

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: P965638

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

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-740-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16622.4 lumens
Efficiency: N/A
Efficacy: 145.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

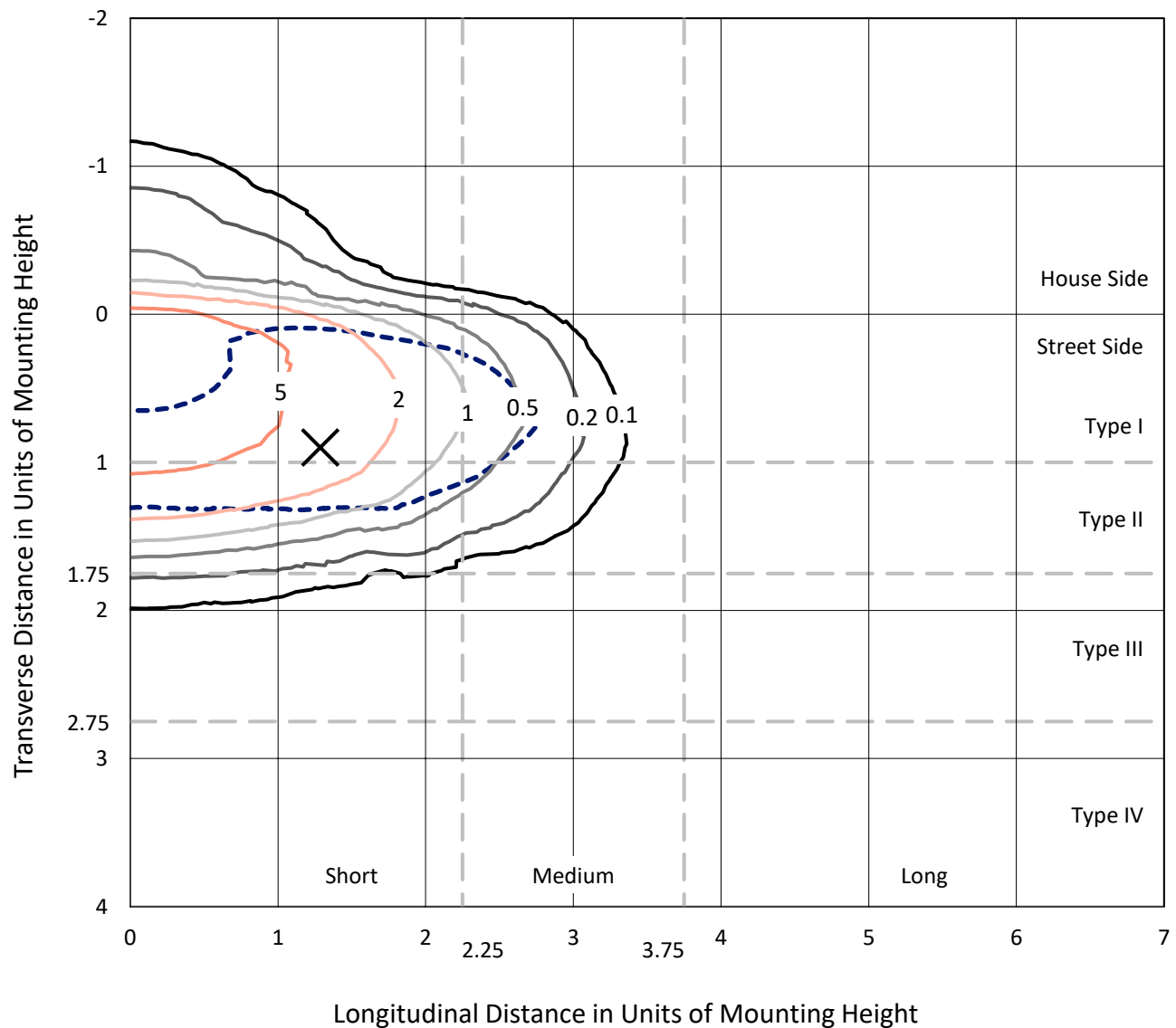
Input Watts (W): 114
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

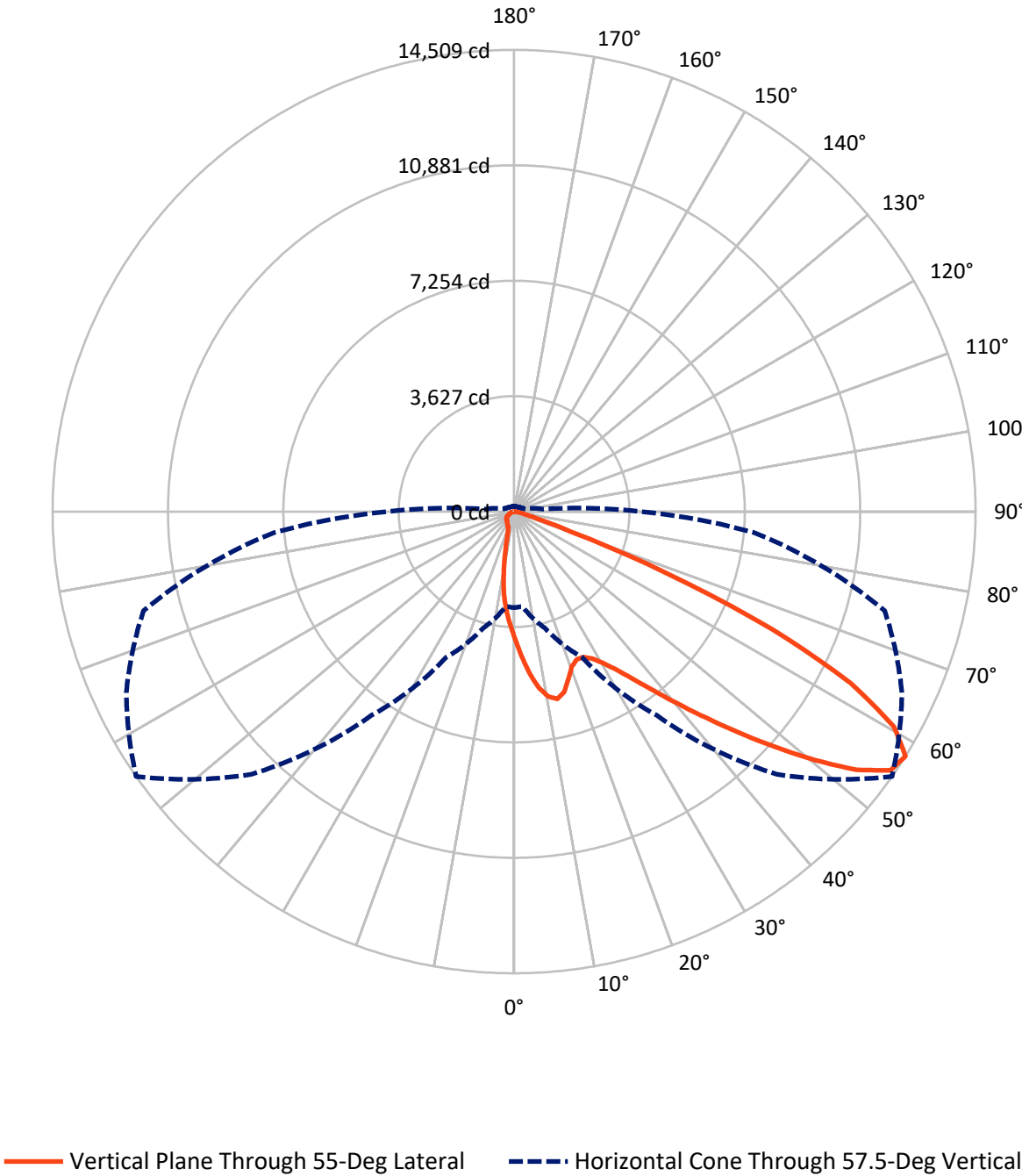
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.2 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1298.1	0.0	1298.1
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	15324.3	0.0	15324.3
	% Fixture	92.2	0.0	92.2
Total	Lumens	16622.4	0.0	16622.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.7	2.2
10°-20°	900.3	5.4
20°-30°	1440.4	8.7
30°-40°	2437.9	14.7
40°-50°	4002.6	24.1
50°-60°	4399.2	26.5
60°-70°	2523.4	15.2
70°-80°	515.6	3.1
80°-90°	30.4	0.2
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°	16622.4	100.0
0°-180°	16622.4	100.0

Coefficient of Utilization



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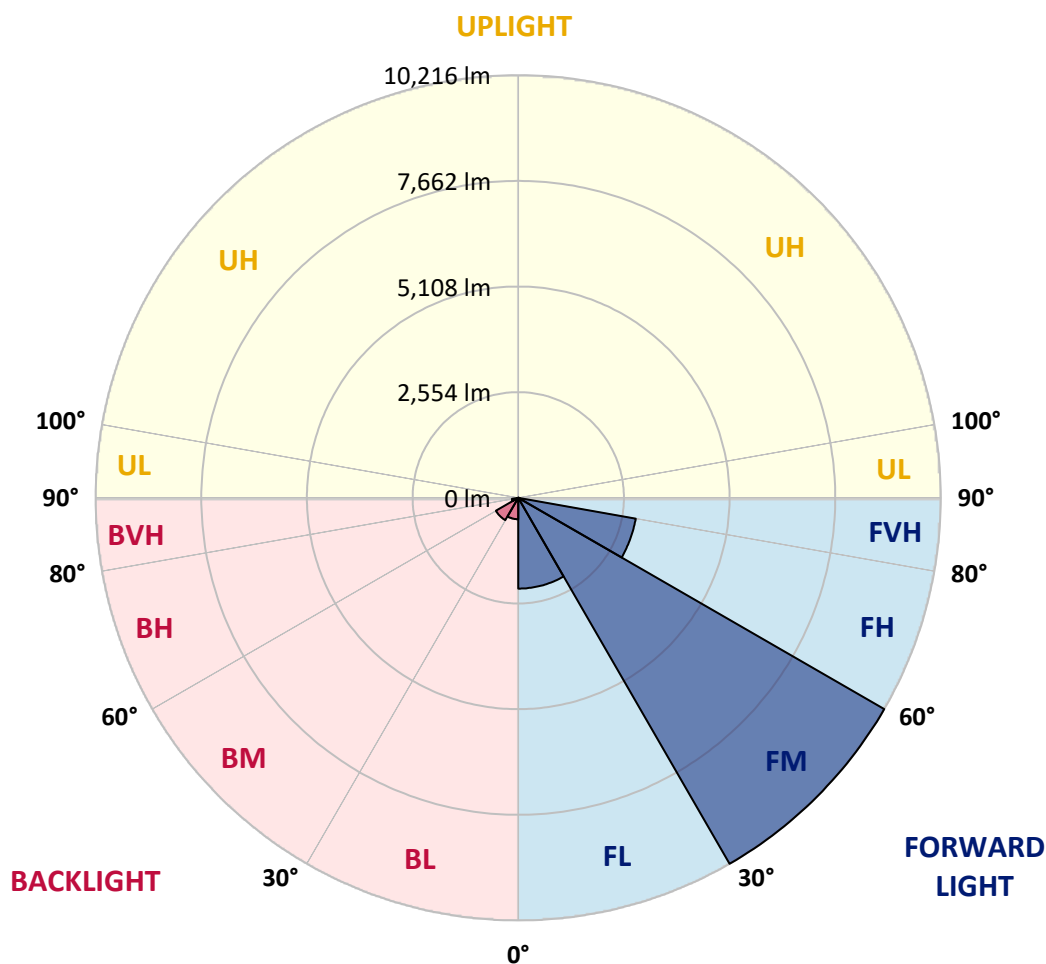
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2195.1	13.2			
FM	(30°-60°)	10216.2	61.5			
FH	(60°-80°)	2884.6	17.4			G2/5000
FVH	(80°-90°)	28.4	0.2			G1/100
