

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: P883606

Luminaire Tested: **NAV-SB4A-740-U-T2-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883606  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-740-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 4000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

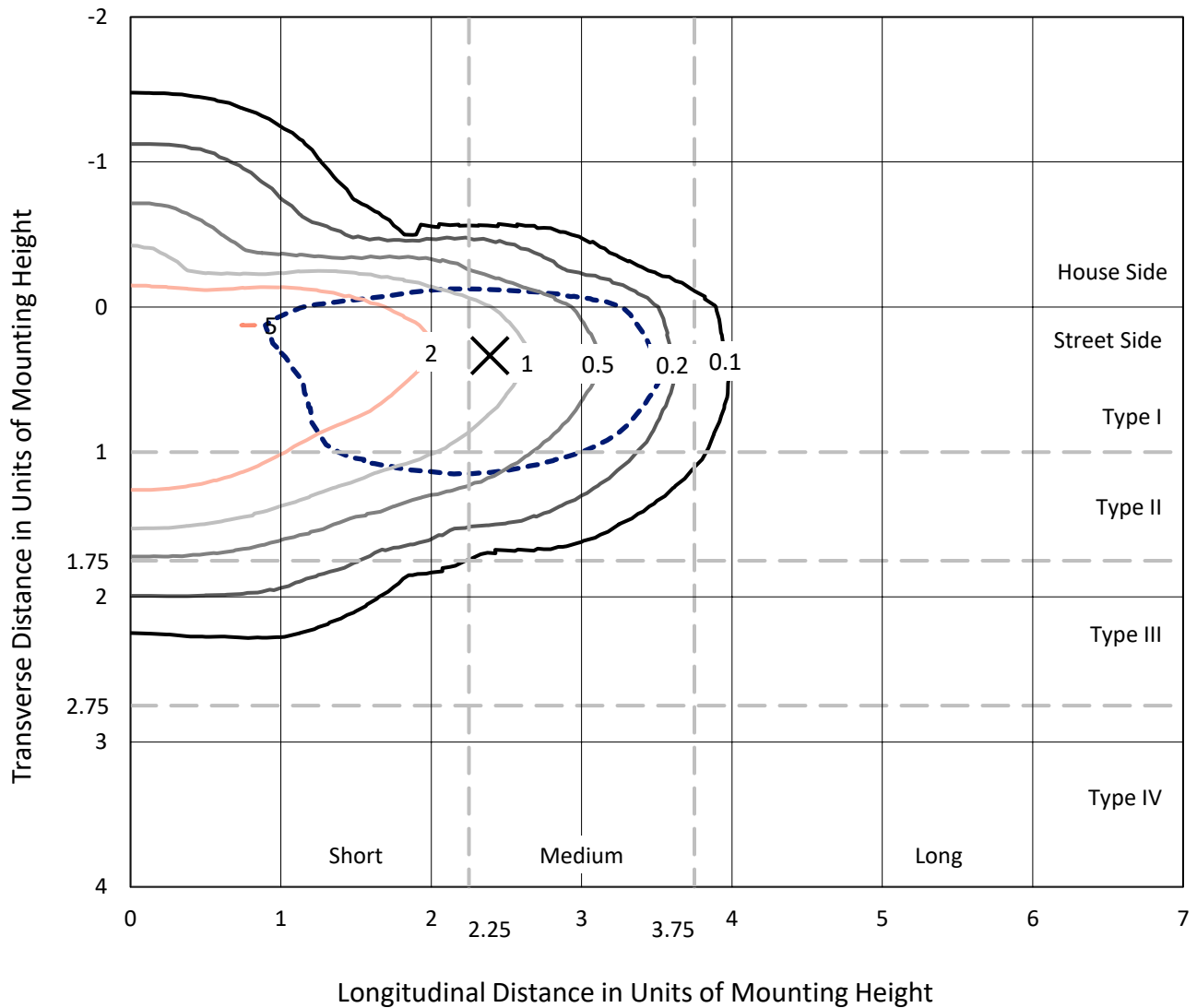
Lumens per Lamp: N/A  
Luminaire Lumens: 14312 lumens  
Efficiency: N/A  
Efficacy: 125.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 114  
Input Voltage (V): 120.0  
Input Current (Ain): 0.952  
Voltage Rise (V): NR  
Power Factor: 0.995  
Total Harmonic Distortion (THDi): 8.206  
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

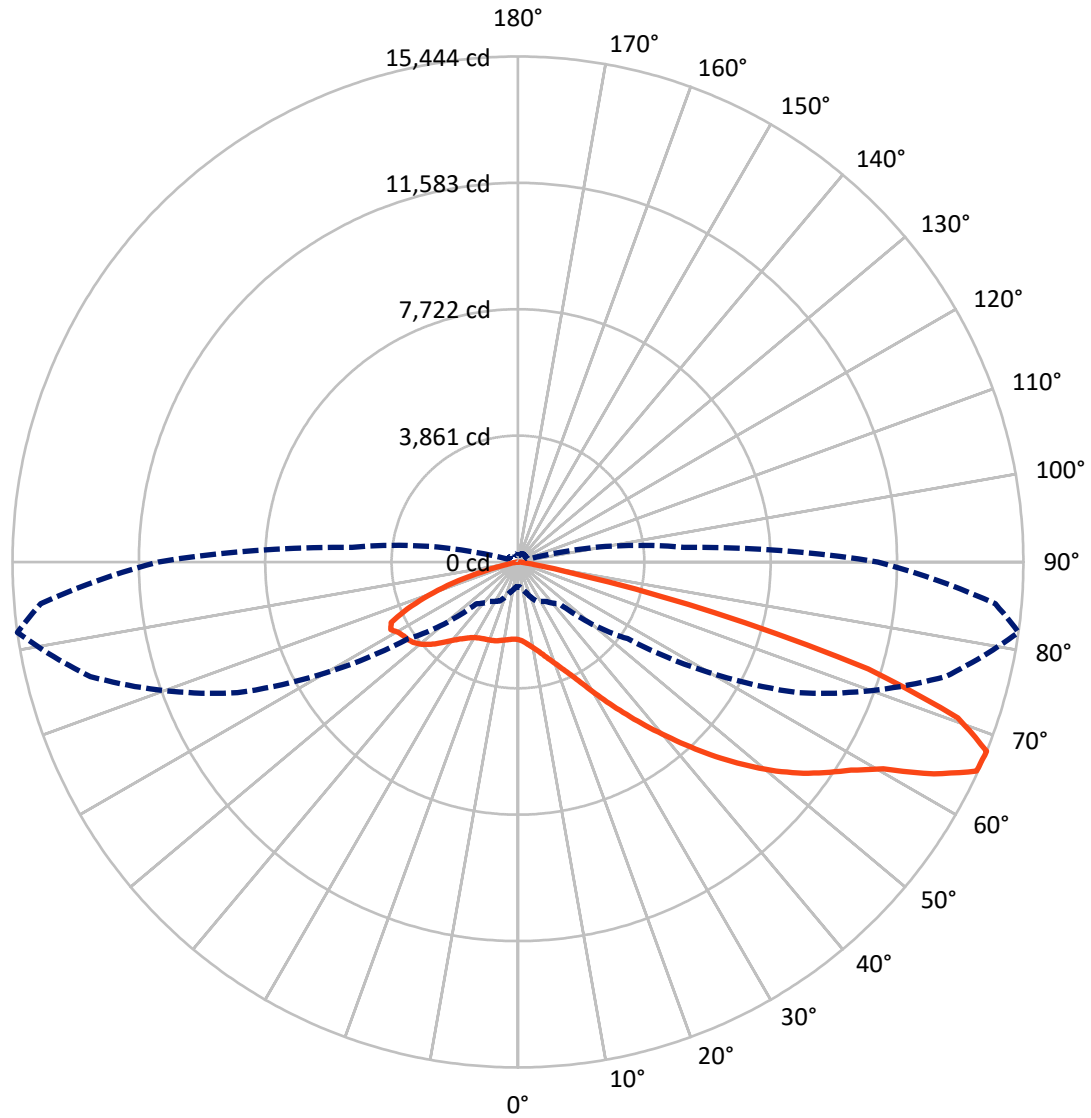
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2592.5	0.0	2592.5
	% Fixture	18.1	0.0	18.1
<b>Street Side</b>	Lumens	11719.5	0.0	11719.5
	% Fixture	81.9	0.0	81.9
<b>Total</b>	Lumens	14312.0	0.0	14312.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.2	1.5
10°-20°	548.9	3.8
20°-30°	879.2	6.1
30°-40°	1554.7	10.9
40°-50°	2724.0	19.0
50°-60°	3633.0	25.4
60°-70°	3382.2	23.6
70°-80°	1298.1	9.1
80°-90°	80.6	0.6
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°	14312.0	100.0
0°-180°	14312.0	100.0

**Coefficient of Utilization**



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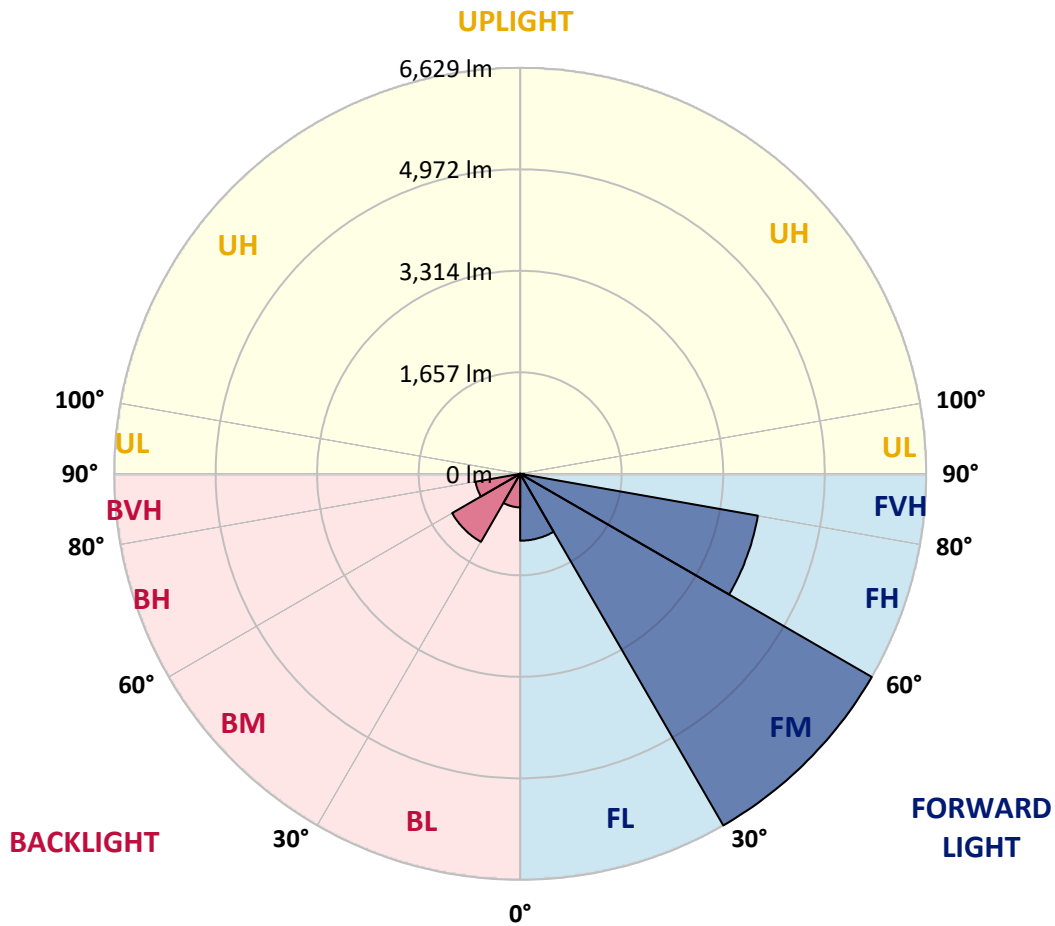
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1091.8	7.6			
