

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: P884148

Luminaire Tested: **NAV-SB4D-827-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884148
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26279 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G4

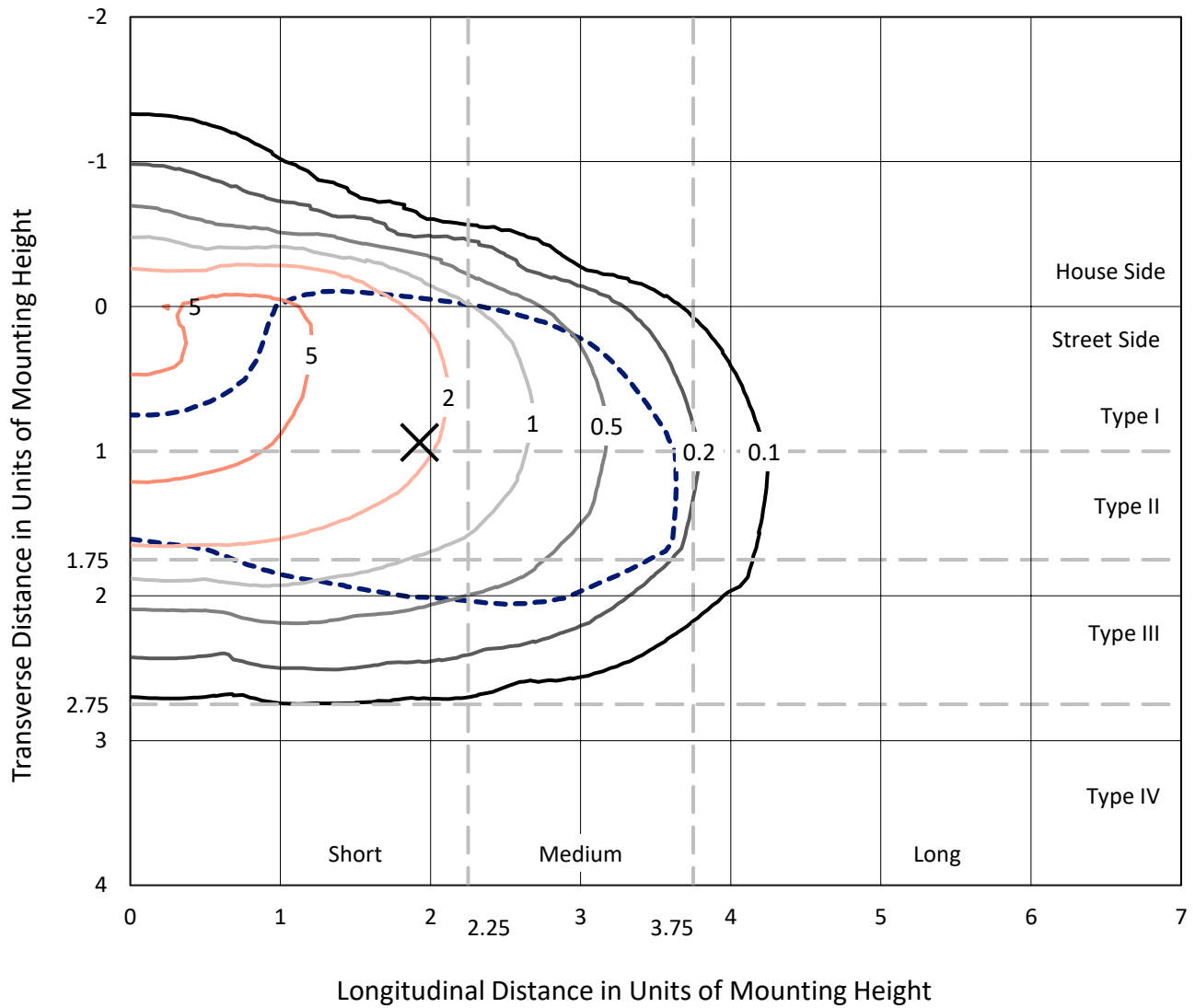
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

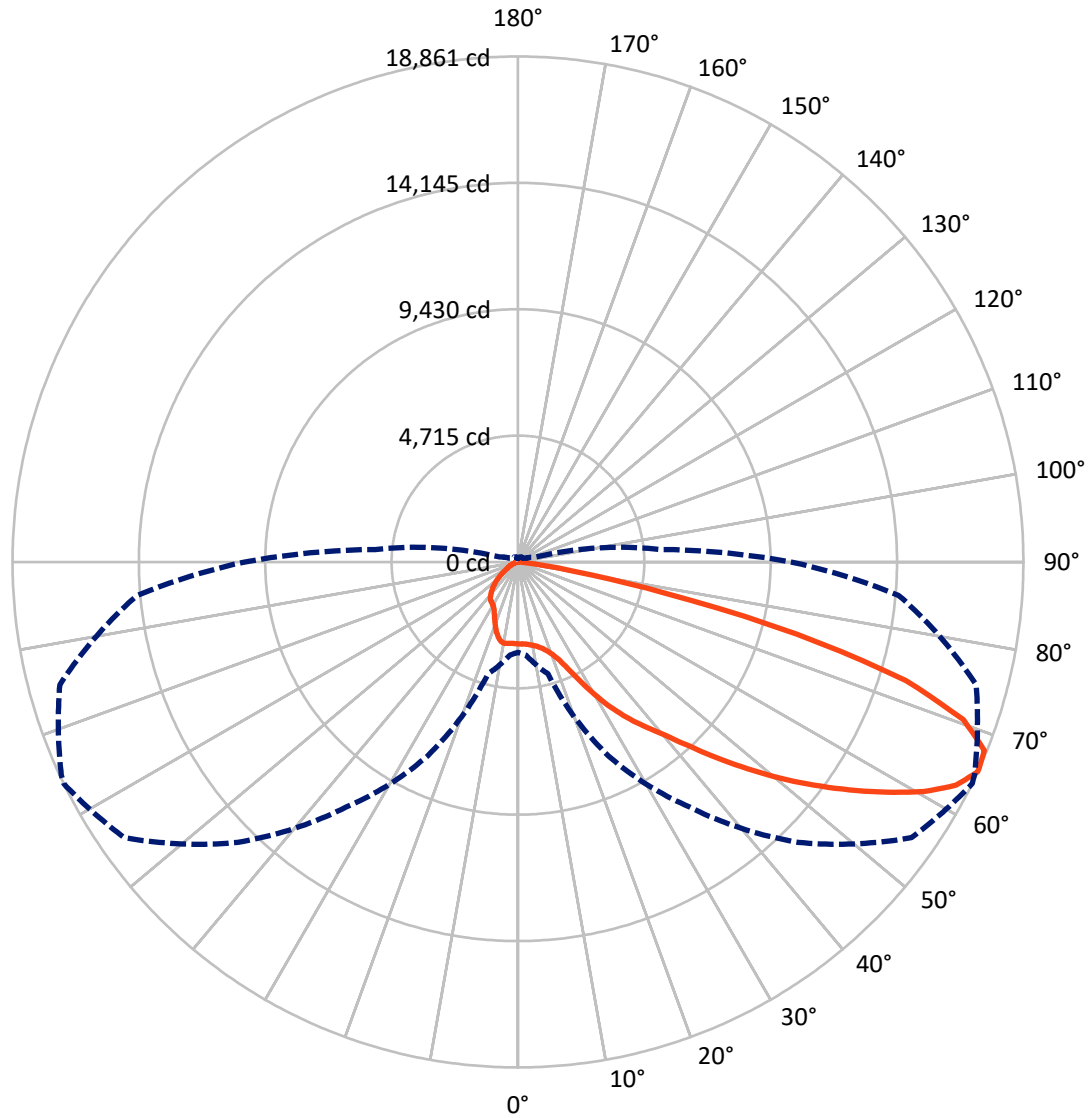
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3514.3	0.0	3514.3
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	22764.7	0.0	22764.7
	% Fixture	86.6	0.0	86.6
Total	Lumens	26279.0	0.0	26279.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.0	1.1
10°-20°	764.9	2.9
20°-30°	1449.3	5.5
30°-40°	2932.8	11.2
40°-50°	4996.0	19.0
50°-60°	6794.1	25.9
60°-70°	6380.0	24.3
70°-80°	2556.1	9.7
80°-90°	123.8	0.5
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°	26279.0	100.0
0°-180°	26279.0	100.0

Coefficient of Utilization



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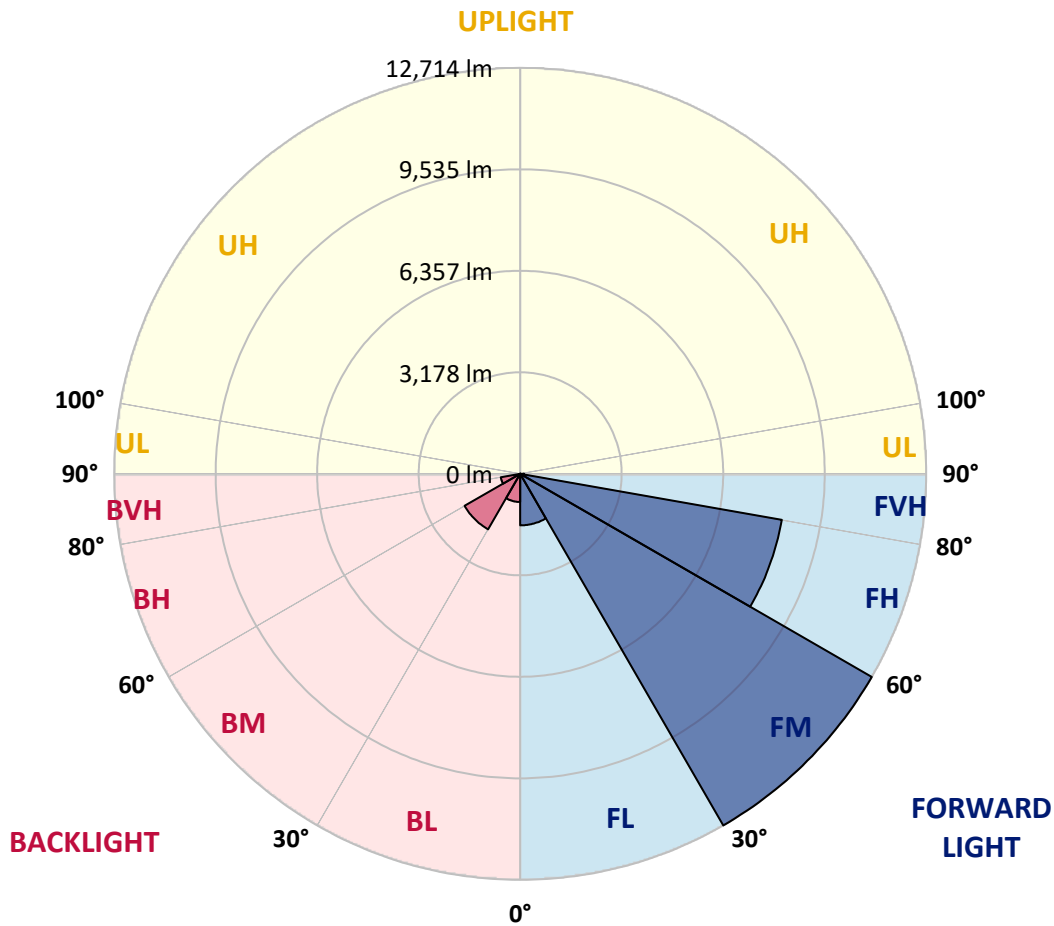
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1613.8	6.1			
FM (30°-60°)	12713.8	48.4			
FH (60°-80°)	8319.3	31.7			G4/12000
FVH (80°-90°)	117.8	0.4			G2/225
BL (0°-30°)	882.3	3.4	B2/1000		
BM (30°-60°)	2009.1	7.6	B2/2500		
BH (60°-80°)	616.8	2.3	B2/1000		G2/1000
BVH (80°-90°)	6.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5