BL	(0°-30°)	518.3	3.1	B2/1000		
BM	(30°-60°)	623.5	3.8	B1/1000		
BH	(60°-80°)	154.4	0.9	B1/500		G1/500
BVH	(80°-90°)	2.1	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-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6
2.5°	4970.1	4907.6	4898.4	4886.1	4767.2	4678.0	4548.8	4407.4	4248.5	4086.6	4014.8
5°	5741.9	5692.7	5683.5	5626.1	5490.8	5339.1	5109.5	4819.4	4523.2	4174.7	4025.1
7.5°	5891.5	5882.3	5924.3	5922.2	5903.8	5784.0	5590.2	5244.8	4800.0	4283.4	4051.7
10°	5224.3	5247.9	5372.9	5482.6	5778.8	5950.9	5908.9	5624.1	5084.9	4407.4	4081.4
12.5°	4616.5	4588.8	4678.0	4802.0	5146.4	5658.9	6041.1	5940.7	5410.9	4547.8	4125.5
15°	4235.2	4223.9	4274.1	4331.5	4593.9	5110.5	5887.4	6198.0	5724.5	4713.9	4192.1
17.5°	4113.2	4104.0	4119.4	4133.7	4303.9	4703.6	5521.6	6355.8	6024.7	4903.5	4265.9
20°	4212.6	4200.3	4198.3	4187.0	4257.7	4530.4	5190.5	6367.1	6294.3	5075.7	4329.5
22.5°	4502.7	4488.4	4438.1	4393.0	4399.2	4554.0	5042.9	6254.3	6497.3	5236.6	4369.5
25°	5028.5	5005.0	4900.4	4748.7	4652.4	4718.0	5065.4	6105.7	6691.0	5362.7	4350.0
27.5°	5686.6	5655.8	5521.6	5296.1	5075.7	4995.7	5228.4	6003.2	6851.9	5459.0	4308.0
30°	6331.2	6291.2	6159.0	5983.7	5662.0	5409.8	5522.6	6048.3	7043.6	5559.5	4252.6
32.5°	7027.2	6989.3	6814.0	6596.7	6330.2	5990.9	5925.3	6268.7	7278.3	5699.9	4213.7
35°	7907.7	7848.2	7599.1	7302.9	7020.0	6676.6	6470.6	6649.0	7590.9	5914.0	4235.2
