

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: P882788

Luminaire Tested: **NAV-SB2D-827-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882788
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-SB2D-827-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 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: 13216 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
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

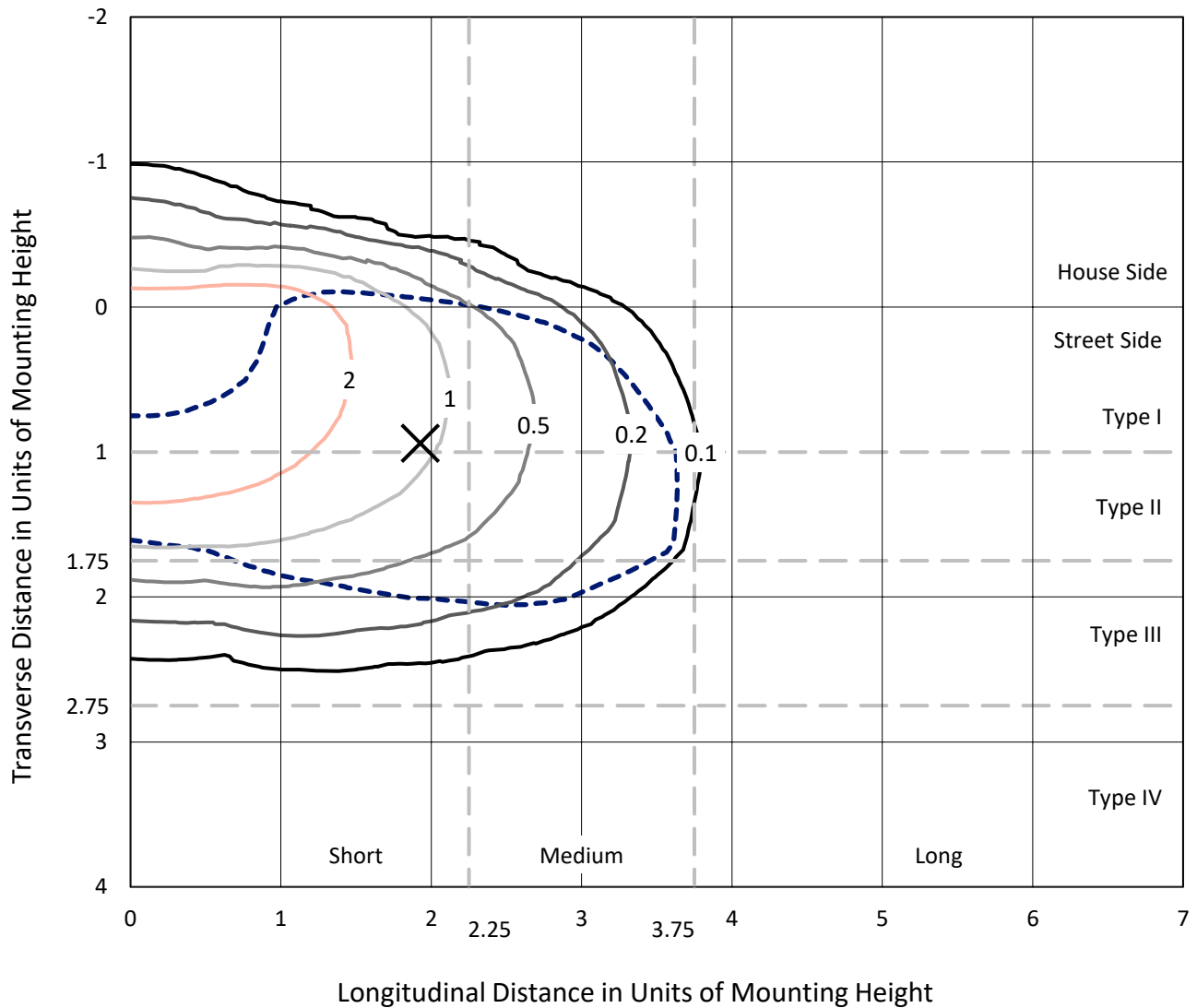


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Iso-Footcandle Lines of Horizontal Illumination

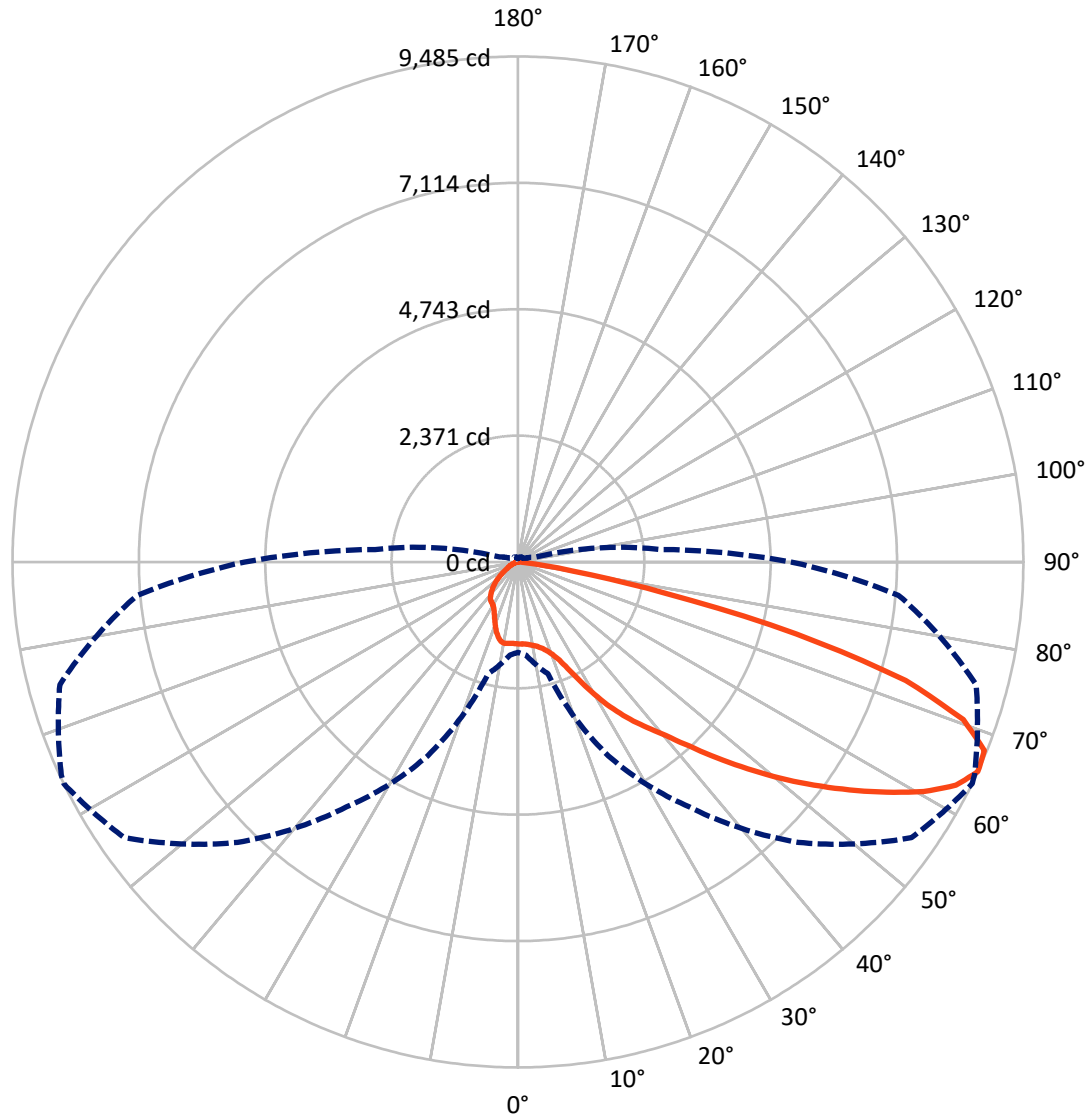
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 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	1767.4	0.0	1767.4
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	11448.6	0.0	11448.6
	% Fixture	86.6	0.0	86.6
Total	Lumens	13216.0	0.0	13216.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.8	1.1
10°-20°	384.7	2.9
20°-30°	728.9	5.5
30°-40°	1474.9	11.2
40°-50°	2512.5	19.0
50°-60°	3416.8	25.9
60°-70°	3208.6	24.3
70°-80°	1285.5	9.7
80°-90°	62.3	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°	13216.0	100.0
0°-180°	13216.0	100.0

Coefficient of Utilization



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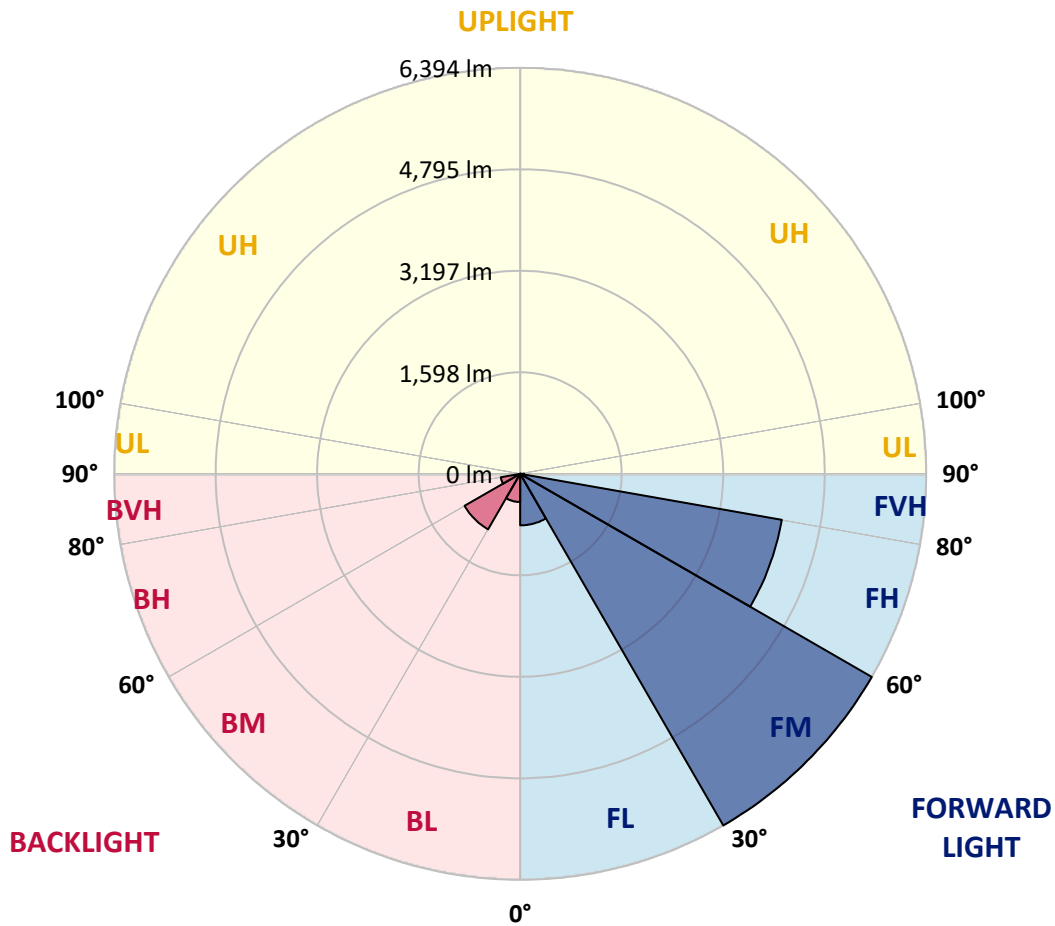
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	811.6	6.1			
FM (30°-60°)	6393.9	48.4			
FH (60°-80°)	4183.9	31.7			G2/5000
