

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: P966284

Luminaire Tested: **NAV-SB4B-827-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966284
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-827-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15493.9 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

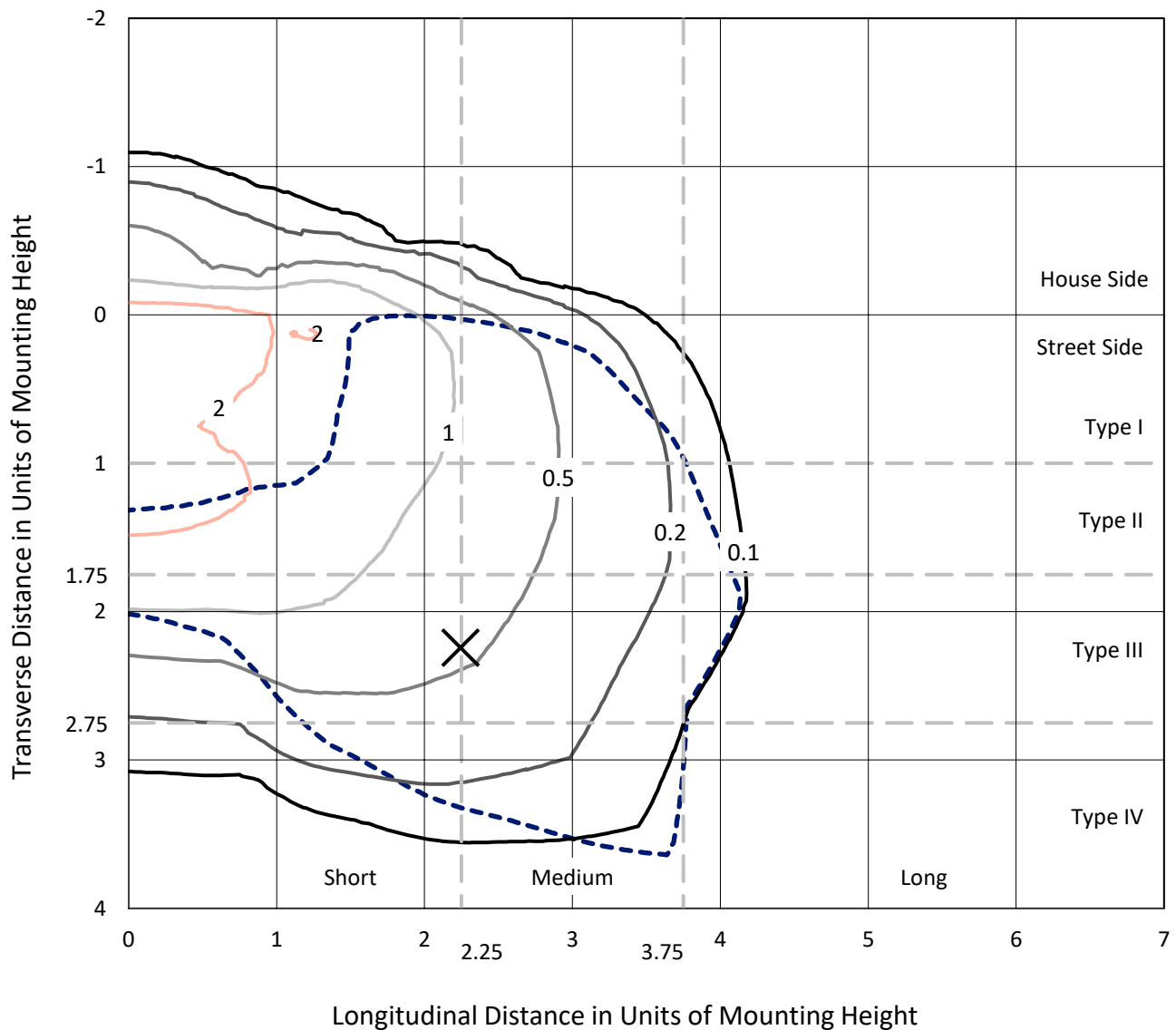
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

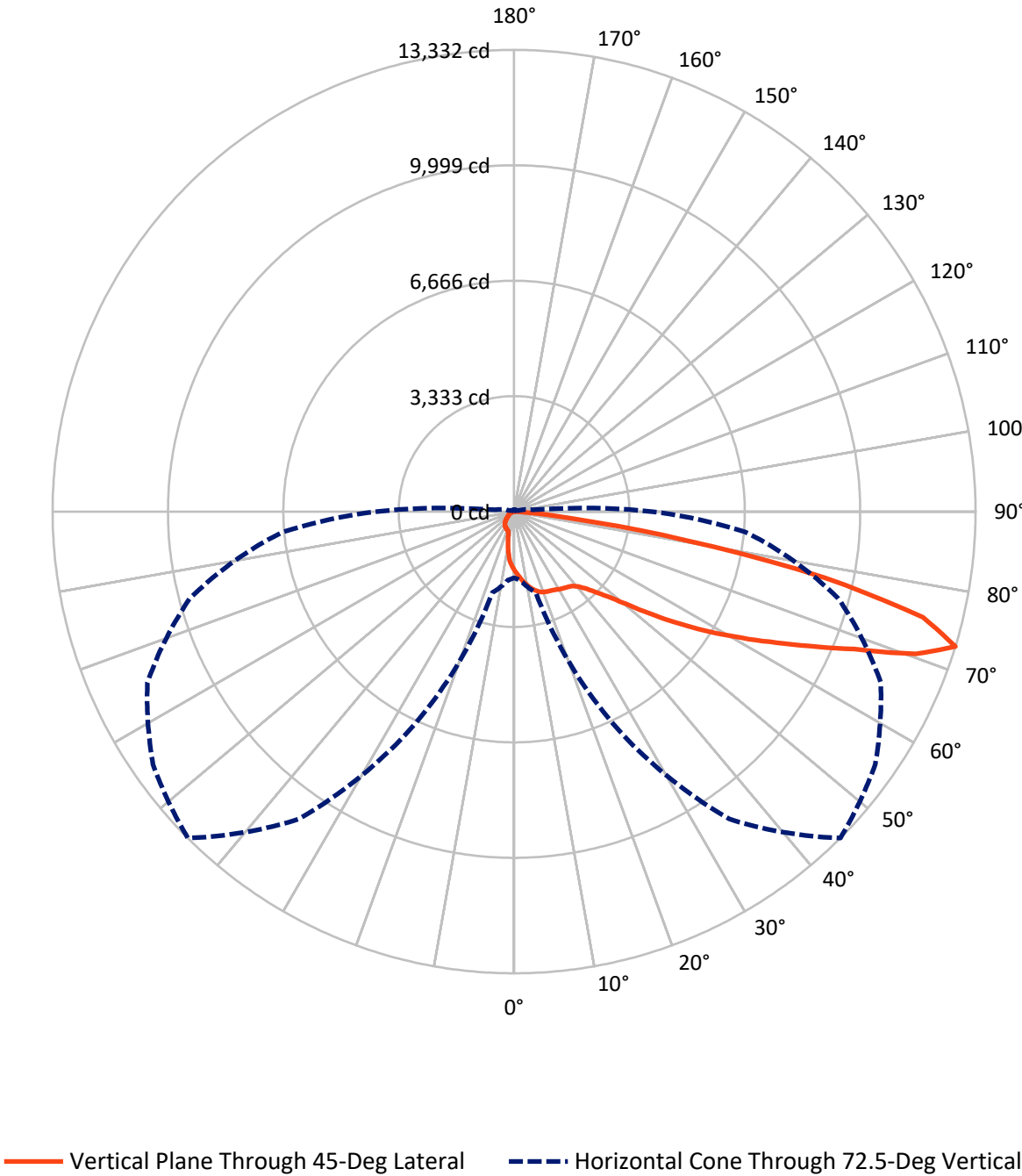
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1628.0	0.0	1628.0
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	13865.9	0.0	13865.9
	% Fixture	89.5	0.0	89.5
Total	Lumens	15493.9	0.0	15493.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.9	1.0
10°-20°	467.4	3.0
20°-30°	767.5	5.0
30°-40°	1088.6	7.0
40°-50°	1799.3	11.6
50°-60°	3232.2	20.9
60°-70°	4488.1	29.0
70°-80°	3255.5	21.0
80°-90°	235.4	1.5
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°	15493.9	100.0
0°-180°	15493.9	100.0

Coefficient of Utilization



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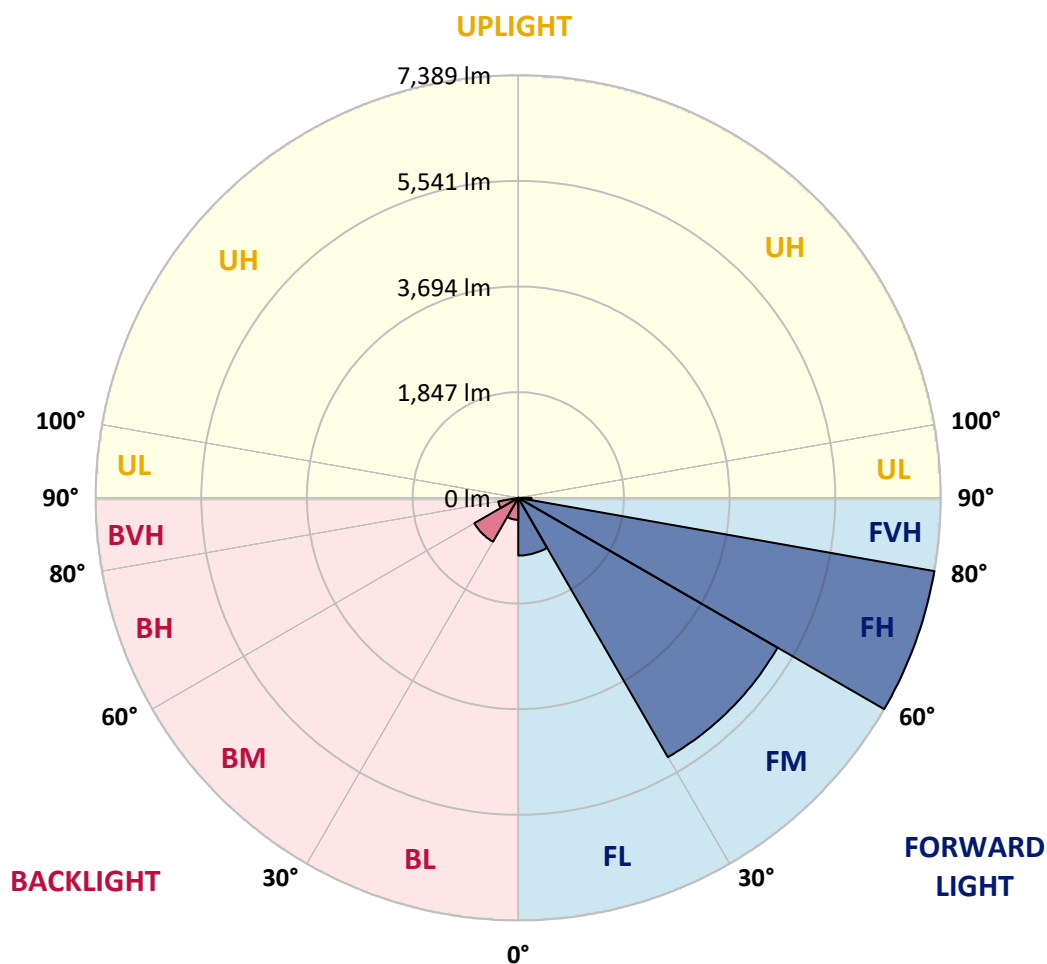
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1009.3	6.5			
FM	(30°-60°)	5234.7	33.8			
FH	(60°-80°)	7388.6	47.7			G3/7500
FVH	(80°-90°)	233.4	1.5			G3/500
BL	(0°-30°)	385.6	2.5	B1/500		
BM	(30°-60°)	885.4	5.7	B1/1000		
BH	(60°-80°)	355.0	2.3	B1/500		G1/500
