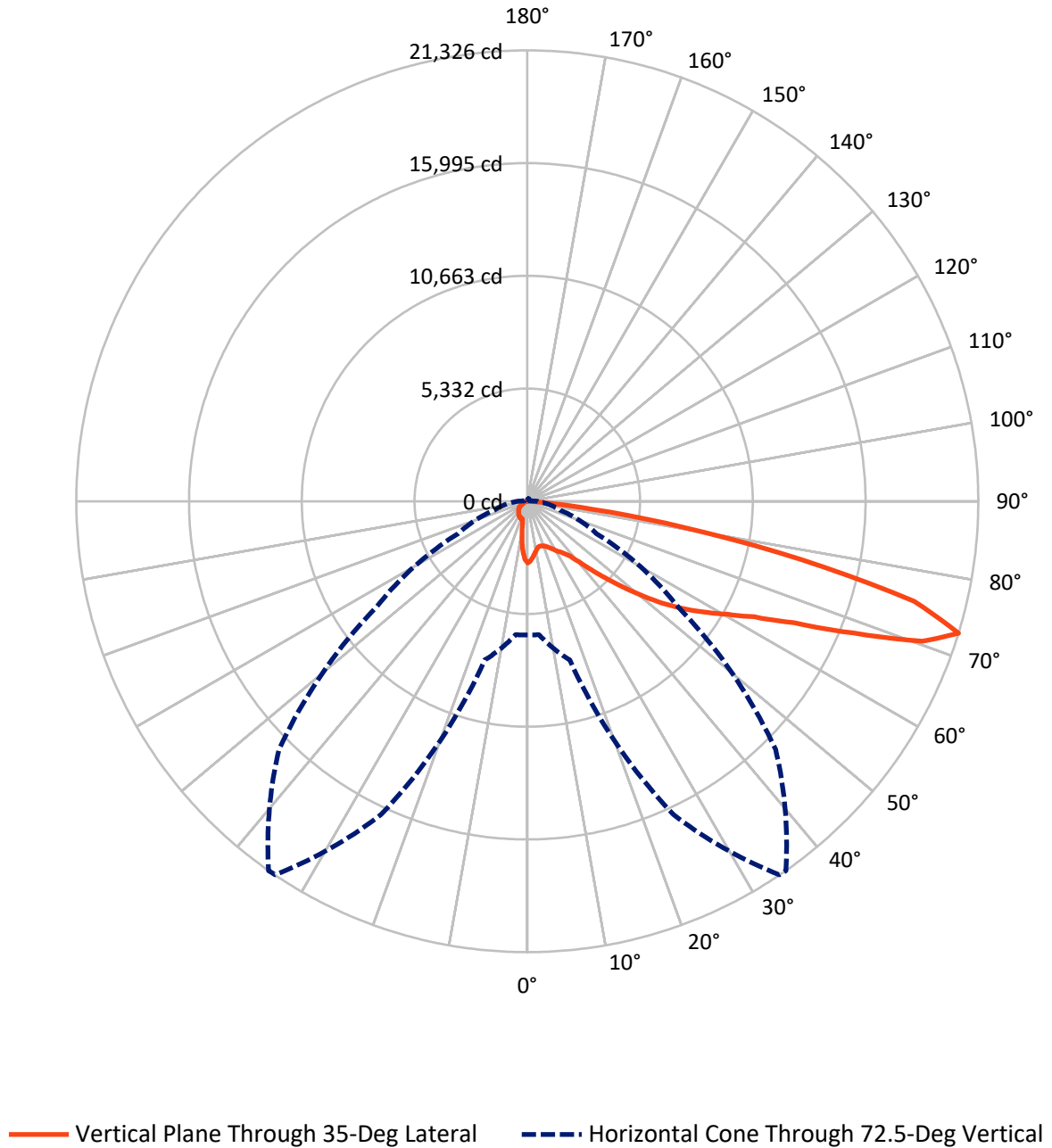
× Max cd  
 - - - 1/2 Max cd



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



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2263.0	0.0	2263.0
	% Fixture	11.3	0.0	11.3
<b>Street Side</b>	Lumens	17844.0	0.0	17844.0
	% Fixture	88.7	0.0	88.7
<b>Total</b>	Lumens	20107.0	0.0	20107.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.5	1.2
10°-20°	560.2	2.8
20°-30°	910.0	4.5
30°-40°	1518.4	7.6
40°-50°	2872.8	14.3
50°-60°	4564.9	22.7
60°-70°	5647.1	28.1
70°-80°	3510.3	17.5
80°-90°	283.7	1.4
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°	20107.0	100.0
0°-180°	20107.0	100.0

**Coefficient of Utilization**



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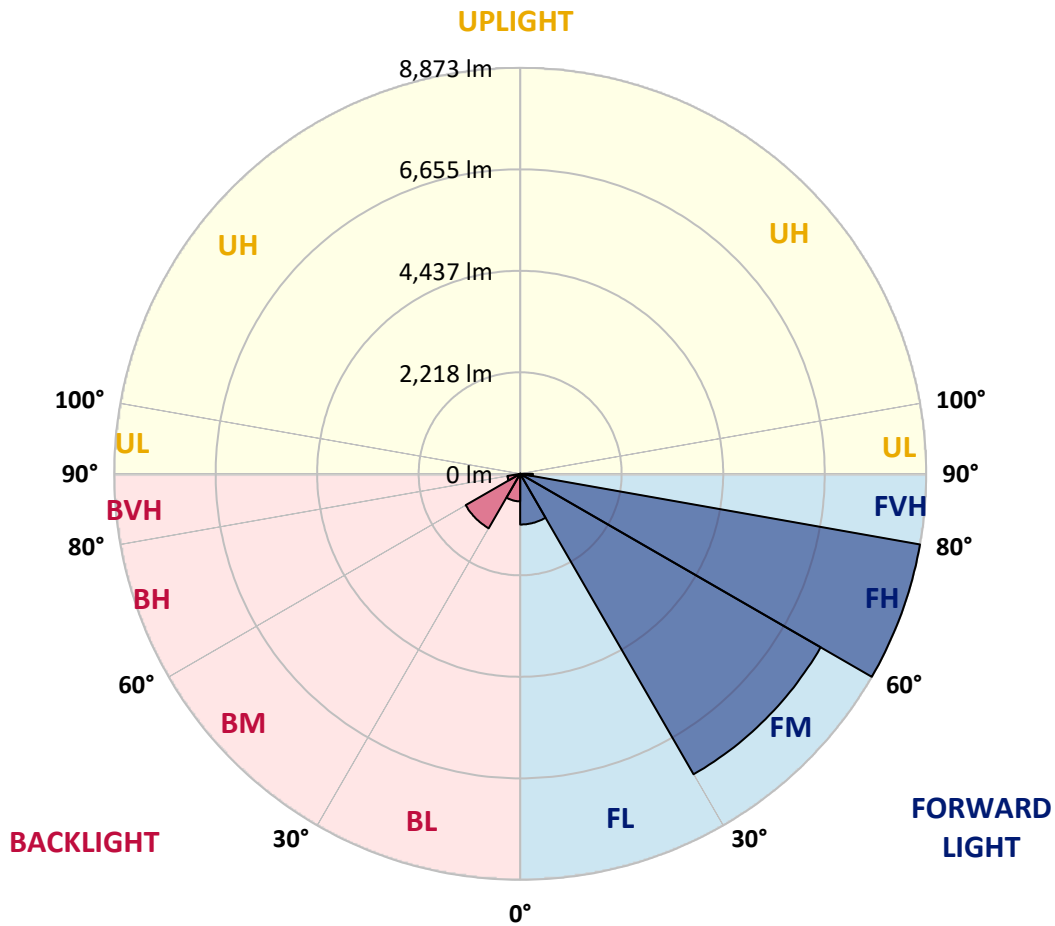
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1108.4	5.5			
FM (30°-60°)	7582.3	37.7			
FH (60°-80°)	8873.5	44.1			G4/12000
FVH (80°-90°)	279.8	1.4			G3/500
BL (0°-30°)	601.3	3.0	B2/1000		
BM (30°-60°)	1373.8	6.8	B2/2500		
BH (60°-80°)	284.0	1.4	B1/500		G1/500
BVH (80°-90°)	3.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2
2.5°	2784.5	2808.1	2812.5	2819.9	2819.9	2828.7	2843.5	2864.1	2898.0	2915.7	2927.4
5°	2566.5	2584.2	2606.3	2623.9	2657.8	2662.2	2719.7	2775.7	2853.8	2912.7	2954.0
7.5°	2347.0	2367.6	2397.1	2439.8	2484.0	2497.2	2584.2	2678.5	2802.2	2912.7	2982.0
10°	2192.3	2193.7	2220.3	2263.0	2333.7	2349.9	2456.0	2590.1	2744.7	2895.0	3008.5
12.5°	2105.3	2115.7	2127.4	2159.9	2227.6	2237.9	2351.4	2509.0	2687.3	2884.7	3039.4
15°	2105.3	2112.7	2120.1	2136.3	2190.8	2199.6	2299.8	2457.5	2657.8	2889.1	3089.5
17.5°	2127.4	2139.2	2133.3	2152.5	2209.9	2215.8	2304.2	2442.7	2656.4	2917.1	3166.1
