

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: P884088

Luminaire Tested: **NAV-SB4D-727-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884088
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-727-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 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: 29311 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G4

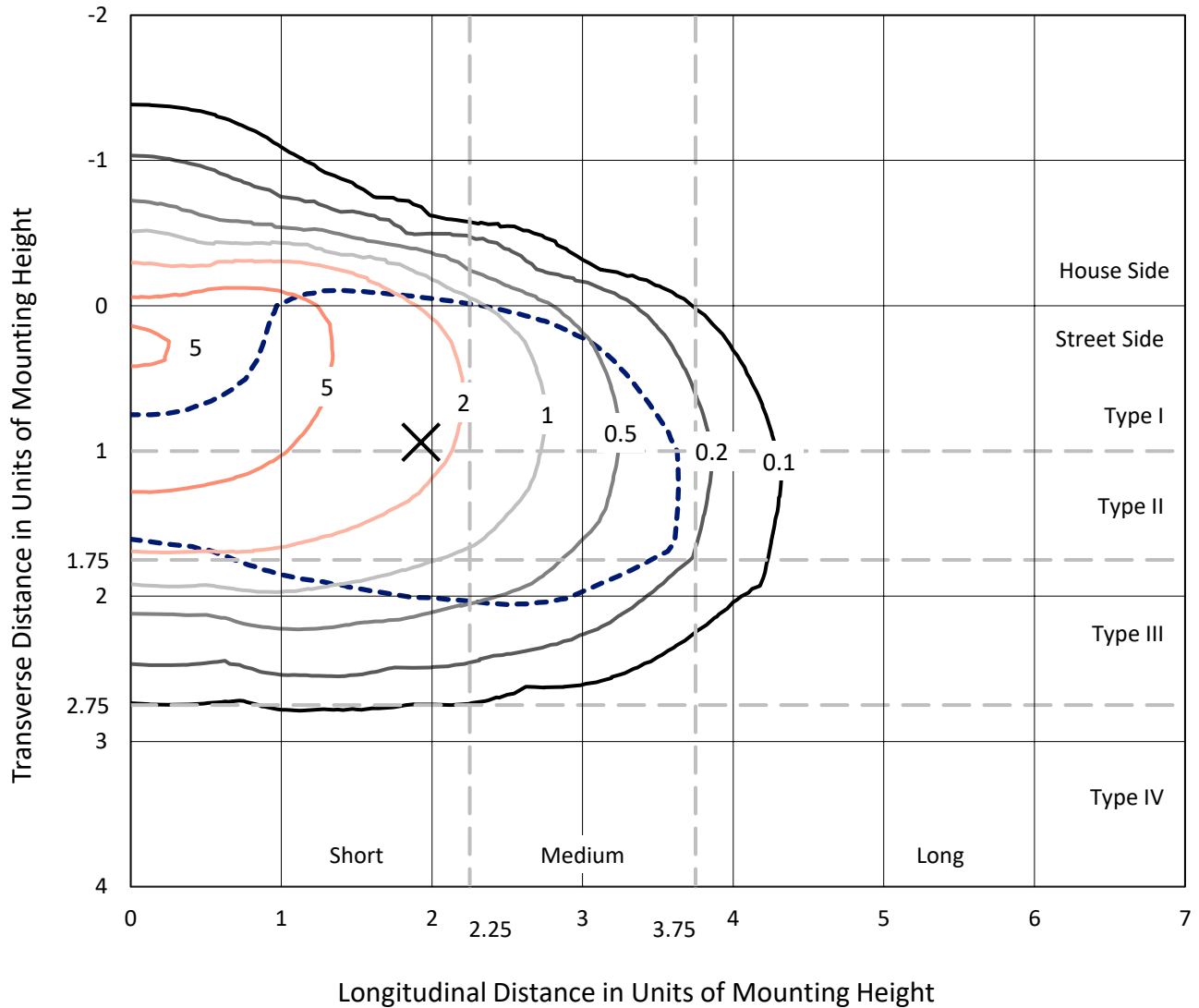
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

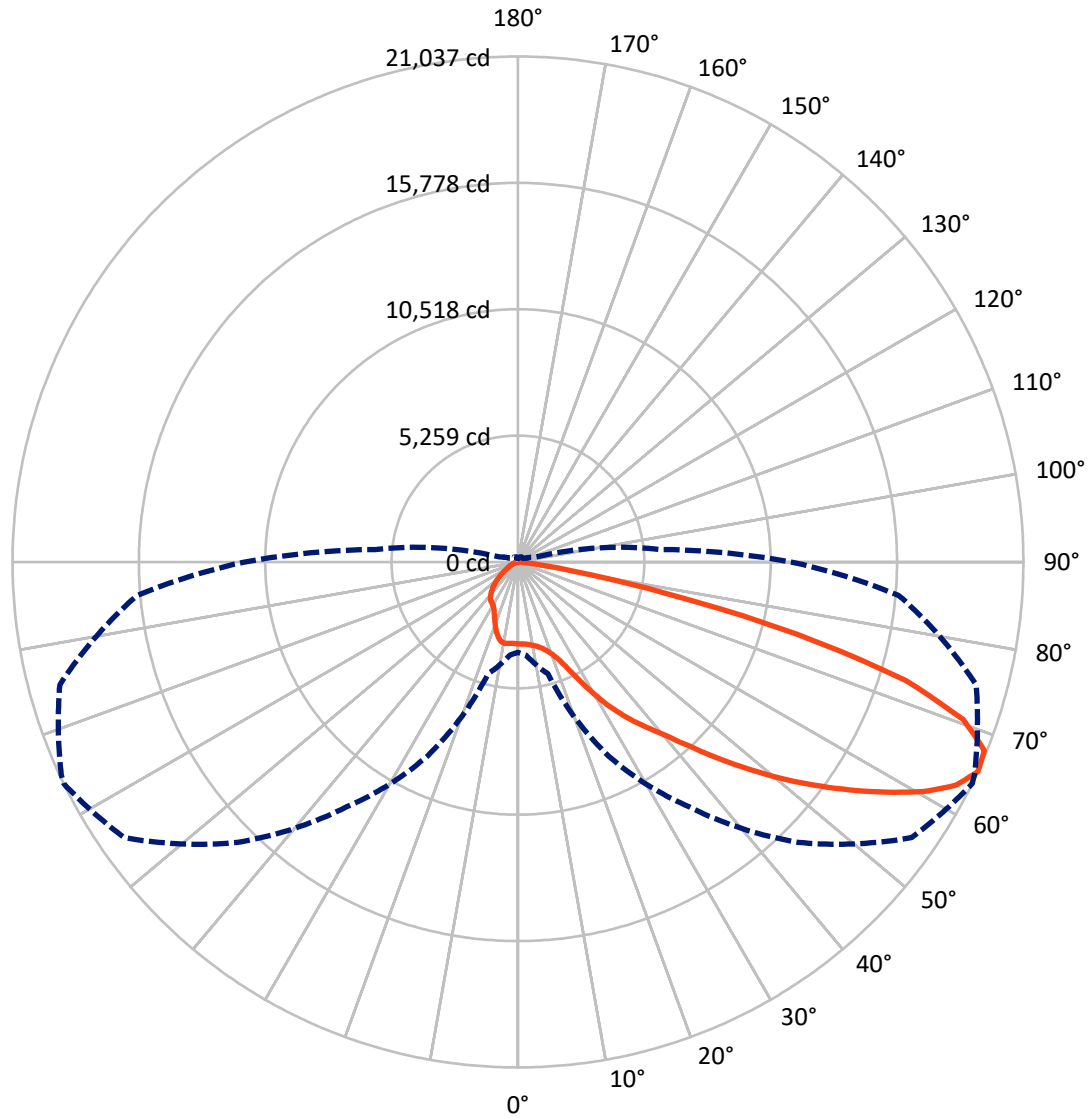
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.6 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	3919.8	0.0	3919.8
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	25391.2	0.0	25391.2
	% Fixture	86.6	0.0	86.6
Total	Lumens	29311.0	0.0	29311.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.5	1.1
10°-20°	853.1	2.9
20°-30°	1616.5	5.5
30°-40°	3271.1	11.2
40°-50°	5572.4	19.0
50°-60°	7578.0	25.9
60°-70°	7116.1	24.3
70°-80°	2851.0	9.7
80°-90°	138.1	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°	29311.0	100.0
0°-180°	29311.0	100.0

Coefficient of Utilization



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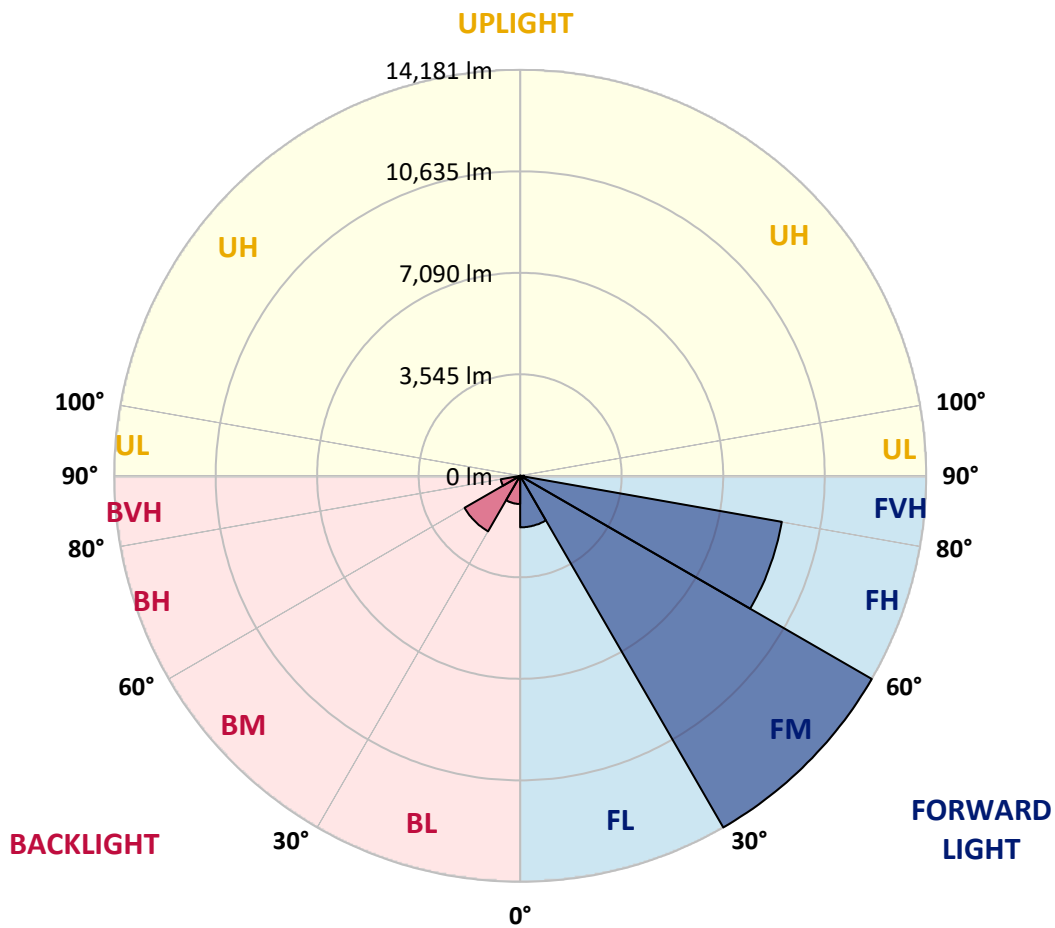
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1800.0	6.1			
FM (30°-60°)	14180.6	48.4			
FH (60°-80°)	9279.2	31.7			G4/12000
FVH (80°-90°)	131.4	0.4			G2/225
BL (0°-30°)	984.1	3.4	B2/1000		
BM (30°-60°)	2240.9	7.6	B2/2500		
