

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: P884158

Luminaire Tested: **NAV-SB4D-830-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884158
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-830-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 28300 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G4

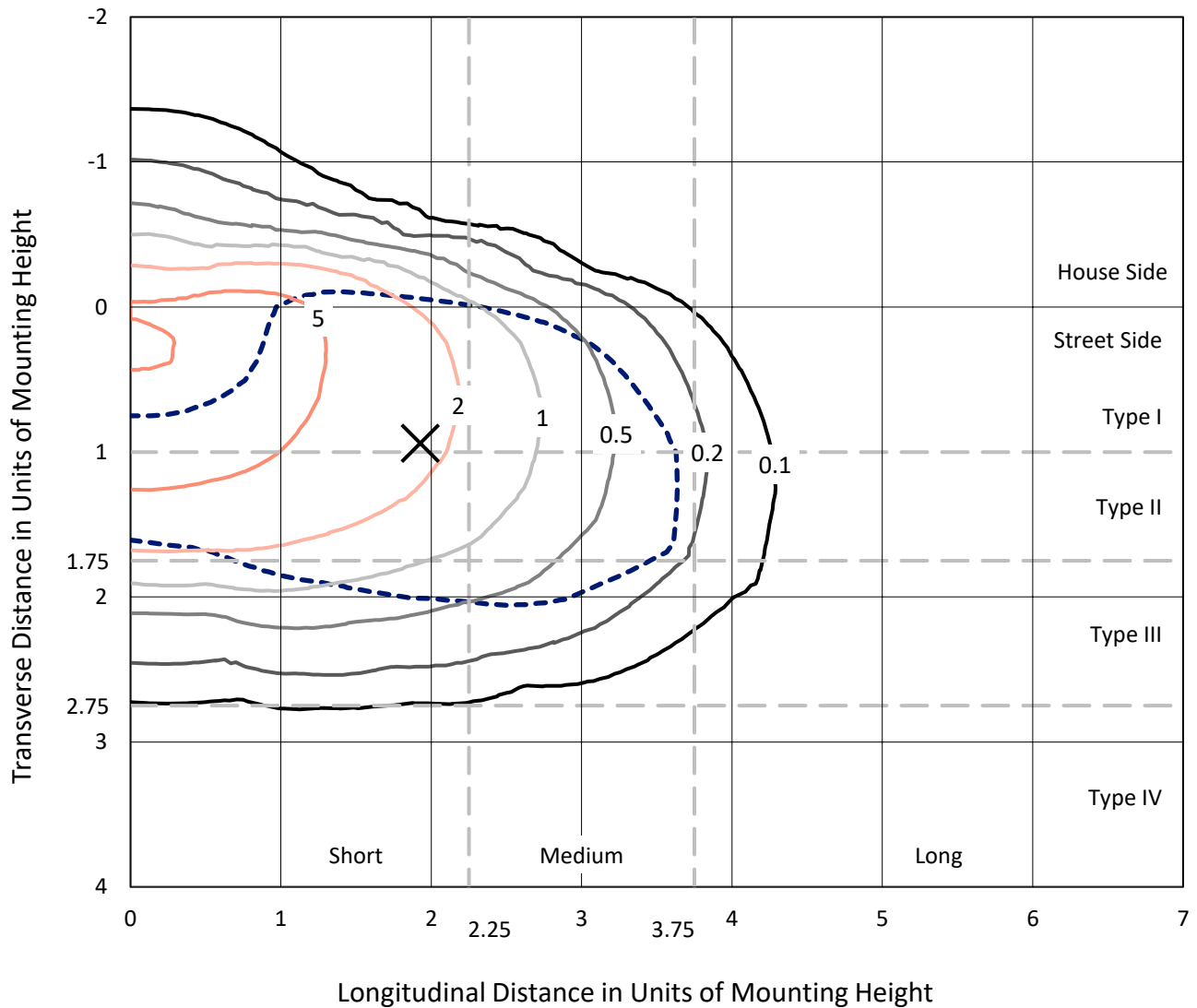
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

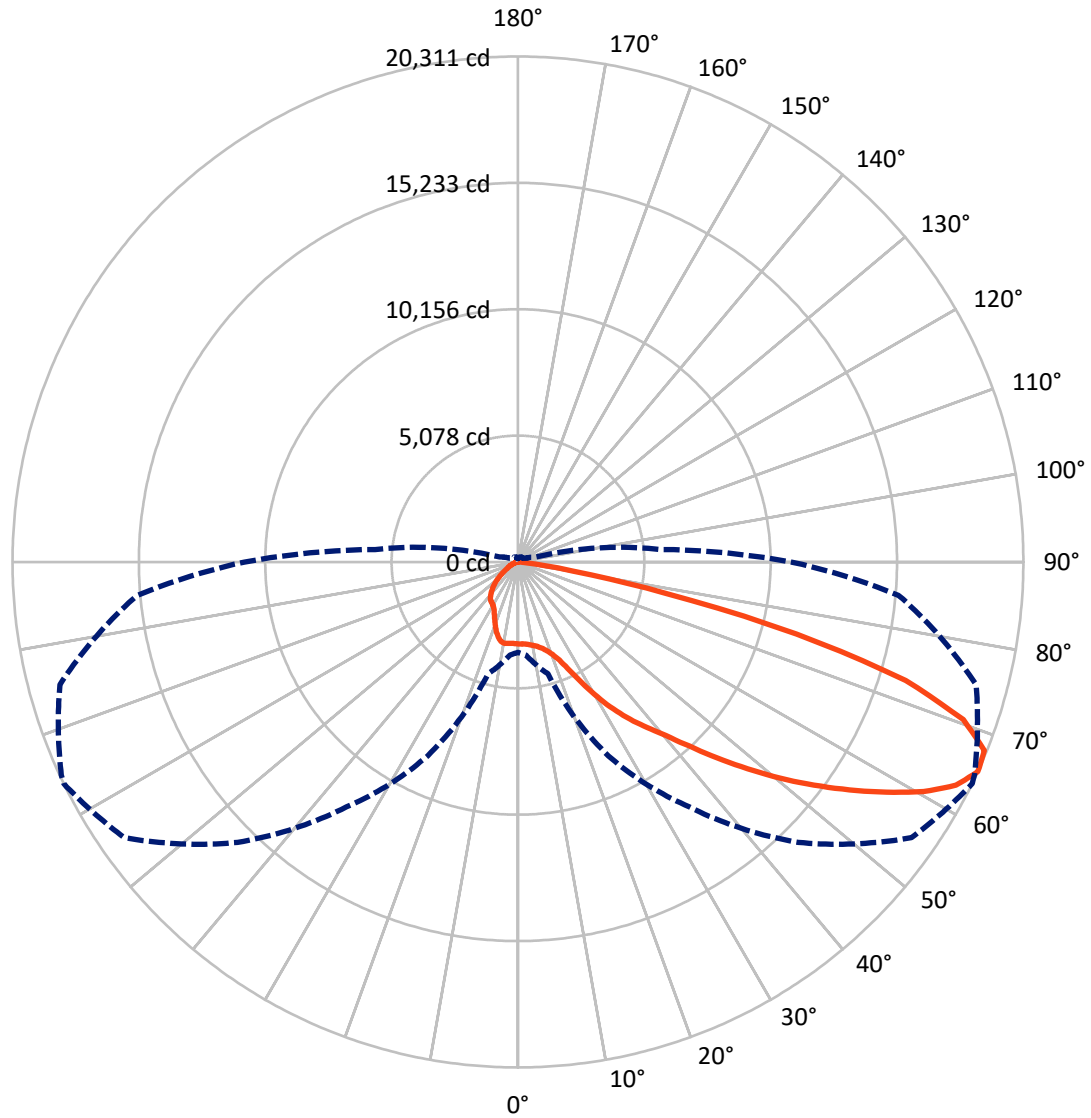
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 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	3784.6	0.0	3784.6
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	24515.4	0.0	24515.4
	% Fixture	86.6	0.0	86.6
Total	Lumens	28300.0	0.0	28300.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.7	1.1
10°-20°	823.7	2.9
20°-30°	1560.8	5.5
30°-40°	3158.3	11.2
40°-50°	5380.2	19.0
50°-60°	7316.6	25.9
60°-70°	6870.7	24.3
70°-80°	2752.7	9.7
80°-90°	133.4	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°	28300.0	100.0
0°-180°	28300.0	100.0

Coefficient of Utilization



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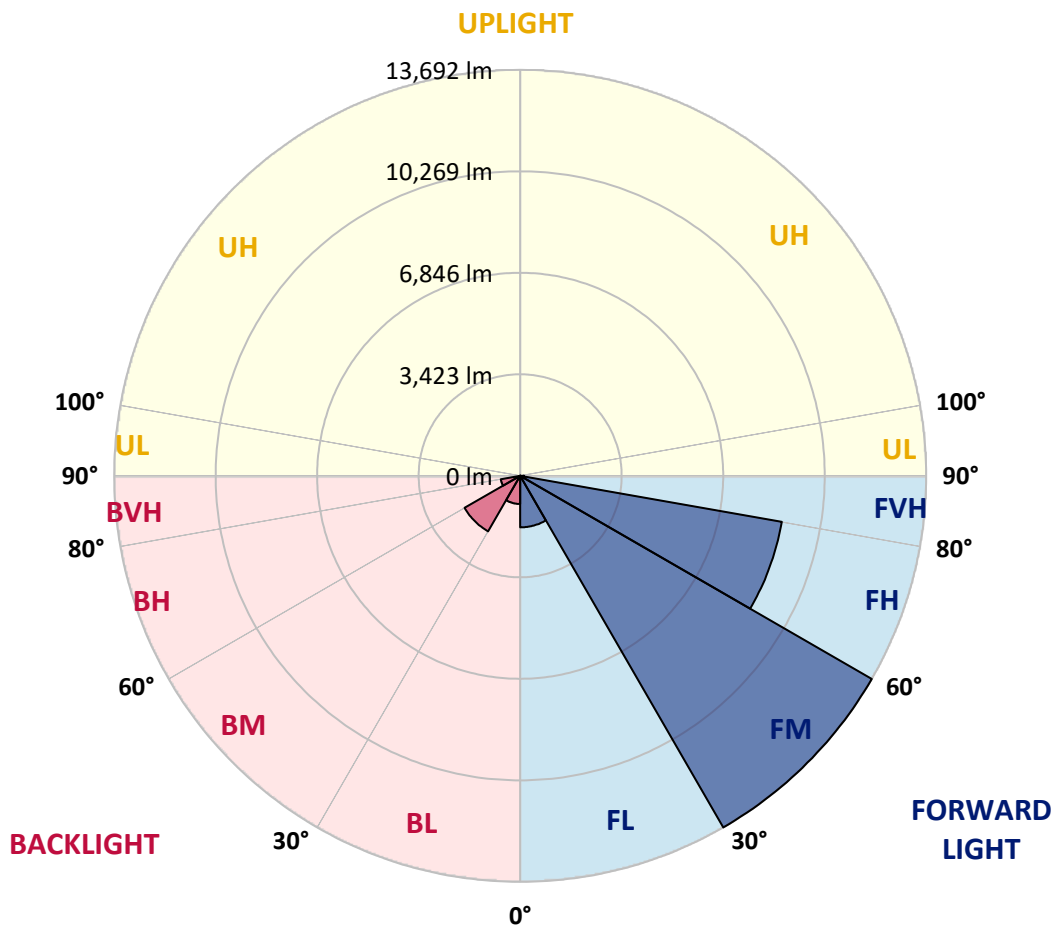
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1737.9	6.1			
FM (30°-60°)	13691.5	48.4			
FH (60°-80°)	8959.1	31.7			G4/12000
FVH (80°-90°)	126.8	0.4			G2/225
BL (0°-30°)	950.2	3.4	B2/1000		
BM (30°-60°)	2163.6	7.6	B2/2500		
BH (60°-80°)	664.3	2.3	B2/1000		G2/1000
