

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: P883638

Luminaire Tested: **NAV-SB4A-827-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883638
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-SB4A-827-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 350mA 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: 11584 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

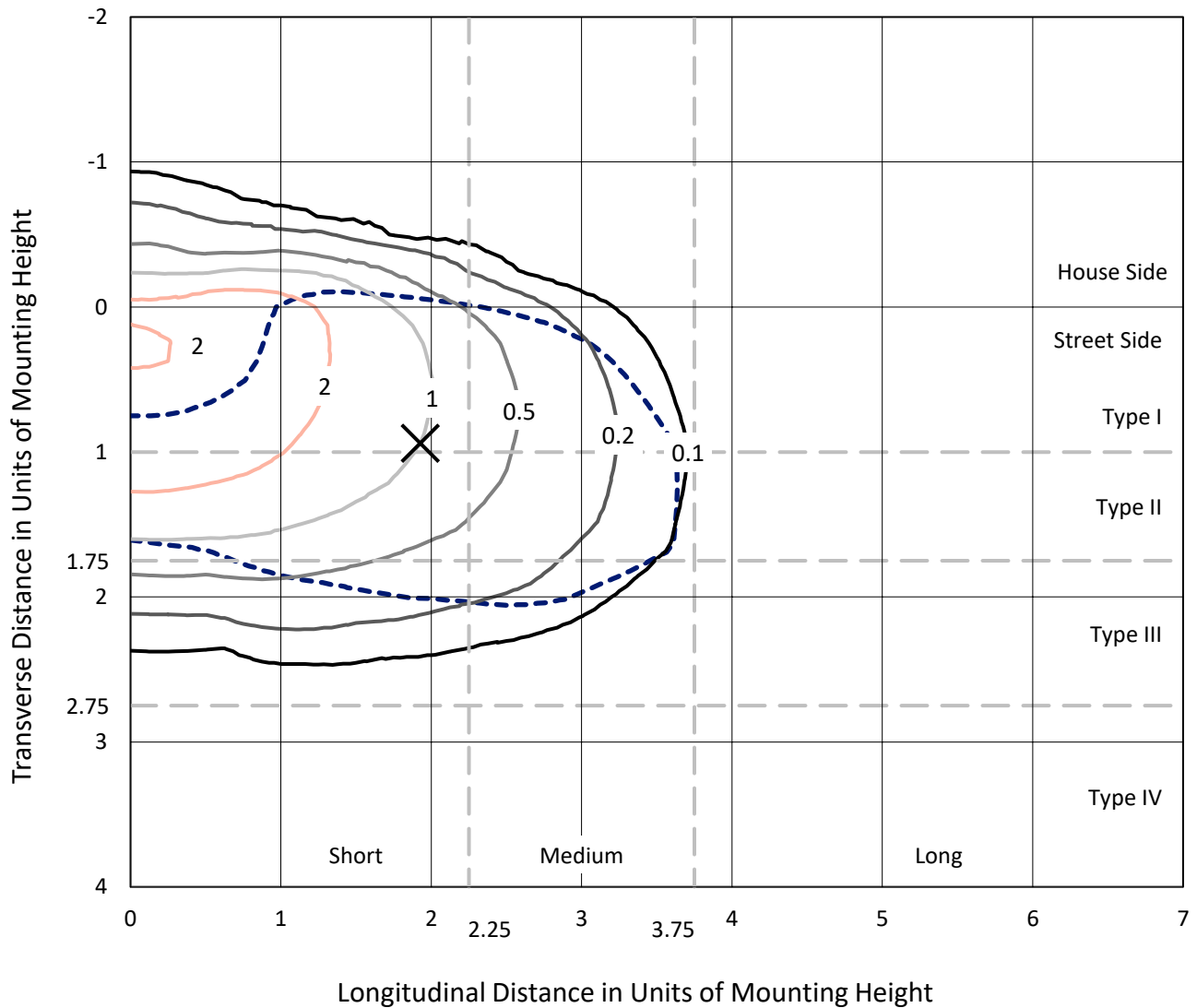
Input Watts (W): 114
Input Voltage (V): 120.0
Input Current (Ain): 0.952
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.206
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

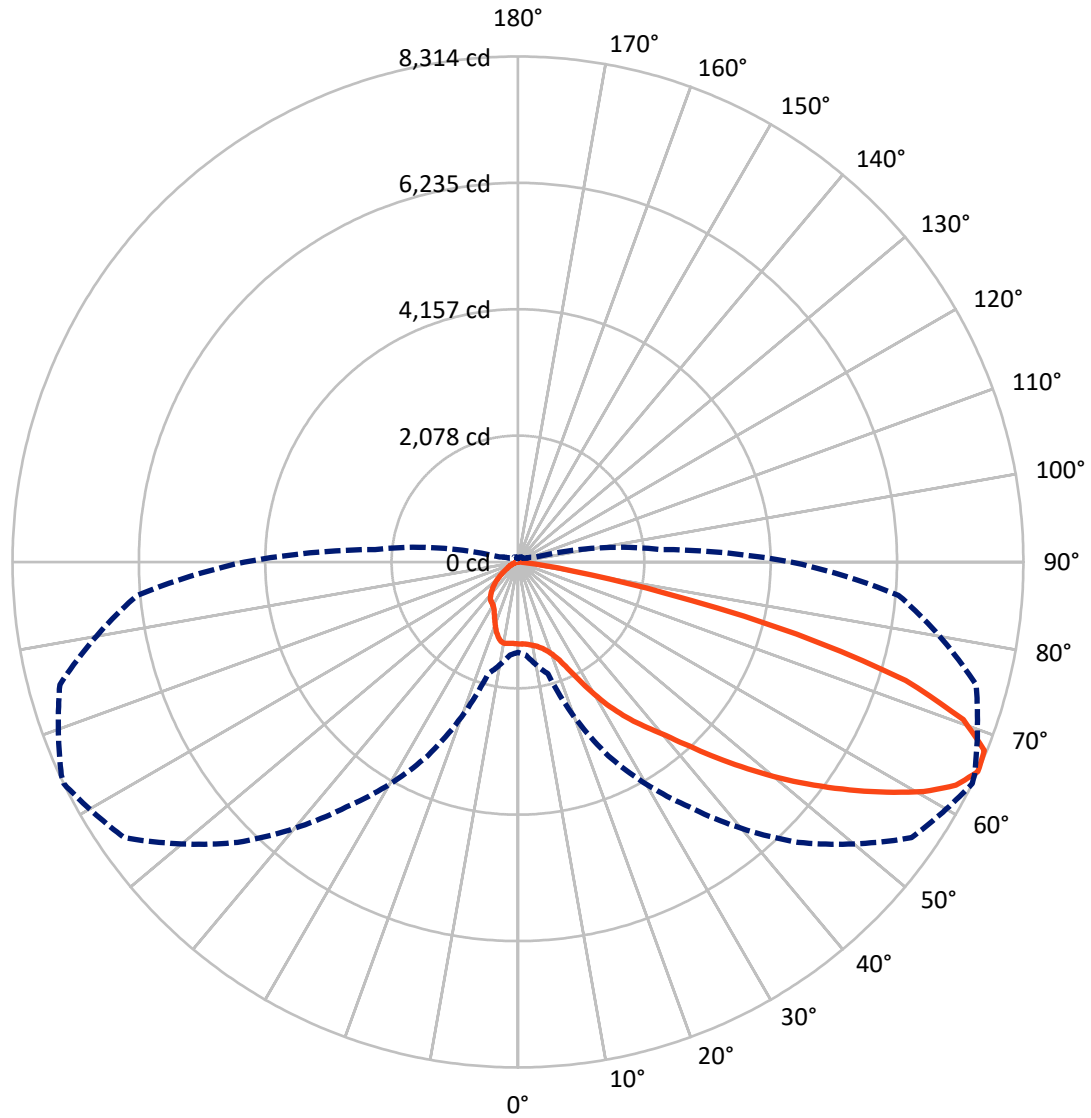
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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	1549.1	0.0	1549.1
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	10034.9	0.0	10034.9
	% Fixture	86.6	0.0	86.6
Total	Lumens	11584.0	0.0	11584.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.3	1.1
10°-20°	337.2	2.9
20°-30°	638.9	5.5
30°-40°	1292.8	11.2
40°-50°	2202.3	19.0
50°-60°	2994.9	25.9
60°-70°	2812.4	24.3
70°-80°	1126.8	9.7
80°-90°	54.6	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°	11584.0	100.0
0°-180°	11584.0	100.0

Coefficient of Utilization



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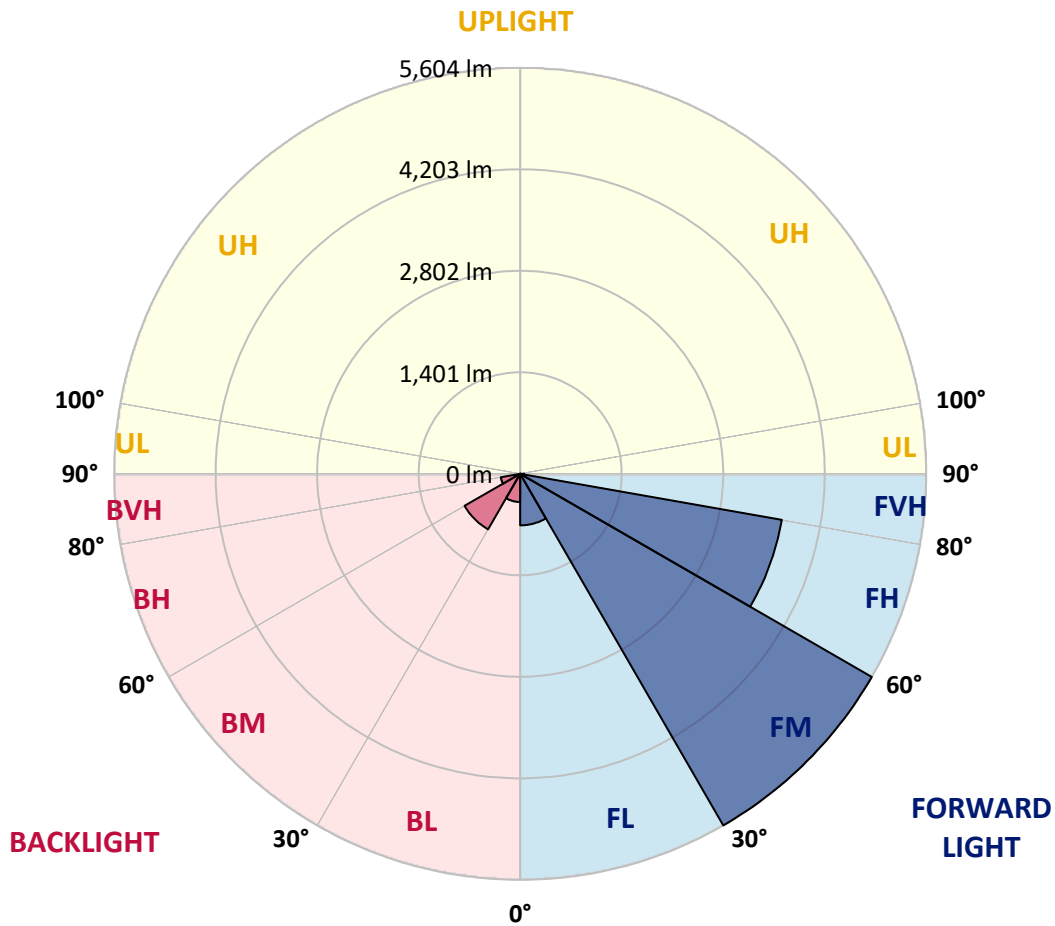
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	711.4	6.1			