BH (60°-80°)	688.0	2.3	B2/1000		G2/1000
BVH (80°-90°)	6.7	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°	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2
2.5°	3397.4	3421.0	3415.1	3409.2	3407.2	3411.1	3413.1	3411.1	3411.1	3411.1	3413.1
5°	3332.5	3352.2	3352.2	3365.9	3385.6	3409.2	3426.9	3430.8	3434.7	3440.6	3438.6
7.5°	3208.7	3224.5	3236.3	3281.5	3330.6	3393.5	3446.5	3474.0	3477.9	3499.6	3507.4
10°	3124.3	3143.9	3163.6	3210.7	3281.5	3375.8	3466.2	3533.0	3542.8	3593.9	3617.5
12.5°	3120.3	3140.0	3165.5	3216.6	3299.1	3399.3	3509.4	3605.7	3623.4	3698.0	3747.1
15°	3161.6	3185.2	3208.7	3271.6	3360.1	3481.9	3599.8	3719.6	3737.3	3843.4	3896.5
17.5°	3246.1	3277.5	3295.2	3358.1	3452.4	3588.0	3743.2	3880.8	3896.5	4020.3	4087.1
20°	3413.1	3450.4	3456.3	3507.4	3599.8	3745.2	3929.9	4100.8	4120.5	4262.0	4336.6
22.5°	3758.9	3812.0	3764.8	3790.4	3872.9	4018.3	4218.7	4434.9	4462.4	4623.5	4690.3
25°	4368.1	4442.7	4320.9	4277.7	4313.0	4464.3	4715.9	4989.0	5020.4	5150.1	5183.5
27.5°	5564.7	5468.4	5283.7	5103.0	4996.8	5083.3	5366.3	5704.2	5743.5	5869.3	5830.0
30°	6879.3	6794.8	6545.2	6144.4	5892.9	5879.1	6140.4	6517.7	6562.9	6682.8	6562.9
32.5°	8195.8	8115.2	7844.0	7350.8	6914.6	6698.5	6879.3	7297.8	7321.4	7398.0	7221.2
35°	9490.7	9408.1	9137.0	8632.0	8095.6	7604.3	7569.0	8040.5	8048.4	8129.0	7865.7
37.5°	10793.4	10724.7	10435.8	9940.6	9412.1	8734.2	8406.0	8744.0	8753.8	8832.4	8559.3
40°	11722.8	11752.3	11553.9	11170.7	10716.8	9976.0	9345.3	9492.6	9433.7	9565.3	9402.2