FVH (80°-90°)	59.2	0.4			G1/100
BL (0°-30°)	443.7	3.4	B1/500		
BM (30°-60°)	1010.4	7.6	B2/2500		
BH (60°-80°)	310.2	2.3	B1/500		G1/500
BVH (80°-90°)	3.0	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 III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2
2.5°	1531.8	1542.5	1539.8	1537.2	1536.3	1538.0	1538.9	1538.0	1538.0	1538.0	1538.9
5°	1502.6	1511.5	1511.5	1517.7	1526.5	1537.2	1545.1	1546.9	1548.7	1551.3	1550.4
7.5°	1446.8	1453.9	1459.2	1479.6	1501.7	1530.1	1554.0	1566.4	1568.2	1577.9	1581.5
10°	1408.7	1417.6	1426.4	1447.7	1479.6	1522.1	1562.9	1593.0	1597.4	1620.4	1631.1
12.5°	1406.9	1415.8	1427.3	1450.3	1487.5	1532.7	1582.3	1625.8	1633.7	1667.4	1689.5
15°	1425.5	1436.2	1446.8	1475.1	1515.0	1569.9	1623.1	1677.1	1685.1	1733.0	1756.9
17.5°	1463.6	1477.8	1485.8	1514.1	1556.6	1617.8	1687.8	1749.8	1756.9	1812.7	1842.8
20°	1538.9	1555.8	1558.4	1581.5	1623.1	1688.7	1771.9	1849.0	1857.9	1921.7	1955.3
22.5°	1694.9	1718.8	1697.5	1709.0	1746.2	1811.8	1902.2	1999.6	2012.0	2084.7	2114.8
25°	1969.5	2003.2	1948.2	1928.8	1944.7	2012.9	2126.3	2249.5	2263.7	2322.1	2337.2
27.5°	2509.1	2465.7	2382.4	2300.9	2253.0	2292.0	2419.6	2572.0	2589.7	2646.4	2628.7
30°	3101.8	3063.7	2951.2	2770.4	2657.0	2650.8	2768.7	2938.8	2959.1	3013.2	2959.1
32.5°	3695.4	3659.1	3536.8	3314.4	3117.7	3020.3	3101.8	3290.5	3301.1	3335.7	3255.9
35°	4279.2	4242.0	4119.8	3892.1	3650.2	3428.7	3412.8	3625.4	3628.9	3665.3	3546.5
