

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: P884143

Luminaire Tested: **NAV-SB4D-827-U-SL4-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-10)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-SL4-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23390 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

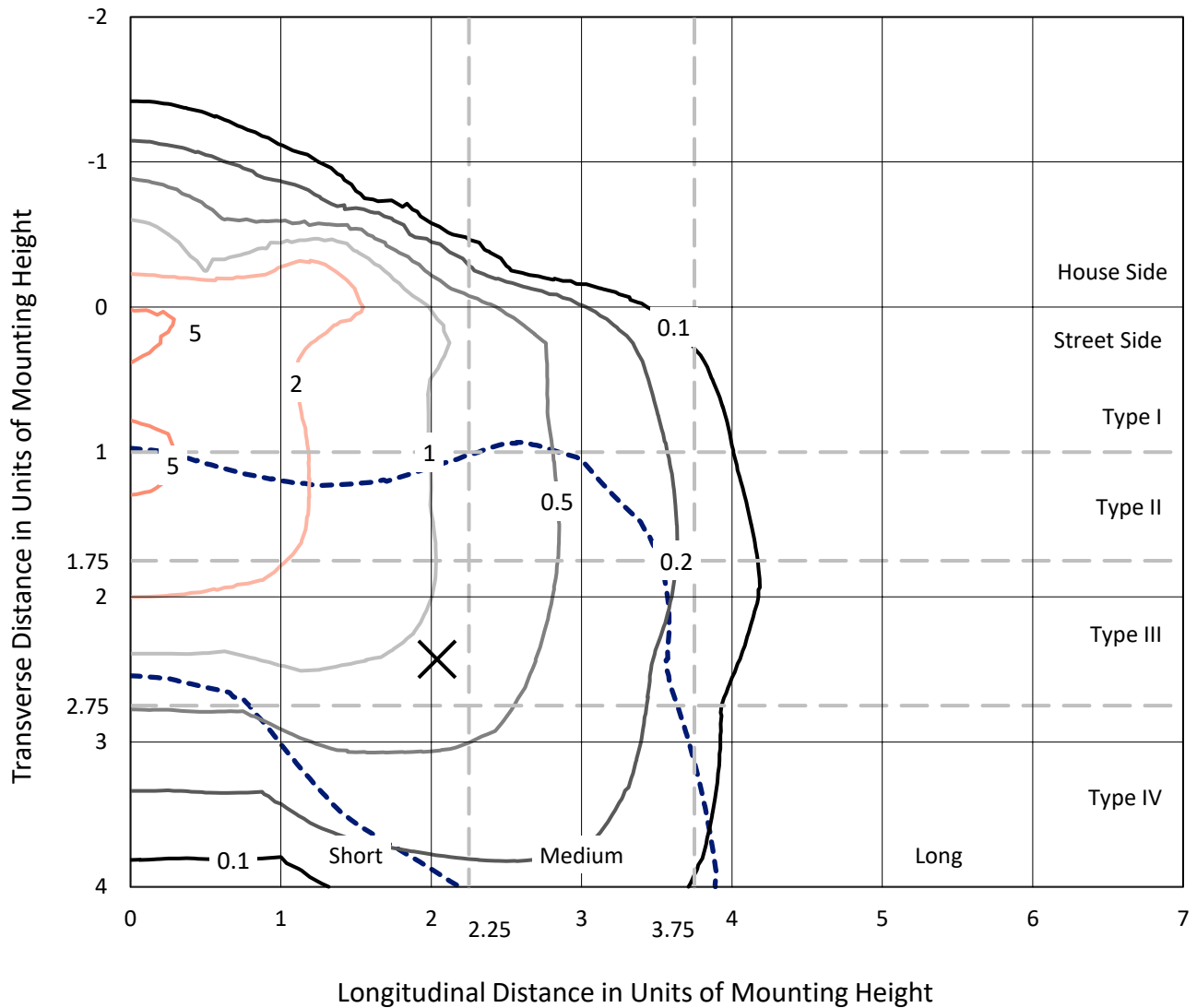
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

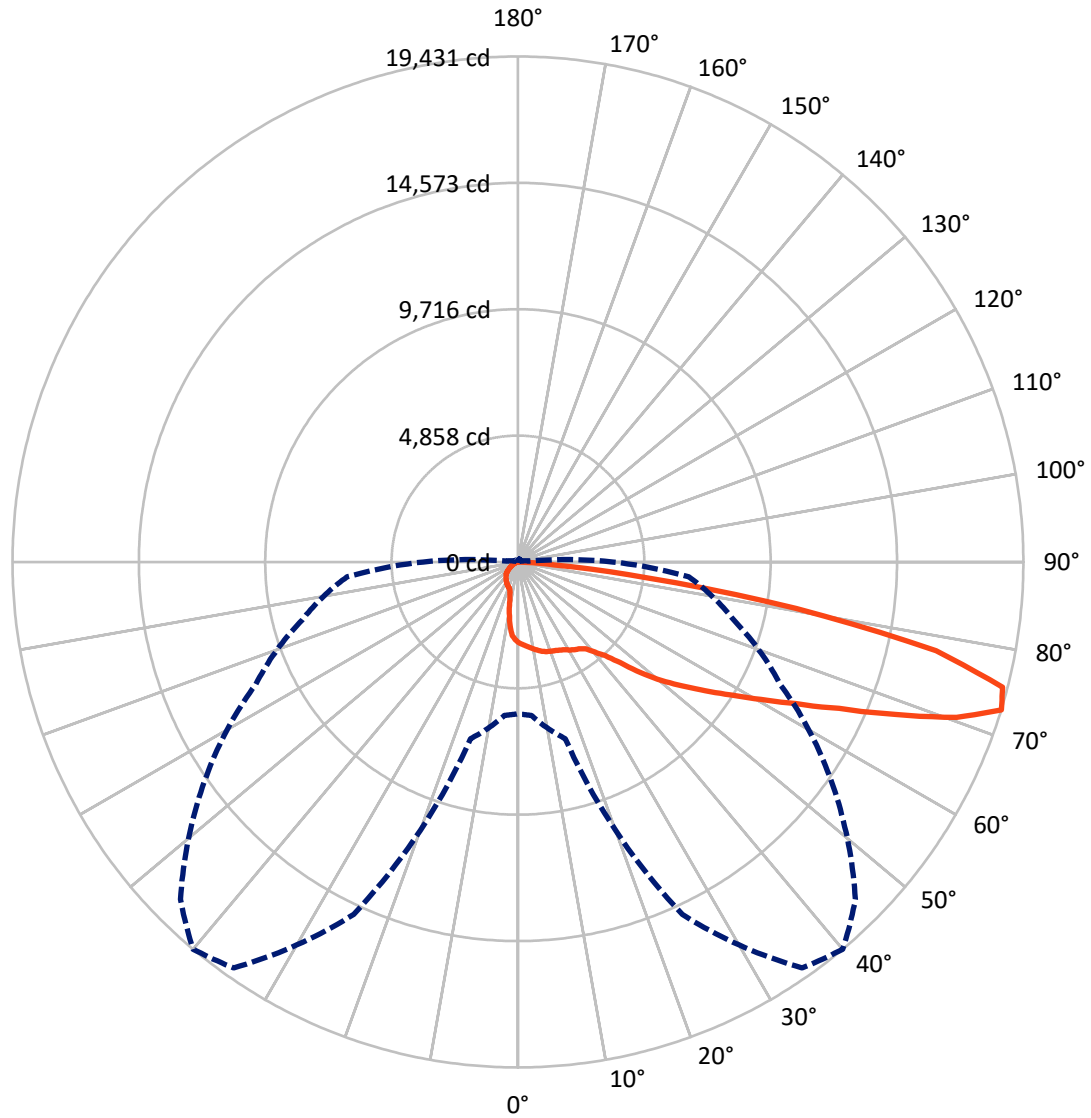
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P884143
CATALOG NUMBER: NAV-SB4D-827-U-SL4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3020.6	0.0	3020.6
	% Fixture	12.9	0.0	12.9
Street Side	Lumens	20369.4	0.0	20369.4
	% Fixture	87.1	0.0	87.1
Total	Lumens	23390.0	0.0	23390.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.8	1.2
10°-20°	768.1	3.3
20°-30°	1242.9	5.3
30°-40°	1834.9	7.8
40°-50°	3088.2	13.2
50°-60°	4795.1	20.5
60°-70°	6000.0	25.7
70°-80°	4912.2	21.0
80°-90°	465.8	2.0
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°	23390.0	100.0
0°-180°	23390.0	100.0

Coefficient of Utilization



REPORT NUMBER: P884143

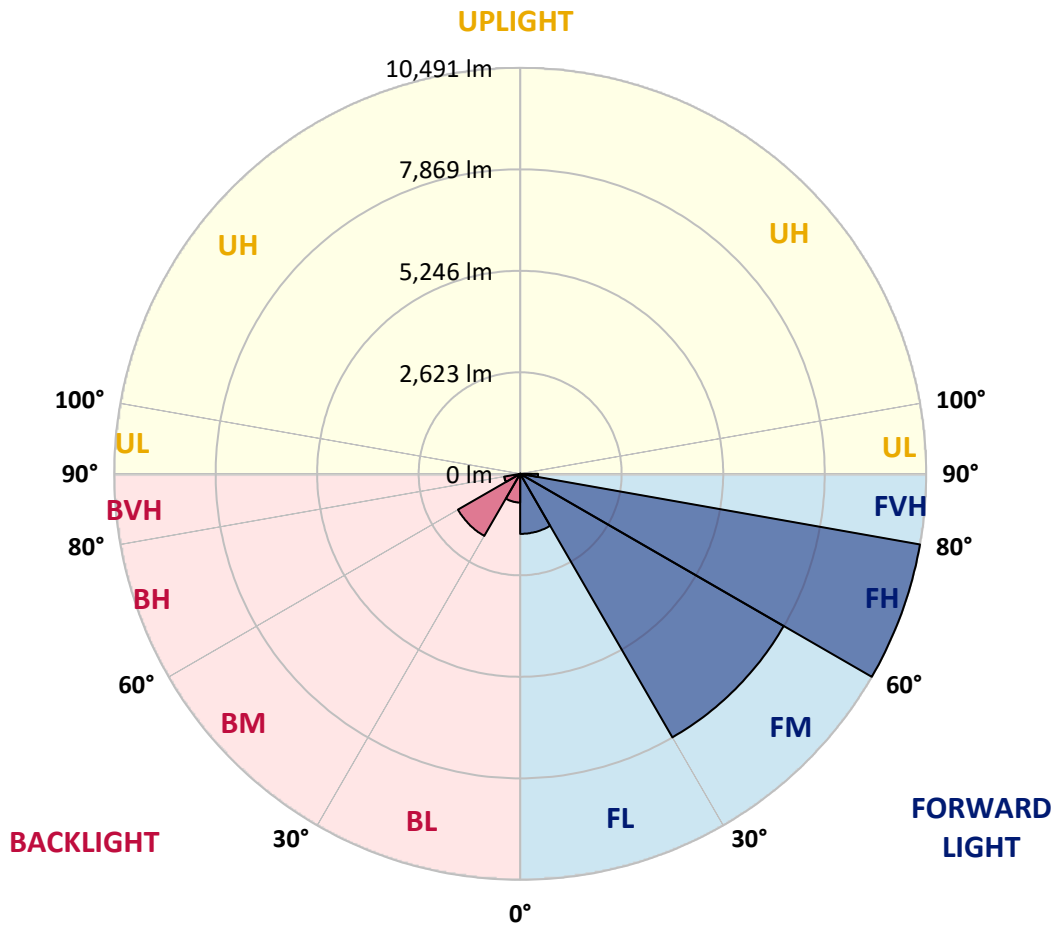
CATALOG NUMBER: NAV-SB4D-827-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1552.4	6.6			
FM (30°-60°)	7863.3	33.6			
FH (60°-80°)	10491.5	44.9			G4/12000
FVH (80°-90°)	462.2	2.0			G3/500
BL (0°-30°)	741.4	3.2	B2/1000		
BM (30°-60°)	1854.8	7.9	B2/2500		
BH (60°-80°)	420.8	1.8	B1/500		G1/500