FM (30°-60°)	5604.3	48.4			
FH (60°-80°)	3667.2	31.7			G2/5000
FVH (80°-90°)	51.9	0.4			G1/100
BL (0°-30°)	388.9	3.4	B1/500		
BM (30°-60°)	885.6	7.6	B1/1000		
BH (60°-80°)	271.9	2.3	B1/500		G1/500
BVH (80°-90°)	2.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3
2.5°	1342.7	1352.0	1349.7	1347.3	1346.6	1348.1	1348.9	1348.1	1348.1	1348.1	1348.9
5°	1317.1	1324.8	1324.8	1330.3	1338.0	1347.3	1354.3	1355.9	1357.4	1359.8	1359.0
7.5°	1268.1	1274.3	1279.0	1296.9	1316.3	1341.1	1362.1	1373.0	1374.5	1383.1	1386.2
10°	1234.7	1242.5	1250.3	1268.9	1296.9	1334.1	1369.9	1396.3	1400.1	1420.3	1429.7
12.5°	1233.2	1241.0	1251.0	1271.2	1303.9	1343.5	1386.9	1425.0	1432.0	1461.5	1480.9
15°	1249.5	1258.8	1268.1	1293.0	1327.9	1376.1	1422.7	1470.0	1477.0	1519.0	1539.9
17.5°	1282.9	1295.3	1302.3	1327.1	1364.4	1418.0	1479.4	1533.7	1539.9	1588.9	1615.3
20°	1348.9	1363.6	1366.0	1386.2	1422.7	1480.1	1553.1	1620.7	1628.5	1684.4	1713.9
22.5°	1485.6	1506.5	1487.9	1498.0	1530.6	1588.1	1667.3	1752.7	1763.6	1827.3	1853.7
25°	1726.3	1755.8	1707.7	1690.6	1704.6	1764.4	1863.8	1971.7	1984.1	2035.4	2048.6
27.5°	2199.2	2161.2	2088.2	2016.7	1974.8	2009.0	2120.8	2254.4	2269.9	2319.6	2304.1
30°	2718.8	2685.4	2586.7	2428.3	2328.9	2323.5	2426.8	2575.9	2593.7	2641.1	2593.7
32.5°	3239.1	3207.2	3100.0	2905.1	2732.7	2647.3	2718.8	2884.2	2893.5	2923.8	2853.9
35°	3750.8	3718.2	3611.0	3411.4	3199.4	3005.3	2991.3	3177.7	3180.8	3212.6	3108.6