BVH	(80°-90°)	2.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4
2.5°	1853.9	1857.1	1854.9	1842.2	1821.1	1809.5	1803.2	1782.0	1768.2	1743.9	1718.5
5°	2024.2	2036.9	2029.5	2004.1	1963.9	1935.3	1926.9	1883.5	1844.4	1798.9	1746.1
7.5°	2205.0	2211.3	2197.6	2164.8	2110.9	2062.3	2054.8	1994.5	1932.1	1862.3	1790.5
10°	2361.5	2369.0	2347.8	2300.2	2238.9	2178.5	2168.0	2101.4	2027.3	1941.7	1849.7
12.5°	2492.7	2500.1	2472.6	2415.5	2347.8	2285.4	2274.8	2205.0	2123.6	2028.4	1914.2
15°	2592.1	2605.9	2568.9	2507.5	2434.5	2372.2	2366.8	2298.0	2218.8	2113.0	1991.4
17.5°	2650.2	2664.0	2629.1	2555.1	2492.7	2439.8	2433.5	2376.4	2302.4	2200.8	2066.5
20°	2659.8	2672.5	2635.5	2570.9	2519.1	2476.8	2473.6	2432.4	2378.4	2281.1	2147.9
22.5°	2631.2	2647.1	2613.2	2561.4	2525.5	2503.3	2499.1	2475.8	2445.1	2362.6	2224.0
25°	2601.7	2614.3	2588.9	2543.4	2524.4	2522.3	2525.5	2521.2	2514.8	2445.1	2312.9
27.5°	2599.5	2613.2	2584.6	2541.3	2530.7	2553.0	2556.1	2576.2	2581.5	2520.2	2398.6
30°	2617.4	2627.0	2599.5	2554.0	2548.8	2599.5	2600.5	2636.5	2645.0	2583.6	2483.2
32.5°	2656.6	2667.2	2639.7	2573.1	2565.7	2636.5	2639.7	2687.2	2701.0	2651.3	2572.0
35°	2748.6	2761.4	2729.6	2625.9	2599.5	2671.4	2680.9	2737.0	2764.4	2723.2	2664.0
37.5°	2978.1	2941.1	2897.7	2732.8	2676.7	2726.4	2742.3	2807.8	2856.5	2808.9	2774.0
40°	3548.1	3431.8	3296.4	2914.7	2812.1	2843.8	2856.5	2922.1	2988.7	2942.2	2925.2