37.5°	4866.6	4835.6	4705.4	4482.1	4243.8	3938.1	3790.2	3942.6	3947.0	3982.4	3859.3
40°	5285.7	5299.0	5209.5	5036.7	4832.1	4498.1	4213.7	4280.1	4253.5	4312.9	4239.4
42.5°	5645.4	5672.0	5594.0	5507.2	5388.5	5094.3	4738.2	4726.7	4684.1	4716.0	4639.8
45°	5956.4	5978.5	5908.5	5888.2	5885.5	5679.1	5311.4	5242.3	5182.9	5176.7	5085.5
47.5°	6070.7	6113.2	6143.3	6211.5	6344.4	6257.6	5904.1	5796.9	5730.5	5681.7	5537.3
50°	6114.1	6159.3	6262.0	6460.5	6775.0	6812.2	6494.2	6373.7	6292.2	6203.6	5990.9
52.5°	6055.6	6136.2	6274.4	6608.5	7064.7	7257.0	7060.3	6954.9	6861.8	6717.4	6402.0
55°	5711.0	5791.6	6074.2	6606.7	7209.1	7568.8	7595.4	7548.5	7443.9	7216.2	6734.3
57.5°	4984.5	5104.1	5551.5	6381.6	7206.5	7837.3	8119.9	8153.6	8036.6	7710.6	6995.6
60°	3978.0	4140.1	4685.9	5882.8	6984.1	7982.6	8579.7	8748.1	8624.0	8197.9	7207.4
62.5°	2775.7	2963.6	3480.1	5101.4	6475.6	7878.0	8915.5	9226.5	9132.6	8633.8	7288.9
65°	1693.1	1753.3	2169.7	4014.3	5610.8	7440.4	9019.2	9485.2	9454.2	8900.5	7168.4
67.5°	1127.8	1178.3	1297.9	2752.7	4355.4	6565.9	8771.1	9440.0	9448.9	8857.0	6727.2
70°	679.5	723.0	800.9	1600.9	2822.7	5197.1	8003.0	8864.1	8915.5	8276.7	5890.8
72.5°	280.0	309.2	380.1	725.6	1461.9	3298.5	6372.8	7610.5	7730.1	6959.3	4521.1
75°	158.6	173.7	223.3	364.1	634.4	1537.2	3860.2	5402.6	5579.0	4796.6	2719.9
77.5°	105.4	112.5	144.4	235.7	357.0	524.5	1649.7	2814.7	3151.4	2619.8	1177.5
80°	70.9	77.1	99.2	157.7	232.1	225.0	525.4	1042.8	1282.9	900.1	287.1