2.5°	3046.0	3067.1	3061.8	3056.5	3054.8	3058.3	3060.0	3058.3	3058.3	3058.3	3060.0
5°	2987.8	3005.4	3005.4	3017.8	3035.4	3056.5	3072.4	3075.9	3079.4	3084.7	3082.9
7.5°	2876.8	2890.9	2901.5	2942.0	2986.1	3042.4	3090.0	3114.7	3118.2	3137.6	3144.6
10°	2801.1	2818.7	2836.3	2878.6	2942.0	3026.6	3107.6	3167.5	3176.3	3222.1	3243.3
12.5°	2797.6	2815.2	2838.1	2883.9	2957.9	3047.7	3146.4	3232.7	3248.5	3315.5	3359.5
15°	2834.5	2855.7	2876.8	2933.2	3012.5	3121.7	3227.4	3334.9	3350.7	3445.9	3493.4
17.5°	2910.3	2938.5	2954.3	3010.7	3095.3	3216.8	3356.0	3479.3	3493.4	3604.4	3664.3
20°	3060.0	3093.5	3098.8	3144.6	3227.4	3357.8	3523.4	3676.6	3694.2	3821.1	3888.0
22.5°	3370.1	3417.7	3375.4	3398.3	3472.3	3602.6	3782.3	3976.1	4000.8	4145.2	4205.1
25°	3916.2	3983.2	3873.9	3835.2	3866.9	4002.5	4228.0	4472.9	4501.1	4617.4	4647.3
27.5°	4989.1	4902.8	4737.2	4575.1	4480.0	4557.5	4811.2	5114.2	5149.4	5262.1	5226.9
30°	6167.7	6091.9	5868.2	5508.8	5283.3	5271.0	5505.3	5843.5	5884.0	5991.5	5884.0
32.5°	7348.0	7275.8	7032.6	6590.5	6199.4	6005.6	6167.7	6542.9	6564.0	6632.7	6474.2
35°	8508.9	8434.9	8191.8	7739.1	7258.1	6817.7	6786.0	7208.8	7215.9	7288.1	7052.0
37.5°	9676.9	9615.3	9356.3	8912.4	8438.5	7830.7	7536.5	7839.5	7848.3	7918.8	7673.9
40°	10510.2	10536.6	10358.7	10015.2	9608.2	8944.1	8378.6	8510.7	8457.8	8575.9	8429.7
42.5°	11225.4	11278.3	11123.3	10950.6	10714.6	10129.7	9421.5	9398.6	9314.0	9377.4	9225.9