37.5°	8910.1	8830.2	8561.6	8152.6	7783.6	7399.3	7134.8	7171.7	8049.1	6201.0	4301.8
40°	9855.1	9782.3	9534.3	9148.9	8685.6	8219.3	7937.4	7855.4	8681.5	6550.6	4418.7
42.5°	10421.9	10356.3	10251.7	10088.8	9698.3	9222.7	8867.1	8689.7	9429.8	6968.8	4561.1
45°	10453.7	10396.3	10536.7	10726.3	10649.4	10332.7	9899.1	9574.3	10181.0	7361.3	4708.7
47.5°	9945.3	9906.3	10332.7	10994.9	11324.9	11458.2	11058.4	10385.0	10801.1	7643.2	4769.2
50°	8559.6	8545.2	9422.6	10638.2	11582.2	12444.2	12281.2	11139.4	11281.9	7788.8	4711.8
52.5°	7421.8	7369.5	7881.0	9496.4	11208.1	12962.9	13476.4	11879.4	11618.1	7816.4	4577.5
55°	5629.2	5583.1	6224.6	7585.8	10001.6	12778.4	14350.6	12643.1	11858.9	7745.7	4336.7
57.5°	3019.5	2990.8	3801.6	5049.0	7818.5	11671.4	14508.5	13450.8	12061.9	7558.1	3999.4
60°	1175.7	1170.6	1473.9	2449.6	4751.8	9495.4	13712.0	13935.5	12189.0	7327.5	3717.6
62.5°	711.3	726.7	775.9	1099.8	2099.1	5898.7	11876.4	13384.1	12274.1	7116.4	3484.9
65°	588.3	589.4	595.5	755.4	1005.5	2468.1	8940.9	11569.9	12063.9	6740.2	3154.8
67.5°	504.3	513.5	537.1	599.6	709.3	1082.4	5147.4	8962.4	10785.8	5864.8	2640.3
70°	397.7	410.0	439.7	493.0	547.3	677.5	1902.4	5963.2	8239.8	4420.7	1996.6
72.5°	335.2	334.2	349.5	400.8	434.6	476.6	731.8	3341.4	4788.7	2110.4	988.1
75°	259.3	269.6	289.0	335.2	355.7	345.4	396.7	1220.8	1715.8	639.6	336.2