37.5°	4265.7	4238.5	4124.3	3928.6	3719.7	3451.8	3322.1	3455.7	3459.6	3490.7	3382.7
40°	4633.0	4644.6	4566.2	4414.8	4235.4	3942.6	3693.3	3751.6	3728.3	3780.3	3715.9
42.5°	4948.3	4971.6	4903.2	4827.1	4723.1	4465.2	4153.1	4143.0	4105.7	4133.7	4066.9
45°	5220.8	5240.3	5178.9	5161.0	5158.7	4977.8	4655.5	4594.9	4542.9	4537.5	4457.5
47.5°	5321.0	5358.3	5384.7	5444.5	5561.0	5484.9	5175.0	5081.1	5022.8	4980.1	4853.5
50°	5359.1	5398.7	5488.8	5662.7	5938.4	5971.0	5692.2	5586.6	5515.2	5437.5	5251.1
52.5°	5307.8	5378.5	5499.6	5792.4	6192.3	6360.8	6188.4	6096.0	6014.5	5887.9	5611.5
55°	5005.7	5076.4	5324.1	5790.8	6318.9	6634.2	6657.5	6616.3	6524.7	6325.1	5902.7
57.5°	4369.0	4473.8	4866.0	5593.6	6316.6	6869.5	7117.2	7146.7	7044.2	6758.4	6131.8
60°	3486.8	3628.9	4107.2	5156.4	6121.7	6996.8	7520.3	7667.8	7559.1	7185.6	6317.4
62.5°	2433.0	2597.6	3050.3	4471.5	5675.9	6905.2	7814.6	8087.1	8004.8	7567.6	6388.8
65°	1484.0	1536.8	1901.8	3518.6	4918.0	6521.6	7905.4	8313.9	8286.7	7801.4	6283.2
67.5°	988.6	1032.8	1137.7	2412.8	3817.6	5755.1	7688.0	8274.3	8282.1	7763.3	5896.5
70°	595.6	633.7	702.0	1403.3	2474.1	4555.3	7014.7	7769.5	7814.6	7254.7	5163.4
72.5°	245.4	271.0	333.1	636.0	1281.3	2891.1	5585.8	6670.7	6775.5	6099.9	3962.8
75°	139.0	152.2	195.7	319.2	556.0	1347.3	3383.5	4735.5	4890.0	4204.3	2384.1
77.5°	92.4	98.6	126.6	206.6	313.0	459.7	1446.0	2467.1	2762.2	2296.3	1032.1
80°	62.1	67.6	87.0	138.2	203.5	197.2	460.5	914.0	1124.5	789.0	251.6