42.5°	12520.6	12579.6	12406.6	12214.1	11950.8	11298.4	10508.5	10483.0	10388.6	10459.4	10290.4
45°	13210.3	13259.4	13104.2	13059.0	13053.1	12595.3	11779.8	11626.6	11494.9	11481.2	11278.8
47.5°	13463.8	13558.1	13624.9	13776.2	14070.9	13878.4	13094.4	12856.6	12709.2	12601.2	12280.9
50°	13560.1	13660.3	13888.2	14328.4	15025.9	15108.4	14403.0	14135.8	13955.0	13758.5	13286.9
52.5°	13430.4	13609.2	13915.7	14656.5	15668.4	16094.8	15658.6	15424.8	15218.5	14898.2	14198.7
55°	12666.0	12844.8	13471.6	14652.6	15988.7	16786.5	16845.4	16741.3	16509.4	16004.4	14935.5
57.5°	11054.8	11320.0	12312.3	14153.5	15982.8	17381.9	18008.7	18083.4	17824.0	17100.9	15515.2
60°	8822.6	9182.2	10392.6	13047.2	15489.6	17704.1	19028.5	19401.8	19126.7	18181.6	15984.8
62.5°	6156.2	6572.7	7718.3	11314.1	14361.8	17472.3	19773.2	20462.9	20254.6	19148.4	16165.6
65°	3755.0	3888.6	4812.1	8903.2	12444.0	16501.6	20003.1	21036.7	20967.9	19739.8	15898.3
67.5°	2501.4	2613.4	2878.6	6105.1	9659.7	14562.2	19452.9	20936.5	20956.1	19643.5	14919.8
70°	1507.1	1603.4	1776.3	3550.6	6260.3	11526.3	17749.3	19659.2	19773.2	18356.5	13064.9
72.5°	620.9	685.8	843.0	1609.3	3242.2	7315.5	14133.8	16878.8	17144.1	15434.6	10027.1
75°	351.7	385.1	495.2	807.6	1406.9	3409.2	8561.3	11982.2	12373.2	10638.2	6032.4
77.5°	233.8	249.5	320.3	522.7	791.9	1163.2	3658.7	6242.6	6989.3	5810.3	2611.4
80°	157.2	170.9	220.1	349.8	514.8	499.1	1165.2	2312.7	2845.2	1996.4	636.6