77.5°	203.0	211.2	228.6	273.7	294.2	245.0	228.6	436.6	551.4	229.6	151.7
80°	91.2	98.4	155.8	201.9	239.8	169.1	124.0	223.4	245.0	104.6	76.9
82.5°	16.4	27.7	91.2	106.6	123.0	109.7	64.6	115.8	119.9	42.0	26.6
85°	1.0	2.0	31.8	38.9	49.2	35.9	19.5	46.1	40.0	14.3	10.2
87.5°	0.0	0.0	0.0	1.0	1.0	5.1	6.1	8.2	6.1	5.1	4.1
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6	4005.6
2.5°	3941.0	3795.5	3654.0	3538.2	3470.5	3355.7	3279.9	3267.6	3235.8	3263.5
5°	3865.2	3604.8	3341.4	3105.6	2911.9	2661.8	2475.3	2396.3	2327.7	2351.2
7.5°	3829.3	3418.3	3008.3	2605.4	2191.3	1791.7	1494.4	1370.4	1276.1	1289.4
10°	3781.1	3224.5	2581.9	1966.9	1412.4	1017.8	812.8	737.0	694.9	696.0
12.5°	3744.2	2992.9	2086.8	1333.5	860.0	649.8	586.3	567.8	555.6	556.6
15°	3725.8	2720.2	1598.0	888.7	615.0	550.4	535.0	526.8	518.6	517.6
17.5°	3695.0	2416.8	1169.5	648.8	538.1	515.6	502.2	493.0	482.8	480.7
20°	3648.9	2072.4	854.8	548.4	504.3	486.9	468.4	456.1	443.8	441.8
22.5°	3563.8	1708.7	657.0	507.4	479.7	460.2	437.7	423.3	411.0	409.0
25°	3406.0	1367.4	553.5	481.7	458.2	434.6	410.0	390.5	379.2	377.2
27.5°	3206.1	1074.2	502.2	458.2	430.5	409.0	381.3	362.8	352.6	350.5
30°	2970.3	827.2	472.5	431.5	397.7	379.2	354.6	339.3	333.1	333.1
32.5°	2716.1	661.1	460.2	404.9	369.0	348.5	329.0	322.9	320.8	319.8
35°	2477.3	574.0	454.1	383.3	343.4	323.9	315.7	316.7	320.8	320.8