42.5°	4403.7	4266.3	4048.3	3333.4	3016.2	3032.1	3041.6	3098.7	3192.8	3155.8	3160.0
45°	5166.2	5116.5	4894.4	4048.3	3398.0	3319.7	3331.4	3361.0	3499.5	3485.7	3513.2
47.5°	5752.1	5723.5	5552.2	4869.1	4043.1	3671.9	3704.7	3718.4	3918.3	3967.0	4041.0
50°	6202.6	6192.0	6038.7	5598.8	4886.0	4191.1	4202.8	4173.2	4472.5	4593.0	4733.7
52.5°	6627.8	6663.7	6550.6	6276.7	5785.9	4871.1	4869.1	4729.5	5133.4	5315.3	5555.4
55°	7011.6	7024.3	7036.0	6968.3	6691.2	5645.3	5625.2	5396.7	5900.1	6088.4	6348.5
57.5°	7372.3	7377.5	7481.2	7619.7	7633.5	6476.6	6439.5	6165.6	6737.7	6872.0	7031.7
60°	7614.4	7638.8	7857.6	8242.6	8410.8	7334.2	7314.1	7034.9	7590.1	7652.5	7622.9
62.5°	7265.5	7413.5	7965.6	8729.1	9144.7	8285.0	8275.4	8013.1	8486.9	8436.2	8182.4
65°	5881.1	6131.8	7102.6	9058.0	9864.9	9346.8	9360.5	9081.3	9408.1	9243.1	8637.2
67.5°	4113.9	4378.3	5526.8	9084.5	10669.7	10593.6	10672.9	10235.1	10386.3	10016.2	8745.0
70°	2844.9	2981.3	3729.0	8515.5	11296.9	12311.1	12309.0	11652.2	11359.3	10368.4	8195.1
72.5°	1913.2	1984.0	2421.9	6755.7	10835.8	13331.7	13270.3	12735.2	11687.2	9696.8	6695.4
75°	806.9	858.7	1121.0	3796.7	8572.6	12196.9	12030.8	11254.6	10384.2	7635.6	4177.4
77.5°	255.9	278.2	442.1	1358.9	4722.1	9168.0	8992.4	7028.5	6959.9	3830.5	1527.1
80°	121.7	141.8	248.6	545.7	1858.1	4986.4	4962.1	3188.6	2993.9	1034.3	306.7
82.5°	52.9	62.4	137.5	291.9	831.3	1778.8	1814.8	1085.1	897.9	392.4	94.1