82.5°	106.1	108.1	157.2	229.9	326.2	241.7	343.9	719.2	903.9	577.7	241.7
85°	60.9	58.9	115.9	133.6	145.4	100.2	104.1	216.1	283.0	243.7	137.5
87.5°	7.9	11.8	45.2	35.4	19.6	21.6	21.6	37.3	55.0	58.9	29.5
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°	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2	3409.2
2.5°	3413.1	3411.1	3405.2	3399.3	3385.6	3377.7	3381.7	3377.7	3375.8	3377.7	3385.6
5°	3438.6	3432.8	3417.0	3397.4	3369.9	3336.5	3314.9	3283.4	3253.9	3236.3	3240.2
7.5°	3507.4	3501.5	3479.9	3424.9	3336.5	3197.0	3069.2	2957.2	2872.7	2823.6	2825.6
10°	3617.5	3607.6	3574.2	3452.4	3220.5	2916.0	2662.5	2452.2	2314.7	2249.9	2244.0
12.5°	3747.1	3735.4	3676.4	3426.9	3000.5	2524.9	2175.2	1941.4	1813.6	1756.7	1750.8
15°	3900.4	3884.7	3768.8	3305.0	2680.2	2092.7	1772.4	1597.5	1515.0	1463.9	1465.8
17.5°	4091.0	4063.5	3837.5	3122.3	2332.4	1762.6	1524.8	1393.1	1320.4	1271.3	1267.4
20°	4338.6	4293.4	3892.5	2904.2	2012.1	1554.3	1357.8	1247.7	1192.7	1149.5	1141.6
22.5°	4684.4	4619.6	3959.4	2668.4	1786.1	1410.8	1234.0	1153.4	1108.2	1059.1	1051.2
25°	5112.8	5036.1	4041.9	2450.3	1630.9	1287.0	1143.6	1076.8	1023.7	966.8	960.9
27.5°	5712.1	5574.5	4140.1	2271.5	1497.3	1180.9	1061.1	986.4	925.5	878.3	868.5
30°	6380.2	6154.2	4226.6	2163.4	1375.5	1082.7	953.0	878.3	821.3	787.9	782.0
32.5°	7012.9	6706.3	4283.6	2116.2	1265.4	970.7	835.1	754.5	711.3	701.5	707.4
35°	7610.2	7205.4	4277.7	2071.0	1167.2	858.7	719.2	636.6	603.2	609.1	609.1
37.5°	8297.9	7737.9	4236.4	2000.3	1086.6	756.5	619.0	546.3	516.8	518.7	526.6