45°	11843.8	11887.8	11748.7	11708.1	11702.9	11292.4	10561.3	10423.9	10305.8	10293.5	10112.1
47.5°	12071.1	12155.6	12215.5	12351.2	12615.4	12442.8	11739.9	11526.7	11394.6	11297.7	11010.5
50°	12157.4	12247.2	12451.6	12846.2	13471.6	13545.6	12913.1	12673.5	12511.5	12335.3	11912.5
52.5°	12041.1	12201.4	12476.2	13140.4	14047.7	14429.9	14038.9	13829.2	13644.2	13357.1	12729.9
55°	11355.8	11516.1	12078.1	13136.9	14334.8	15050.1	15102.9	15009.5	14801.7	14348.9	13390.6
57.5°	9911.2	10149.1	11038.7	12689.4	14329.5	15583.9	16145.8	16212.8	15980.2	15331.9	13910.3
60°	7910.0	8232.3	9317.5	11697.6	13887.3	15872.8	17060.1	17394.9	17148.2	16300.9	14331.3
62.5°	5519.4	5892.8	6919.9	10143.8	12876.1	15664.9	17727.8	18346.2	18159.4	17167.6	14493.4
65°	3366.6	3486.4	4314.4	7982.2	11156.7	14794.6	17933.9	18860.6	18798.9	17697.9	14253.8
67.5°	2242.6	2343.0	2580.9	5473.6	8660.4	13055.8	17440.7	18770.7	18788.4	17611.5	13376.5
70°	1351.2	1437.5	1592.6	3183.4	5612.7	10334.0	15913.3	17625.6	17727.8	16457.6	11713.4
72.5°	556.7	614.8	755.8	1442.8	2906.8	6558.7	12671.8	15132.9	15370.7	13838.0	8989.9
75°	315.3	345.3	443.9	724.1	1261.4	3056.5	7675.7	10742.7	11093.3	9537.8	5408.4
77.5°	209.6	223.7	287.2	468.6	710.0	1042.9	3280.3	5596.9	6266.3	5209.3	2341.3
80°	140.9	153.3	197.3	313.6	461.6	447.5	1044.7	2073.5	2550.9	1789.9	570.8
82.5°	95.1	96.9	140.9	206.1	292.4	216.7	308.3	644.8	810.4	517.9	216.7
85°	54.6	52.9	103.9	119.8	130.4	89.8	93.4	193.8	253.7	218.4	123.3