BVH (80°-90°)	3.6	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



REPORT NUMBER: P884143
 CATALOG NUMBER: NAV-SB4D-827-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0
2.5°	3190.4	3202.7	3195.7	3181.6	3178.1	3171.0	3162.2	3158.7	3146.4	3135.8	3123.5
5°	3280.2	3292.6	3283.8	3264.4	3255.6	3246.8	3234.4	3223.9	3199.2	3176.3	3148.1
7.5°	3378.9	3389.5	3378.9	3350.7	3336.6	3326.0	3308.4	3292.6	3264.4	3230.9	3195.7
10°	3488.1	3496.9	3481.1	3444.1	3421.2	3405.3	3389.5	3371.8	3345.4	3308.4	3266.1
12.5°	3590.3	3600.9	3576.2	3532.2	3505.7	3489.9	3472.3	3458.2	3431.7	3396.5	3352.5
15°	3683.7	3699.5	3657.2	3609.7	3579.7	3567.4	3549.8	3541.0	3523.4	3498.7	3458.2
17.5°	3754.1	3764.7	3720.7	3664.3	3630.8	3622.0	3609.7	3615.0	3611.4	3599.1	3572.7
20°	3814.0	3821.1	3762.9	3694.2	3657.2	3659.0	3655.5	3673.1	3680.1	3680.1	3678.4
22.5°	3888.0	3889.8	3815.8	3729.5	3685.4	3697.8	3703.0	3722.4	3736.5	3750.6	3782.3
25°	3984.9	3981.4	3893.3	3775.3	3736.5	3754.1	3766.5	3773.5	3789.4	3812.3	3884.5
27.5°	4129.4	4118.8	4006.1	3849.3	3803.5	3819.3	3842.2	3838.7	3831.6	3849.3	3970.8
30°	4312.6	4298.5	4148.7	3953.2	3910.9	3925.0	3932.1	3900.3	3849.3	3865.1	4046.6
32.5°	4603.3	4578.6	4370.7	4069.5	4004.3	4020.1	4011.3	3946.2	3870.4	3886.3	4122.3
35°	5108.9	5049.0	4754.8	4312.6	4110.0	4092.4	4071.2	4007.8	3914.4	3898.6	4185.7
37.5°	6183.5	6077.8	5575.7	4786.5	4349.6	4235.1	4169.9	4106.5	3962.0	3898.6	4258.0