BVH (80°-90°)	6.5	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°	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6
2.5°	3280.2	3303.0	3297.3	3291.6	3289.7	3293.5	3295.4	3293.5	3293.5	3293.5	3295.4
5°	3217.6	3236.6	3236.6	3249.8	3268.8	3291.6	3308.7	3312.5	3316.2	3321.9	3320.0
7.5°	3098.1	3113.3	3124.6	3168.3	3215.7	3276.4	3327.6	3354.2	3358.0	3378.9	3386.4
10°	3016.5	3035.5	3054.4	3100.0	3168.3	3259.3	3346.6	3411.1	3420.6	3469.9	3492.7
12.5°	3012.7	3031.7	3056.3	3105.7	3185.3	3282.1	3388.3	3481.3	3498.4	3570.5	3617.9
15°	3052.5	3075.3	3098.1	3158.8	3244.2	3361.8	3475.6	3591.3	3608.4	3710.9	3762.1
17.5°	3134.1	3164.5	3181.5	3242.3	3333.3	3464.2	3614.1	3746.9	3762.1	3881.6	3946.1
20°	3295.4	3331.4	3337.1	3386.4	3475.6	3616.0	3794.3	3959.4	3978.4	4115.0	4187.0
22.5°	3629.3	3680.5	3635.0	3659.6	3739.3	3879.7	4073.2	4281.9	4308.5	4464.0	4528.5
25°	4217.4	4289.5	4171.9	4130.1	4164.3	4310.4	4553.2	4816.9	4847.3	4972.5	5004.7
27.5°	5372.8	5279.8	5101.5	4926.9	4824.5	4908.0	5181.2	5507.5	5545.4	5666.8	5628.9
30°	6642.0	6560.4	6319.5	5932.4	5689.6	5676.3	5928.6	6292.9	6336.5	6452.3	6336.5
32.5°	7913.1	7835.3	7573.5	7097.3	6676.1	6467.4	6642.0	7046.1	7068.8	7142.8	6972.1
35°	9163.3	9083.6	8821.8	8334.3	7816.3	7342.0	7307.9	7763.2	7770.8	7848.6	7594.4
37.5°	10421.1	10354.7	10075.9	9597.8	9087.4	8432.9	8116.1	8442.4	8451.9	8527.8	8264.1
40°	11318.5	11347.0	11155.3	10785.4	10347.1	9631.9	9022.9	9165.2	9108.3	9235.4	9077.9