37.5°	2265.1	546.3	451.0	368.0	320.8	303.4	308.5	317.8	313.6	313.6
40°	2073.5	549.4	449.0	356.7	302.4	292.1	302.4	295.2	285.0	283.9
42.5°	1927.0	575.0	444.8	347.5	291.1	283.9	279.8	268.5	267.5	269.6
45°	1820.4	597.6	443.8	343.4	278.8	265.5	260.3	249.1	269.6	274.7
47.5°	1694.3	597.6	443.8	329.0	258.3	253.2	245.0	232.7	253.2	258.3
50°	1531.4	559.6	426.4	312.6	241.9	238.8	224.5	209.1	205.0	208.1
52.5°	1325.3	491.0	382.3	290.1	225.5	219.4	201.9	190.6	187.6	187.6
55°	1090.6	411.0	322.9	257.3	208.1	196.8	184.5	179.4	176.3	174.2
57.5°	886.6	337.2	259.3	228.6	191.7	177.3	173.2	167.1	162.0	158.9
60°	727.7	265.5	214.2	203.0	175.3	162.0	160.9	152.7	139.4	137.4
62.5°	561.7	194.7	180.4	176.3	158.9	147.6	145.5	129.1	108.6	104.6
65°	396.7	151.7	145.5	154.8	141.4	131.2	126.1	101.5	79.9	76.9
67.5°	278.8	127.1	114.8	135.3	123.0	109.7	106.6	86.1	66.6	64.6
70°	198.8	103.5	94.3	115.8	98.4	96.4	90.2	71.8	54.3	52.3
72.5°	140.4	78.9	72.8	100.4	67.6	83.0	73.8	55.4	41.0	38.9
75°	103.5	56.4	51.2	58.4	49.2	62.5	52.3	36.9	25.6	24.6
77.5°	75.8	35.9	30.7	28.7	28.7	38.9	28.7	15.4	11.3	10.2
80°	53.3	16.4	14.3	12.3	11.3	9.2	4.1	2.0	1.0	1.0
82.5°	31.8	7.2	7.2	5.1	3.1	0.0	0.0	0.0	0.0	0.0
85°	7.2	3.1	3.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	1.0	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

(END OF REPORT)