20°	2180.5	2189.3	2177.5	2189.3	2246.8	2258.6	2349.9	2470.7	2681.4	2965.7	3261.9
22.5°	2264.5	2268.9	2240.9	2249.7	2308.7	2323.4	2429.5	2550.3	2741.8	3043.8	3390.1
25°	2370.5	2379.4	2336.6	2347.0	2402.9	2420.6	2542.9	2669.6	2837.6	3151.4	3553.6
27.5°	2492.8	2497.2	2460.4	2458.9	2531.1	2556.2	2679.9	2816.9	2965.7	3286.9	3759.9
30°	2632.8	2646.0	2610.7	2604.8	2696.1	2716.8	2839.0	2998.2	3154.3	3490.2	4053.0
32.5°	2743.3	2753.6	2733.0	2747.7	2840.5	2856.7	3032.0	3254.5	3450.5	3779.0	4452.3
35°	2902.4	2908.3	2861.1	2887.7	2993.7	3035.0	3295.8	3614.0	3823.2	4141.4	4973.8
37.5°	3478.5	3478.5	3278.1	3147.0	3248.6	3285.4	3656.7	4066.3	4282.9	4627.6	5630.9
40°	4275.5	4262.2	3969.1	3700.9	3687.7	3759.9	4170.9	4636.5	4876.6	5211.0	6370.5
42.5°	5125.6	5105.0	4705.7	4440.5	4396.3	4421.4	4764.6	5339.2	5583.8	5922.6	7166.1
45°	5879.9	5874.0	5508.7	5152.1	5072.6	5152.1	5505.7	6161.3	6336.6	6693.2	7960.2
47.5°	6512.0	6512.0	6245.3	6012.5	5971.3	6018.4	6509.0	7073.3	7057.1	7513.8	8733.7
50°	7239.8	7233.9	6980.5	6880.3	6923.0	6989.3	7664.1	8033.9	7802.6	8319.7	9424.7
52.5°	7749.5	7784.9	7698.0	7681.8	7899.8	8014.7	8836.8	8973.8	8470.0	9084.3	9941.8
55°	8153.2	8194.5	8294.7	8408.1	8828.0	8978.3	9972.7	9865.2	9028.4	9747.3	10239.4
57.5°	8724.9	8665.9	8820.6	9044.6	9723.8	9905.0	11073.3	10706.4	9477.7	10285.1	10271.8
60°	9418.8	9427.6	9454.1	9737.0	10618.0	10850.8	12157.6	11502.0	9766.5	10615.1	9912.3
62.5°	10252.7	10265.9	10320.4	10755.1	11818.8	12038.3	13312.7	12153.2	9899.1	10522.3	8984.2
65°	10195.2	10251.2	10859.7	12346.2	13644.2	13860.8	14660.8	12609.9	9698.7	9673.7	7314.9