40°	9097.7	8353.0	4210.9	1866.7	998.2	662.2	536.4	477.5	455.9	448.0	446.0
42.5°	9950.5	8948.3	4214.8	1715.4	888.2	577.7	479.4	430.3	410.7	404.8	402.8
45°	10807.2	9516.2	4220.7	1558.2	772.2	512.8	438.2	396.9	385.1	377.3	377.3
47.5°	11612.8	9999.6	4110.7	1389.2	658.3	463.7	404.8	377.3	367.4	357.6	357.6
50°	12363.4	10321.8	3845.4	1192.7	567.9	424.4	379.2	359.6	349.8	339.9	339.9
52.5°	12947.0	10372.9	3407.2	990.3	505.0	395.0	363.5	345.8	334.0	324.2	322.3
55°	13206.4	10052.6	2784.3	801.7	455.9	369.4	347.8	330.1	316.4	306.5	304.6
57.5°	13139.6	9378.7	2171.3	644.5	408.7	343.9	328.1	316.4	300.6	284.9	283.0
60°	12811.4	8476.8	1636.8	536.4	365.5	316.4	306.5	296.7	275.1	251.5	247.6
62.5°	12243.6	7343.0	1167.2	444.1	318.3	284.9	281.0	273.1	241.7	198.5	194.5
65°	11375.0	5965.6	786.0	369.4	273.1	249.5	251.5	237.8	196.5	147.4	143.4
67.5°	10105.7	4362.2	503.0	302.6	227.9	208.3	210.2	202.4	167.0	125.8	119.9
70°	8488.5	2888.5	328.1	229.9	182.7	161.1	172.9	174.9	141.5	102.2	98.2
72.5°	6223.0	1705.6	229.9	170.9	133.6	112.0	141.5	145.4	114.0	76.6	72.7
75°	3546.7	809.6	172.9	123.8	82.5	78.6	110.0	110.0	78.6	51.1	47.2
77.5°	1489.4	338.0	121.8	80.6	47.2	45.2	74.7	68.8	39.3	23.6	23.6
80°	430.3	151.3	64.8	39.3	19.6	17.7	29.5	21.6	9.8	3.9	3.9
82.5°	169.0	66.8	25.5	15.7	7.9	7.9	3.9	0.0	0.0	0.0	0.0
85°	100.2	27.5	11.8	5.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	25.5	5.9	3.9	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)