85°	16.9	22.2	63.4	134.3	351.1	442.1	436.8	258.1	361.7	213.6	32.8
87.5°	0.0	0.0	21.1	30.6	36.0	25.4	28.6	22.2	100.4	59.2	11.6
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°	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4
2.5°	1705.8	1688.9	1659.3	1631.8	1607.5	1583.2	1568.4	1547.2	1545.1	1545.1	1550.4
5°	1717.5	1690.0	1637.1	1581.1	1516.6	1455.2	1393.9	1334.7	1315.6	1301.9	1308.2
7.5°	1751.3	1708.0	1624.4	1517.6	1394.9	1260.6	1166.4	1065.0	1025.8	1004.7	1007.9
10°	1800.0	1740.8	1613.9	1426.7	1227.8	1044.9	910.6	800.5	758.3	740.3	740.3
12.5°	1853.9	1780.9	1594.8	1313.5	1044.9	825.9	694.8	644.0	637.8	637.8	637.8
15°	1918.4	1829.6	1562.0	1180.3	853.4	653.5	607.0	609.2	615.5	619.7	619.7
17.5°	1985.0	1881.4	1510.2	1031.1	684.3	588.0	589.1	592.2	597.5	601.8	601.8
20°	2057.0	1933.3	1441.5	872.5	586.9	569.0	572.2	575.3	579.5	581.7	582.7
22.5°	2134.2	1981.8	1360.1	717.0	554.1	553.1	554.1	557.3	562.6	562.6	564.8
25°	2216.7	2035.9	1267.0	603.8	537.2	537.2	539.4	541.5	545.7	545.7	546.7
27.5°	2301.2	2085.5	1168.6	544.7	522.4	521.4	521.4	524.6	526.6	527.8	528.8
30°	2394.3	2143.7	1070.3	532.0	510.8	505.5	502.4	504.5	506.6	507.6	509.7
32.5°	2489.5	2199.8	982.5	537.2	499.2	489.6	479.1	476.9	476.9	481.2	484.4
35°	2595.3	2261.0	914.8	555.2	492.8	466.4	449.5	439.9	441.0	447.3	450.5
37.5°	2722.2	2335.1	865.1	571.1	488.6	439.9	412.5	400.8	393.4	400.8	398.7