FM (30°-60°)	6628.7	46.3			
FH (60°-80°)	3940.3	27.5			G2/5000
FVH (80°-90°)	58.6	0.4			G1/100
BL (0°-30°)	547.5	3.8	B2/1000		
BM (30°-60°)	1283.0	9.0	B2/2500		
BH (60°-80°)	739.9	5.2	B2/1000		G2/1000
BVH (80°-90°)	22.0	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0
2.5°	2506.0	2520.4	2512.2	2508.1	2500.8	2490.5	2482.3	2456.5	2429.7	2412.2	2406.0
5°	2556.5	2570.9	2569.9	2574.0	2579.2	2582.3	2580.2	2551.3	2513.2	2483.3	2465.8
7.5°	2513.2	2529.7	2543.1	2563.7	2599.8	2637.9	2656.4	2650.3	2611.1	2569.9	2548.2
10°	2390.6	2408.1	2440.1	2488.5	2564.7	2647.2	2716.2	2748.2	2723.4	2678.1	2648.2
12.5°	2166.0	2183.5	2246.3	2351.4	2479.2	2622.4	2754.3	2839.9	2846.0	2800.7	2765.7
15°	1913.5	1931.0	1998.0	2129.9	2324.6	2554.4	2774.9	2936.7	2991.3	2952.2	2909.9
17.5°	1756.9	1772.3	1822.8	1929.0	2132.0	2418.4	2767.7	3039.8	3164.4	3133.5	3083.0
20°	1709.5	1722.9	1746.6	1820.8	1989.8	2277.2	2720.3	3136.6	3351.0	3333.4	3276.8
22.5°	1760.0	1772.3	1779.5	1812.5	1918.7	2184.5	2660.6	3235.5	3567.3	3569.4	3500.4
25°	1876.4	1888.8	1880.5	1901.1	1947.5	2155.7	2637.9	3352.0	3839.4	3862.0	3783.7
27.5°	2068.1	2069.1	2049.5	2048.5	2055.7	2198.9	2661.6	3476.7	4182.5	4224.8	4127.9
30°	2452.4	2437.0	2361.7	2280.3	2243.2	2328.8	2727.5	3624.0	4587.5	4662.7	4541.1
32.5°	3044.9	3022.2	2884.2	2689.4	2493.6	2537.9	2846.0	3792.0	5028.5	5164.5	5016.1
35°	3687.9	3681.7	3537.5	3247.9	2905.8	2835.7	3038.7	4012.5	5509.7	5726.1	5549.9