42.5°	12088.7	12145.7	11978.7	11792.8	11538.6	10908.7	10146.0	10121.4	10030.3	10098.6	9935.5
45°	12754.7	12802.1	12652.2	12608.6	12602.9	12160.8	11373.5	11225.5	11098.4	11085.1	10889.7
47.5°	12999.4	13090.4	13155.0	13301.0	13585.6	13399.7	12642.7	12413.2	12270.9	12166.5	11857.3
50°	13092.3	13189.1	13409.2	13834.1	14507.6	14587.3	13906.2	13648.2	13473.7	13284.0	12828.6
52.5°	12967.1	13139.8	13435.7	14151.0	15128.0	15539.7	15118.5	14892.8	14693.6	14384.3	13708.9
55°	12229.1	12401.8	13007.0	14147.2	15437.2	16207.5	16264.4	16163.9	15940.0	15452.4	14420.4
57.5°	10673.5	10929.6	11887.6	13665.3	15431.6	16782.3	17387.5	17459.6	17209.2	16511.0	14980.0
60°	8518.3	8865.5	10034.1	12597.2	14955.4	17093.5	18372.2	18732.6	18467.0	17554.5	15433.4
62.5°	5943.8	6346.0	7452.1	10923.9	13866.4	16869.6	19091.2	19757.1	19556.0	18487.9	15608.0
65°	3625.5	3754.5	4646.2	8596.1	12014.8	15932.4	19313.2	20311.1	20244.7	19058.9	15350.0
67.5°	2415.1	2523.2	2779.3	5894.5	9326.5	14059.9	18781.9	20214.3	20233.3	18966.0	14405.2
70°	1455.1	1548.1	1715.0	3428.2	6044.4	11128.8	17137.1	18981.2	19091.2	17723.3	12614.3
72.5°	599.5	662.1	813.9	1553.8	3130.3	7063.2	13646.3	16296.7	16552.8	14902.2	9681.2
75°	339.6	371.8	478.1	779.7	1358.4	3291.6	8266.0	11568.9	11946.5	10271.3	5824.3
77.5°	225.8	240.9	309.2	504.6	764.6	1123.1	3532.5	6027.3	6748.2	5609.9	2521.3
80°	151.8	165.1	212.5	337.7	497.1	481.9	1125.0	2233.0	2747.1	1927.5	614.7
82.5°	102.4	104.3	151.8	222.0	314.9	233.4	332.0	694.4	872.7	557.8	233.4