67.5°	9287.7	9379.0	10397.0	14246.8	16396.3	16637.9	16290.2	12699.8	8833.9	7522.6	4772.0
70°	8097.2	8129.6	9354.0	15955.8	19583.0	19827.6	17748.8	11711.2	6703.5	4195.9	2137.8
72.5°	6323.4	6330.8	7767.2	16352.1	21312.7	21326.0	16604.0	8693.9	3605.2	1611.8	742.5
75°	4517.1	4472.9	5202.2	13261.1	18750.6	18900.9	12447.9	4078.1	1377.5	761.7	369.8
77.5°	2422.1	2470.7	2943.6	7864.5	12953.2	13209.6	6791.9	1175.7	701.3	518.6	244.6
80°	748.4	789.7	1206.6	3600.7	7337.0	7491.7	2517.9	523.0	489.1	369.8	160.6
82.5°	235.7	244.6	562.8	1513.1	3045.3	3116.0	729.3	296.1	334.4	244.6	94.3
85°	67.8	69.2	250.5	564.3	752.9	767.6	204.8	114.9	191.5	151.7	48.6
87.5°	7.4	23.6	94.3	94.3	66.3	64.8	22.1	25.0	54.5	19.2	8.8
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°	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2	2914.2
2.5°	2920.1	2921.5	2902.4	2870.0	2834.6	2805.2	2768.3	2738.9	2718.2	2712.3	2722.7
5°	2940.7	2930.4	2875.9	2777.2	2659.3	2557.6	2444.2	2354.3	2295.4	2270.3	2279.2
7.5°	2971.6	2942.2	2822.8	2628.4	2402.9	2202.6	1999.3	1841.6	1741.4	1691.3	1698.7
10°	2998.2	2939.2	2734.4	2413.3	2068.5	1765.0	1491.0	1300.9	1194.8	1144.8	1146.2
12.5°	3023.2	2937.8	2619.5	2158.4	1691.3	1320.1	1065.2	970.9	941.4	931.1	928.2
15°	3070.3	2942.2	2475.1	1866.7	1315.7	997.4	904.6	903.1	909.0	906.1	904.6
17.5°	3135.2	2946.6	2311.6	1557.3	1015.1	879.6	875.1	888.4	897.2	892.8	891.3
20°	3219.2	2964.3	2137.8	1250.8	872.2	850.1	860.4	872.2	879.6	872.2	870.7
22.5°	3337.0	2995.2	1947.7	1004.8	826.5	832.4	841.3	854.5	861.9	851.6	850.1
25°	3481.4	3043.8	1760.6	873.7	804.4	811.8	825.0	839.8	848.6	838.3	836.8
27.5°	3668.5	3121.9	1588.2	844.2	782.3	786.7	805.9	828.0	839.8	826.5	826.5