40°	7395.5	7288.1	6708.5	5579.2	4747.7	4553.9	4398.9	4222.7	4011.3	3921.5	4370.7
42.5°	8660.4	8542.4	7946.9	6562.2	5316.7	4918.6	4629.7	4316.1	4092.4	3992.0	4520.5
45°	10073.3	9925.3	9146.6	7587.5	6143.0	5524.6	5001.4	4508.1	4233.3	4117.0	4724.8
47.5°	11563.6	11371.6	10342.8	8582.9	7032.6	6363.2	5681.4	4851.7	4441.2	4303.8	5001.4
50°	12884.9	12694.6	11577.7	9624.0	7864.1	7161.2	6456.5	5327.3	4753.0	4568.0	5373.1
52.5°	13834.4	13690.0	12701.7	10698.7	8729.1	7909.9	7159.4	5880.5	5147.6	4906.3	5811.8
55°	14470.4	14338.3	13498.0	11716.9	9735.0	8734.4	7851.8	6481.2	5623.3	5311.5	6296.2
57.5°	14856.2	14780.5	14074.0	12625.9	10732.1	9636.4	8644.5	7141.8	6183.5	5788.9	6837.1
60°	14993.6	14932.0	14431.6	13492.7	11937.1	10719.8	9576.5	7887.0	6863.5	6331.5	7392.0
62.5°	14627.2	14639.5	14688.9	14519.7	13207.3	11988.2	10693.4	8782.0	7617.5	6946.3	7913.4
65°	12902.5	13004.7	13941.9	15657.8	14889.7	13577.2	12115.0	9874.2	8480.7	7645.7	8327.4
67.5°	10682.8	10830.8	11997.0	16323.7	16683.1	15640.2	14095.2	11265.9	9509.5	8357.4	8484.2
70°	8177.7	8336.2	9749.1	16184.5	18361.9	17895.1	16543.9	13036.4	10575.3	8850.7	8084.3
72.5°	5836.4	5917.5	7030.8	14946.1	19050.8	19431.3	18347.9	14713.5	11119.7	8577.6	6594.0
75°	4101.2	4087.1	4825.2	12035.8	17977.9	19244.5	17715.4	13806.3	10062.7	6814.2	4065.9
77.5°	1786.3	1789.9	2410.0	7309.2	14348.8	16436.4	14725.8	8648.1	7015.0	3611.4	1715.9
80°	463.3	477.4	884.4	2910.3	8639.3	10848.4	8981.0	3801.7	3241.5	880.8	327.7