82.5°	47.8	48.7	70.9	103.7	147.1	109.0	155.0	324.3	407.5	260.5	109.0
85°	27.5	26.6	52.3	60.2	65.6	45.2	47.0	97.5	127.6	109.9	62.0
87.5°	3.5	5.3	20.4	15.9	8.9	9.7	9.7	16.8	24.8	26.6	13.3
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°	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2	1537.2
2.5°	1538.9	1538.0	1535.4	1532.7	1526.5	1523.0	1524.8	1523.0	1522.1	1523.0	1526.5
5°	1550.4	1547.8	1540.7	1531.8	1519.4	1504.4	1494.6	1480.5	1467.2	1459.2	1461.0
7.5°	1581.5	1578.8	1569.1	1544.2	1504.4	1441.5	1383.9	1333.4	1295.3	1273.1	1274.0
10°	1631.1	1626.6	1611.6	1556.6	1452.1	1314.8	1200.5	1105.7	1043.7	1014.4	1011.8
12.5°	1689.5	1684.2	1657.6	1545.1	1352.9	1138.5	980.8	875.3	817.8	792.1	789.4
15°	1758.7	1751.6	1699.3	1490.2	1208.5	943.6	799.1	720.3	683.1	660.0	660.9
17.5°	1844.6	1832.2	1730.3	1407.8	1051.6	794.7	687.5	628.2	595.4	573.2	571.5
20°	1956.2	1935.8	1755.1	1309.5	907.2	700.8	612.2	562.6	537.8	518.3	514.7
22.5°	2112.2	2082.9	1785.2	1203.1	805.3	636.1	556.4	520.1	499.7	477.5	474.0
25°	2305.3	2270.7	1822.4	1104.8	735.4	580.3	515.6	485.5	461.6	435.9	433.2
27.5°	2575.5	2513.5	1866.7	1024.2	675.1	532.5	478.4	444.8	417.3	396.0	391.6
30°	2876.7	2774.9	1905.7	975.5	620.2	488.2	429.7	396.0	370.3	355.3	352.6
32.5°	3162.0	3023.8	1931.4	954.2	570.6	437.7	376.5	340.2	320.7	316.3	318.9
35°	3431.4	3248.9	1928.8	933.8	526.3	387.2	324.3	287.1	272.0	274.7	274.7