87.5°	7.0	10.6	40.5	31.7	17.6	19.4	19.4	33.5	49.3	52.9	26.4
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°	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5	3056.5
2.5°	3060.0	3058.3	3053.0	3047.7	3035.4	3028.3	3031.9	3028.3	3026.6	3028.3	3035.4
5°	3082.9	3077.7	3063.6	3046.0	3021.3	2991.3	2972.0	2943.8	2917.3	2901.5	2905.0
7.5°	3144.6	3139.3	3119.9	3070.6	2991.3	2866.3	2751.7	2651.3	2575.6	2531.5	2533.3
10°	3243.3	3234.5	3204.5	3095.3	2887.4	2614.3	2387.1	2198.6	2075.3	2017.1	2011.8
12.5°	3359.5	3349.0	3296.1	3072.4	2690.1	2263.8	1950.2	1740.5	1626.0	1574.9	1569.7
15°	3496.9	3482.8	3378.9	2963.2	2402.9	1876.2	1589.0	1432.2	1358.3	1312.5	1314.2
17.5°	3667.8	3643.2	3440.6	2799.3	2091.1	1580.2	1367.1	1249.0	1183.9	1139.8	1136.3
20°	3889.8	3849.3	3489.9	2603.8	1804.0	1393.5	1217.3	1118.7	1069.3	1030.6	1023.5
22.5°	4199.9	4141.7	3549.8	2392.4	1601.4	1264.9	1106.3	1034.1	993.6	949.5	942.5
25°	4583.9	4515.2	3623.8	2196.8	1462.2	1153.9	1025.3	965.4	917.8	866.7	861.5
27.5°	5121.2	4997.9	3711.9	2036.5	1342.4	1058.8	951.3	884.4	829.8	787.5	778.7
30°	5720.2	5517.6	3789.4	1939.6	1233.2	970.7	854.4	787.5	736.4	706.4	701.1
32.5°	6287.4	6012.6	3840.5	1897.3	1134.5	870.3	748.7	676.5	637.7	628.9	634.2
35°	6823.0	6460.1	3835.2	1856.8	1046.4	769.9	644.8	570.8	540.8	546.1	546.1
37.5°	7439.6	6937.5	3798.2	1793.4	974.2	678.2	554.9	489.7	463.3	465.1	472.1