37.5°	4285.5	4282.5	4200.0	3859.0	3442.7	3251.0	3347.9	4301.0	6024.9	6338.2	6130.0
40°	4831.7	4840.9	4758.5	4453.5	4034.1	3783.7	3768.3	4657.5	6597.8	7004.8	6757.5
42.5°	5303.6	5313.9	5230.5	5004.8	4618.4	4373.1	4284.5	5094.4	7157.4	7721.0	7428.4
45°	5624.1	5688.0	5675.6	5495.3	5218.1	4963.6	4904.8	5642.6	7795.2	8480.4	8137.3
47.5°	5714.8	5773.5	5866.2	5891.0	5722.0	5471.6	5541.6	6303.1	8440.2	9240.9	8850.3
50°	5491.1	5545.8	5738.5	5995.0	6112.5	6035.2	6160.9	7011.0	9100.7	9999.3	9550.0
52.5°	5050.1	5105.8	5349.0	5754.9	6234.1	6477.3	6782.3	7708.6	9740.6	10717.5	10212.6
55°	4412.3	4471.0	4783.2	5242.8	6002.2	6659.7	7300.6	8405.2	10326.9	11363.6	10810.2
57.5°	3544.7	3587.9	3912.5	4555.5	5419.0	6478.3	7682.9	9165.7	10879.3	11998.3	11402.7
60°	2310.2	2348.3	2725.5	3442.7	4452.5	5872.4	7759.1	10013.7	11612.9	12823.7	12201.3
62.5°	1536.4	1562.1	1785.7	2312.3	3135.6	4709.1	7312.9	10690.7	12688.7	14260.1	13570.7
65°	1054.1	1079.9	1303.5	1670.3	2025.8	3115.0	6030.1	10601.0	13663.5	15400.8	14585.7
67.5°	752.2	773.9	963.4	1309.7	1466.3	1809.4	4087.7	9455.2	13523.3	15444.0	14640.3
70°	538.9	551.3	707.9	1020.1	1165.4	1087.1	2273.1	7231.5	11840.6	14261.1	13525.4
72.5°	377.1	381.3	491.5	776.9	938.7	793.4	1081.9	4821.4	8955.4	11193.5	10485.6
75°	255.5	260.7	330.8	569.8	753.2	605.9	572.9	2585.3	5257.2	6196.0	5554.0
77.5°	156.6	158.7	213.3	389.5	563.6	461.6	368.9	1095.3	2034.1	1997.0	1702.3
80°	88.6	88.6	136.0	242.2	384.3	297.8	258.6	465.8	644.0	565.7	498.7