40°	2888.2	2444.0	829.1	583.7	483.3	409.3	372.3	353.2	339.5	343.7	341.6
42.5°	3132.5	2615.4	815.4	584.9	471.7	373.3	331.0	305.7	285.6	286.6	282.4
45°	3475.2	2886.1	886.2	571.1	446.3	334.2	287.6	253.8	241.1	237.9	233.7
47.5°	3944.7	3280.5	1050.1	542.5	409.3	296.1	245.4	216.8	207.3	202.0	198.8
50°	4574.0	3787.2	1232.0	510.8	372.3	260.1	210.4	192.5	186.1	180.8	179.8
52.5°	5303.7	4301.1	1381.2	479.1	335.3	228.5	188.3	177.6	172.4	168.2	167.1
55°	5973.1	4655.3	1372.7	445.3	299.3	203.1	172.4	166.0	159.7	155.5	153.3
57.5°	6389.8	4705.1	1131.6	408.3	258.1	183.0	157.5	153.3	146.0	140.6	139.6
60°	6581.2	4421.6	793.1	359.6	216.8	163.9	141.8	139.6	130.1	122.7	120.5
62.5°	6616.1	3895.0	528.8	299.3	180.8	146.0	125.9	122.7	110.0	97.3	90.9
65°	6474.4	3142.0	365.9	233.7	154.4	126.9	107.8	101.5	87.7	75.1	70.8
67.5°	6026.0	2206.1	254.9	168.2	131.1	100.4	85.7	83.5	73.0	62.4	59.2
70°	5204.2	1257.5	170.3	125.9	103.6	68.8	67.6	69.8	59.2	50.7	46.5
72.5°	3990.2	575.3	105.8	92.0	70.8	46.5	53.9	55.0	45.5	38.0	33.8
75°	2348.9	246.4	66.6	59.2	36.0	30.6	39.2	40.2	30.6	24.3	21.1
77.5°	799.5	93.1	42.3	34.8	17.9	16.9	25.4	25.4	16.9	9.5	7.4
80°	181.9	34.8	21.1	13.7	8.5	7.4	8.5	7.4	4.2	1.0	0.0
82.5°	51.9	13.7	8.5	5.3	3.2	3.2	1.0	0.0	0.0	0.0	0.0
85°	14.8	6.4	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.4	1.0	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)