82.5°	41.9	42.7	62.1	90.9	128.9	95.5	135.9	284.2	357.2	228.3	95.5
85°	24.1	23.3	45.8	52.8	57.5	39.6	41.2	85.4	111.8	96.3	54.4
87.5°	3.1	4.7	17.9	14.0	7.8	8.5	8.5	14.8	21.7	23.3	11.6
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°	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3	1347.3
2.5°	1348.9	1348.1	1345.8	1343.5	1338.0	1334.9	1336.5	1334.9	1334.1	1334.9	1338.0
5°	1359.0	1356.7	1350.4	1342.7	1331.8	1318.6	1310.1	1297.6	1286.0	1279.0	1280.6
7.5°	1386.2	1383.8	1375.3	1353.6	1318.6	1263.5	1213.0	1168.7	1135.3	1115.9	1116.7
10°	1429.7	1425.8	1412.6	1364.4	1272.8	1152.4	1052.2	969.2	914.8	889.2	886.8
12.5°	1480.9	1476.2	1453.0	1354.3	1185.8	997.9	859.7	767.2	716.8	694.2	691.9
15°	1541.5	1535.3	1489.5	1306.2	1059.2	827.0	700.5	631.3	598.7	578.5	579.3
17.5°	1616.8	1605.9	1516.6	1234.0	921.8	696.6	602.6	550.6	521.9	502.4	500.9
20°	1714.7	1696.8	1538.4	1147.8	795.2	614.3	536.6	493.1	471.4	454.3	451.2
22.5°	1851.3	1825.7	1564.8	1054.6	705.9	557.6	487.7	455.8	438.0	418.6	415.5
25°	2020.6	1990.3	1597.4	968.4	644.5	508.6	452.0	425.6	404.6	382.1	379.7
27.5°	2257.5	2203.1	1636.2	897.7	591.7	466.7	419.3	389.8	365.8	347.1	343.2
30°	2521.5	2432.2	1670.4	855.0	543.6	427.9	376.6	347.1	324.6	311.4	309.1
32.5°	2771.6	2650.4	1692.9	836.4	500.1	383.6	330.0	298.2	281.1	277.2	279.6
35°	3007.6	2847.7	1690.6	818.5	461.3	339.4	284.2	251.6	238.4	240.7	240.7