40°	8156.6	7488.9	3775.3	1673.6	894.9	593.7	480.9	428.1	408.7	401.7	399.9
42.5°	8921.2	8022.7	3778.8	1537.9	796.3	517.9	429.9	385.8	368.2	362.9	361.1
45°	9689.3	8531.8	3784.1	1397.0	692.3	459.8	392.9	355.9	345.3	338.2	338.2
47.5°	10411.5	8965.2	3685.4	1245.5	590.2	415.8	362.9	338.2	329.4	320.6	320.6
50°	11084.5	9254.1	3447.6	1069.3	509.1	380.5	340.0	322.4	313.6	304.8	304.8
52.5°	11607.7	9299.9	3054.8	887.9	452.8	354.1	325.9	310.1	299.5	290.7	288.9
55°	11840.3	9012.8	2496.3	718.8	408.7	331.2	311.8	296.0	283.6	274.8	273.1
57.5°	11780.4	8408.5	1946.7	577.8	366.4	308.3	294.2	283.6	269.5	255.4	253.7
60°	11486.2	7599.9	1467.5	480.9	327.7	283.6	274.8	266.0	246.6	225.5	222.0
62.5°	10977.0	6583.4	1046.4	398.1	285.4	255.4	251.9	244.9	216.7	177.9	174.4
65°	10198.4	5348.5	704.7	331.2	244.9	223.7	225.5	213.2	176.2	132.1	128.6
67.5°	9060.3	3910.9	451.0	271.3	204.4	186.7	188.5	181.5	149.7	112.7	107.5
70°	7610.5	2589.7	294.2	206.1	163.8	144.5	155.0	156.8	126.8	91.6	88.1
72.5°	5579.3	1529.1	206.1	153.3	119.8	100.4	126.8	130.4	102.2	68.7	65.2
75°	3179.8	725.8	155.0	111.0	74.0	70.5	98.7	98.7	70.5	45.8	42.3
77.5°	1335.4	303.0	109.2	72.2	42.3	40.5	66.9	61.7	35.2	21.1	21.1
80°	385.8	135.6	58.1	35.2	17.6	15.9	26.4	19.4	8.8	3.5	3.5
82.5°	151.5	59.9	22.9	14.1	7.0	7.0	3.5	0.0	0.0	0.0	0.0
85°	89.8	24.7	10.6	5.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	22.9	5.3	3.5	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)