82.5°	163.8	174.4	406.9	914.3	3186.9	4975.0	3999.0	1215.6	845.6	251.9	88.1
85°	47.6	56.4	218.4	280.1	658.9	1405.8	970.7	236.1	207.9	130.4	22.9
87.5°	0.0	7.0	44.0	38.8	38.8	26.4	49.3	26.4	33.5	15.9	7.0
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°	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0	3097.0
2.5°	3112.9	3100.5	3074.1	3045.9	3019.5	2994.8	2987.8	2961.4	2949.0	2950.8	2949.0
5°	3128.7	3105.8	3054.7	2993.1	2929.7	2857.4	2797.5	2713.0	2640.8	2631.9	2626.7
7.5°	3171.0	3134.0	3051.2	2931.4	2772.9	2573.8	2388.8	2205.6	2101.7	2045.3	2041.8
10°	3236.2	3186.9	3060.0	2831.0	2494.5	2138.7	1858.6	1627.8	1509.8	1455.1	1444.6
12.5°	3313.7	3259.1	3074.1	2660.1	2135.2	1668.3	1365.3	1224.4	1199.7	1196.2	1194.4
15°	3422.9	3363.0	3090.0	2429.4	1745.8	1270.2	1131.0	1132.8	1152.1	1162.7	1160.9
17.5°	3544.5	3484.6	3067.1	2147.5	1361.8	1085.2	1081.7	1097.5	1125.7	1136.3	1134.5
20°	3667.8	3611.4	2986.0	1816.3	1101.0	1034.1	1048.2	1065.8	1094.0	1108.1	1108.1
22.5°	3794.6	3745.3	2857.4	1464.0	993.6	997.1	1014.7	1032.3	1064.1	1079.9	1079.9
25°	3930.3	3888.0	2686.6	1173.3	947.8	958.4	981.3	1002.4	1035.9	1055.2	1055.2
27.5°	4067.7	4036.0	2492.8	979.5	905.5	917.8	944.3	972.4	1005.9	1028.8	1030.6
30°	4217.5	4199.8	2337.7	907.3	865.0	875.6	905.5	937.2	974.2	1002.4	1005.9
32.5°	4370.7	4367.2	2262.0	960.1	828.0	835.0	861.5	893.2	939.0	974.2	977.7
35°	4522.2	4529.3	2217.9	1109.9	815.7	796.3	813.9	842.1	896.7	940.7	947.8