37.5°	3741.5	3489.0	1910.2	901.9	489.9	341.1	279.1	246.3	233.0	233.9	237.4
40°	4102.0	3766.3	1898.6	841.7	450.1	298.6	241.9	215.3	205.5	202.0	201.1
42.5°	4486.6	4034.7	1900.4	773.5	400.5	260.5	216.2	194.0	185.2	182.5	181.6
45°	4872.8	4290.8	1903.1	702.6	348.2	231.2	197.6	179.0	173.7	170.1	170.1
47.5°	5236.1	4508.7	1853.4	626.4	296.8	209.1	182.5	170.1	165.7	161.2	161.2
50°	5574.5	4654.0	1733.8	537.8	256.0	191.4	171.0	162.1	157.7	153.3	153.3
52.5°	5837.7	4677.0	1536.3	446.5	227.7	178.1	163.9	155.9	150.6	146.2	145.3
55°	5954.6	4532.6	1255.4	361.5	205.5	166.6	156.8	148.8	142.6	138.2	137.3
57.5°	5924.5	4228.7	979.0	290.6	184.3	155.0	148.0	142.6	135.6	128.5	127.6
60°	5776.5	3822.1	738.0	241.9	164.8	142.6	138.2	133.8	124.0	113.4	111.6
62.5°	5520.5	3310.9	526.3	200.2	143.5	128.5	126.7	123.1	109.0	89.5	87.7
65°	5128.9	2689.8	354.4	166.6	123.1	112.5	113.4	107.2	88.6	66.4	64.7
67.5°	4556.5	1966.9	226.8	136.4	102.8	93.9	94.8	91.3	75.3	56.7	54.0
70°	3827.4	1302.4	148.0	103.7	82.4	72.6	78.0	78.9	63.8	46.1	44.3
72.5°	2805.9	769.0	103.7	77.1	60.2	50.5	63.8	65.6	51.4	34.6	32.8
75°	1599.2	365.0	78.0	55.8	37.2	35.4	49.6	49.6	35.4	23.0	21.3
77.5°	671.6	152.4	54.9	36.3	21.3	20.4	33.7	31.0	17.7	10.6	10.6
80°	194.0	68.2	29.2	17.7	8.9	8.0	13.3	9.7	4.4	1.8	1.8
82.5°	76.2	30.1	11.5	7.1	3.5	3.5	1.8	0.0	0.0	0.0	0.0
85°	45.2	12.4	5.3	2.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	11.5	2.7	1.8	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)