85°	58.8	56.9	111.9	129.0	140.4	96.8	100.5	208.7	273.2	235.2	132.8
87.5°	7.6	11.4	43.6	34.1	19.0	20.9	20.9	36.0	53.1	56.9	28.5
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°	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6	3291.6
2.5°	3295.4	3293.5	3287.8	3282.1	3268.8	3261.2	3265.0	3261.2	3259.3	3261.2	3268.8
5°	3320.0	3314.3	3299.2	3280.2	3253.6	3221.4	3200.5	3170.2	3141.7	3124.6	3128.4
7.5°	3386.4	3380.8	3359.9	3306.8	3221.4	3086.7	2963.4	2855.2	2773.7	2726.2	2728.1
10°	3492.7	3483.2	3450.9	3333.3	3109.5	2815.4	2570.7	2367.7	2234.9	2172.3	2166.6
12.5°	3617.9	3606.5	3549.6	3308.7	2897.0	2437.9	2100.2	1874.4	1751.1	1696.1	1690.4
15°	3765.9	3750.7	3638.8	3191.0	2587.7	2020.5	1711.2	1542.4	1462.7	1413.4	1415.3
17.5°	3949.9	3923.3	3705.2	3014.6	2251.9	1701.8	1472.2	1345.1	1274.9	1227.5	1223.7
20°	4188.9	4145.3	3758.3	2804.0	1942.7	1500.7	1310.9	1204.7	1151.6	1109.8	1102.3
22.5°	4522.8	4460.2	3822.8	2576.4	1724.5	1362.2	1191.4	1113.6	1070.0	1022.6	1015.0
25°	4936.4	4862.4	3902.5	2365.8	1574.6	1242.6	1104.2	1039.6	988.4	933.4	927.7
27.5°	5515.1	5382.3	3997.3	2193.1	1445.6	1140.2	1024.5	952.4	893.6	848.0	838.5
30°	6160.1	5941.9	4080.8	2088.8	1328.0	1045.3	920.1	848.0	793.0	760.8	755.1
32.5°	6771.0	6475.0	4135.8	2043.2	1221.8	937.2	806.3	728.5	686.8	677.3	683.0
35°	7347.7	6956.9	4130.1	1999.6	1126.9	829.1	694.4	614.7	582.4	588.1	588.1
37.5°	8011.7	7471.0	4090.3	1931.3	1049.1	730.4	597.6	527.4	499.0	500.9	508.4