82.5°	49.5	50.5	98.9	150.4	254.5	176.2	142.2	215.4	278.2	246.3	214.3
85°	20.6	22.7	60.8	71.1	121.6	87.6	57.7	90.7	103.0	91.7	67.0
87.5°	2.1	3.1	18.5	13.4	14.4	17.5	8.2	17.5	14.4	14.4	10.3
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°	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0	2371.0
2.5°	2386.5	2371.0	2331.9	2286.5	2226.8	2197.9	2158.7	2132.0	2109.3	2111.3	2090.7
5°	2432.8	2393.7	2306.1	2196.9	2060.9	1964.0	1861.0	1789.9	1732.1	1719.8	1692.0
7.5°	2496.7	2434.9	2281.4	2084.6	1854.8	1680.6	1525.0	1425.1	1354.0	1331.3	1308.6
10°	2579.2	2489.5	2249.4	1943.4	1612.6	1391.1	1224.1	1145.8	1097.4	1080.9	1068.6
12.5°	2675.0	2552.4	2207.2	1771.3	1363.3	1150.0	1043.8	1004.7	989.2	984.1	981.0
15°	2795.6	2630.7	2143.3	1567.3	1152.0	1002.6	957.3	952.1	954.2	952.1	951.1
17.5°	2938.8	2716.2	2039.2	1357.1	1009.8	927.4	910.9	915.0	920.2	919.1	917.1
20°	3095.4	2800.7	1906.3	1170.6	913.0	873.8	864.5	868.7	872.8	870.7	869.7
22.5°	3273.7	2891.4	1758.9	1025.3	848.0	824.3	814.0	815.1	815.1	810.9	808.9
25°	3487.0	2991.3	1604.4	922.2	798.6	780.0	767.7	763.5	757.4	745.0	742.9
27.5°	3741.5	3097.5	1456.0	850.1	759.4	741.9	727.5	717.2	701.7	681.1	679.1
30°	4027.9	3226.3	1330.3	804.8	728.5	711.0	694.5	679.1	656.4	630.6	628.6
32.5°	4364.9	3364.3	1238.6	774.9	700.7	682.1	662.6	644.0	619.3	593.5	594.6
35°	4766.8	3531.3	1185.0	754.3	679.1	654.3	632.7	612.1	593.5	570.9	568.8
37.5°	5202.6	3708.5	1168.5	744.0	664.6	626.5	601.8	587.3	585.3	571.9	570.9