37.5°	3279.4	3058.1	1674.3	790.5	429.4	299.0	244.6	215.9	204.2	205.0	208.1
40°	3595.5	3301.2	1664.2	737.7	394.5	261.7	212.0	188.7	180.2	177.1	176.3
42.5°	3932.5	3536.5	1665.7	677.9	351.0	228.3	189.5	170.1	162.3	160.0	159.2
45°	4271.1	3760.9	1668.1	615.8	305.2	202.7	173.2	156.9	152.2	149.1	149.1
47.5°	4589.5	3951.9	1624.6	549.0	260.1	183.3	160.0	149.1	145.2	141.3	141.3
50°	4886.1	4079.3	1519.7	471.4	224.4	167.7	149.9	142.1	138.2	134.3	134.3
52.5°	5116.8	4099.5	1346.6	391.4	199.6	156.1	143.7	136.7	132.0	128.1	127.4
55°	5219.3	3972.9	1100.4	316.8	180.2	146.0	137.5	130.5	125.0	121.1	120.4
57.5°	5192.9	3706.5	858.1	254.7	161.5	135.9	129.7	125.0	118.8	112.6	111.8
60°	5063.2	3350.1	646.9	212.0	144.4	125.0	121.1	117.3	108.7	99.4	97.8
62.5°	4838.8	2902.0	461.3	175.5	125.8	112.6	111.0	107.9	95.5	78.4	76.9
65°	4495.5	2357.6	310.6	146.0	107.9	98.6	99.4	94.0	77.7	58.2	56.7
67.5°	3993.9	1724.0	198.8	119.6	90.1	82.3	83.1	80.0	66.0	49.7	47.4
70°	3354.8	1141.5	129.7	90.9	72.2	63.7	68.3	69.1	55.9	40.4	38.8
72.5°	2459.4	674.1	90.9	67.6	52.8	44.3	55.9	57.5	45.0	30.3	28.7
75°	1401.7	319.9	68.3	48.9	32.6	31.1	43.5	43.5	31.1	20.2	18.6
77.5°	588.6	133.6	48.1	31.8	18.6	17.9	29.5	27.2	15.5	9.3	9.3
80°	170.1	59.8	25.6	15.5	7.8	7.0	11.6	8.5	3.9	1.6	1.6
82.5°	66.8	26.4	10.1	6.2	3.1	3.1	1.6	0.0	0.0	0.0	0.0
85°	39.6	10.9	4.7	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	10.1	2.3	1.6	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)