37.5°	4716.0	4733.6	2216.2	1271.9	845.6	757.5	769.9	789.2	836.8	887.9	896.7
40°	5004.9	5098.3	2328.9	1411.1	898.5	722.3	725.8	729.3	754.0	796.3	810.4
42.5°	5389.0	5662.0	2735.9	1506.2	919.6	690.6	678.2	658.9	655.3	678.2	690.6
45°	5866.4	6343.8	3451.1	1559.1	898.5	655.3	621.9	570.8	551.4	567.3	567.3
47.5°	6428.4	7090.7	4298.5	1571.4	863.2	611.3	551.4	484.5	468.6	473.9	472.1
50°	6976.2	7651.0	5043.7	1469.2	805.1	554.9	473.9	417.5	406.9	408.7	408.7
52.5°	7460.7	7843.0	5255.1	1227.9	727.6	486.2	406.9	368.2	361.1	361.1	359.4
55°	7781.3	7635.1	4686.1	939.0	630.7	415.8	348.8	329.4	325.9	324.1	320.6
57.5°	7848.3	6958.6	3539.2	678.2	493.3	350.6	310.1	299.5	292.4	285.4	281.9
60°	7608.7	5831.1	2253.2	473.9	370.0	299.5	274.8	267.8	253.7	239.6	234.3
62.5°	7090.7	4404.2	1247.3	329.4	297.7	255.4	243.1	234.3	207.9	185.0	177.9
65°	6394.9	2927.9	551.4	257.2	243.1	214.9	207.9	195.5	163.8	137.4	132.1
67.5°	5695.5	1685.9	248.4	206.1	195.5	176.2	170.9	162.1	139.2	114.5	111.0
70°	4897.5	854.4	170.9	163.8	151.5	133.9	139.2	137.4	114.5	93.4	89.8
72.5°	3646.7	424.6	128.6	123.3	109.2	95.1	114.5	112.7	89.8	70.5	66.9
75°	2064.7	209.6	93.4	86.3	65.2	70.5	91.6	86.3	61.7	45.8	42.3
77.5°	819.2	107.5	61.7	52.9	38.8	47.6	66.9	58.1	31.7	19.4	17.6
80°	188.5	52.9	31.7	22.9	17.6	28.2	35.2	21.1	8.8	1.8	0.0
82.5°	52.9	22.9	10.6	8.8	8.8	10.6	8.8	3.5	0.0	0.0	0.0
85°	17.6	10.6	3.5	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0
87.5°	7.0	3.5	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)