30°	3939.6	3250.1	1439.4	857.5	769.1	758.7	785.3	816.2	829.5	817.7	816.2
32.5°	4299.1	3431.3	1348.1	878.1	763.2	726.3	751.4	791.2	813.3	805.9	805.9
35°	4770.5	3706.8	1312.7	901.7	758.7	692.4	710.1	752.9	791.2	798.5	798.5
37.5°	5342.2	4089.9	1323.0	912.0	745.5	664.5	673.3	710.1	760.2	783.8	789.7
40°	5991.9	4536.3	1382.0	901.7	730.8	640.9	642.4	670.3	714.5	749.9	761.7
42.5°	6662.2	5057.8	1491.0	863.4	717.5	620.3	615.8	635.0	664.5	689.5	699.8
45°	7300.2	5594.1	1598.5	810.3	701.3	599.6	589.3	596.7	602.6	612.9	618.8
47.5°	7857.1	5971.3	1567.6	761.7	679.2	576.1	558.4	555.4	537.8	536.3	534.8
50°	8241.6	6053.8	1392.3	713.1	646.8	549.5	521.5	503.9	472.9	458.2	459.7
52.5°	8363.9	5728.2	1137.4	664.5	593.7	514.2	474.4	446.4	408.1	394.8	393.4
55°	8201.8	5090.2	909.0	605.5	520.1	467.0	422.8	386.0	355.1	338.9	338.9
57.5°	7805.5	4278.5	719.0	536.3	442.0	414.0	369.8	333.0	306.4	290.2	287.3
60°	7148.4	3397.4	568.7	453.8	377.2	356.5	310.9	287.3	263.7	244.6	240.1
62.5°	6151.0	2425.0	446.4	359.5	315.3	291.7	265.2	247.5	219.5	193.0	188.6
65°	4800.0	1483.6	344.8	263.7	253.4	241.6	225.4	209.2	175.3	148.8	144.4
67.5°	3027.6	702.8	246.0	198.9	200.4	194.5	187.1	173.8	148.8	125.2	122.3
70°	1333.3	340.3	162.1	151.7	148.8	148.8	154.7	150.3	126.7	104.6	100.2
72.5°	453.8	182.7	120.8	114.9	107.6	106.1	129.7	125.2	101.7	81.0	76.6
75°	237.2	122.3	88.4	82.5	64.8	78.1	103.1	97.2	72.2	53.0	48.6
77.5°	154.7	86.9	60.4	53.0	36.8	51.6	76.6	67.8	42.7	26.5	23.6
80°	97.2	57.5	35.4	25.0	17.7	28.0	41.3	29.5	16.2	5.9	4.4
82.5°	51.6	29.5	13.3	8.8	7.4	8.8	10.3	7.4	2.9	0.0	0.0
85°	20.6	10.3	4.4	2.9	1.5	0.0	2.9	1.5	0.0	0.0	0.0
87.5°	7.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)