40°	5679.7	3918.7	1180.9	737.8	649.2	599.7	572.9	569.8	575.0	551.3	552.3
42.5°	6184.6	4168.1	1201.5	730.6	627.5	572.9	547.2	547.2	543.0	510.1	510.1
45°	6730.8	4455.6	1222.1	713.1	601.8	546.1	526.5	519.3	501.8	469.9	468.8
47.5°	7281.0	4748.2	1237.5	681.1	570.9	523.5	505.9	489.5	463.7	434.8	433.8
50°	7803.4	5011.0	1221.1	633.7	535.8	501.8	483.3	460.6	432.8	413.2	410.1
52.5°	8270.2	5238.7	1151.0	578.1	498.7	479.1	462.7	439.0	416.3	395.7	393.6
55°	8676.2	5423.1	1027.3	525.5	465.8	459.6	443.1	413.2	382.3	364.8	362.7
57.5°	9065.7	5563.3	872.8	482.2	435.9	437.9	413.2	386.4	357.6	339.0	336.9
60°	9584.0	5750.8	716.1	442.1	403.9	410.1	383.3	363.7	327.7	304.0	300.9
62.5°	10412.5	6042.4	568.8	392.6	366.8	368.9	357.6	333.9	290.6	262.8	260.7
65°	11069.9	5935.3	448.2	339.0	324.6	327.7	327.7	301.9	255.5	223.6	220.5
67.5°	10995.7	5082.1	357.6	286.5	284.4	286.5	293.7	272.0	226.7	200.9	196.8
70°	10129.1	4042.4	286.5	238.0	247.3	242.2	262.8	248.3	204.0	178.3	175.2
72.5°	8265.1	2912.0	218.5	196.8	189.6	197.8	237.0	223.6	170.0	141.2	138.1
75°	4829.6	1553.9	162.8	155.6	137.0	164.9	210.2	190.6	129.8	104.1	101.0
77.5°	1572.4	542.0	119.5	114.4	102.0	132.9	179.3	160.7	106.1	82.4	79.3
80°	421.4	163.8	81.4	75.2	65.9	98.9	142.2	127.8	76.3	53.6	52.6
82.5°	169.0	69.0	47.4	42.2	36.1	68.0	112.3	103.0	56.7	34.0	34.0
85°	54.6	22.7	17.5	13.4	16.5	42.2	67.0	70.1	40.2	17.5	13.4
87.5°	7.2	3.1	3.1	4.1	3.1	7.2	20.6	19.6	11.3	2.1	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)