40°	8783.9	8064.9	4065.6	1802.3	963.8	639.3	517.9	461.0	440.1	432.6	430.7
42.5°	9607.3	8639.7	4069.4	1656.2	857.5	557.8	462.9	415.5	396.5	390.8	388.9
45°	10434.4	9188.0	4075.1	1504.5	745.6	495.2	423.1	383.2	371.8	364.3	364.3
47.5°	11212.3	9654.7	3968.9	1341.3	635.6	447.7	390.8	364.3	354.8	345.3	345.3
50°	11937.0	9965.8	3712.8	1151.6	548.3	409.8	366.2	347.2	337.7	328.2	328.2
52.5°	12500.4	10015.1	3289.7	956.2	487.6	381.3	351.0	333.9	322.5	313.0	311.1
55°	12750.9	9705.9	2688.3	774.0	440.1	356.7	335.8	318.7	305.4	296.0	294.1
57.5°	12686.4	9055.2	2096.4	622.3	394.6	332.0	316.8	305.4	290.3	275.1	273.2
60°	12369.5	8184.4	1580.3	517.9	352.9	305.4	296.0	286.5	265.6	242.8	239.0
62.5°	11821.2	7089.7	1126.9	428.8	307.3	275.1	271.3	263.7	233.4	191.6	187.8
65°	10982.7	5759.8	758.9	356.7	263.7	240.9	242.8	229.6	189.7	142.3	138.5
67.5°	9757.1	4211.7	485.7	292.2	220.1	201.1	203.0	195.4	161.3	121.4	115.7
70°	8195.8	2788.8	316.8	222.0	176.4	155.6	167.0	168.8	136.6	98.7	94.9
72.5°	6008.3	1646.7	222.0	165.1	129.0	108.1	136.6	140.4	110.0	74.0	70.2
75°	3424.4	781.6	167.0	119.5	79.7	75.9	106.2	106.2	75.9	49.3	45.5
77.5°	1438.1	326.3	117.6	77.8	45.5	43.6	72.1	66.4	37.9	22.8	22.8
80°	415.5	146.1	62.6	37.9	19.0	17.1	28.5	20.9	9.5	3.8	3.8
82.5°	163.2	64.5	24.7	15.2	7.6	7.6	3.8	0.0	0.0	0.0	0.0
85°	96.8	26.6	11.4	5.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	24.7	5.7	3.8	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)