

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: P883640

Luminaire Tested: **NAV-SB4A-827-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883640  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-827-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

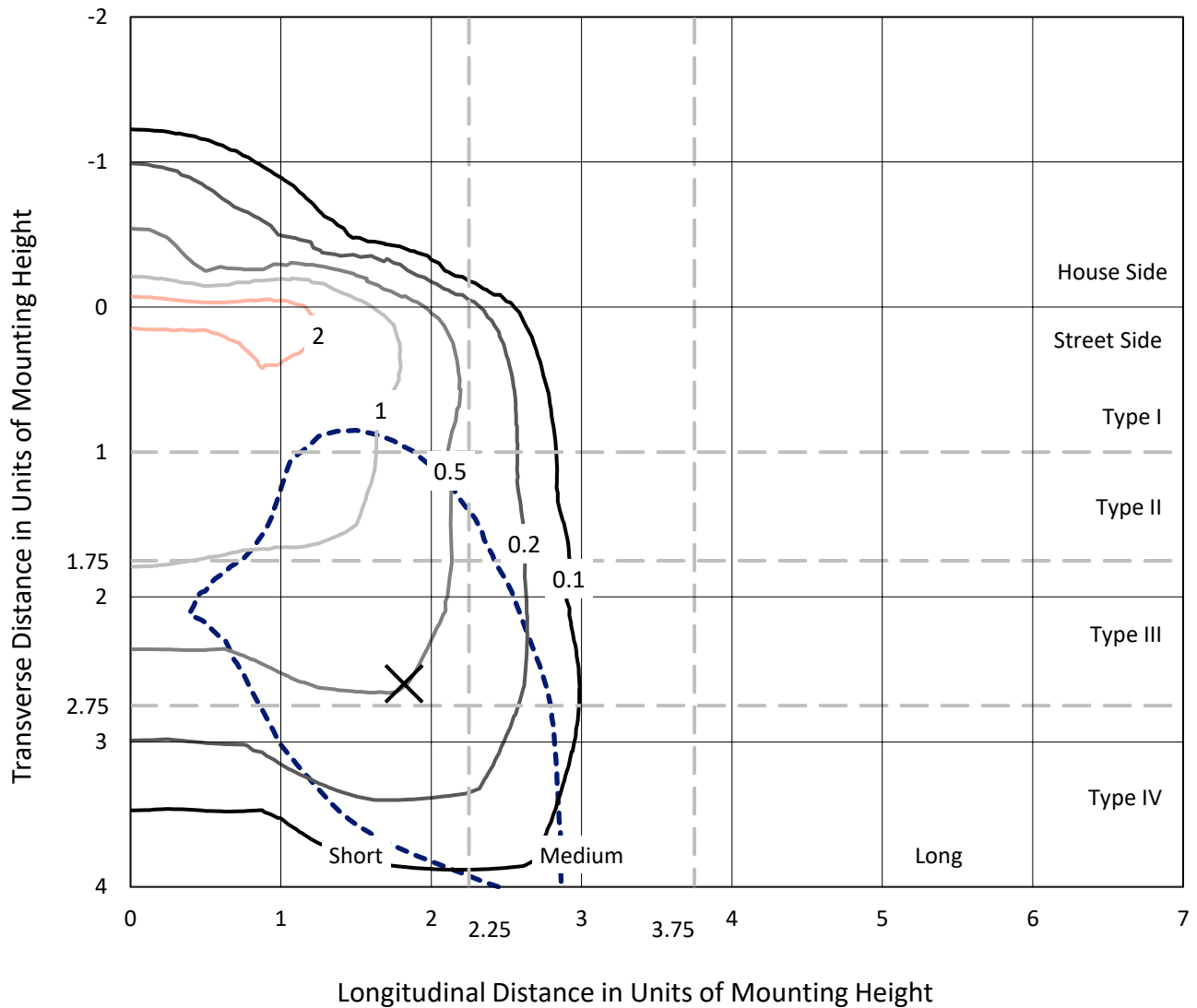
Lumens per Lamp: N/A  
Luminaire Lumens: 11183 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 114  
Input Voltage (V): 120.0  
Input Current (Ain): 0.952  
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

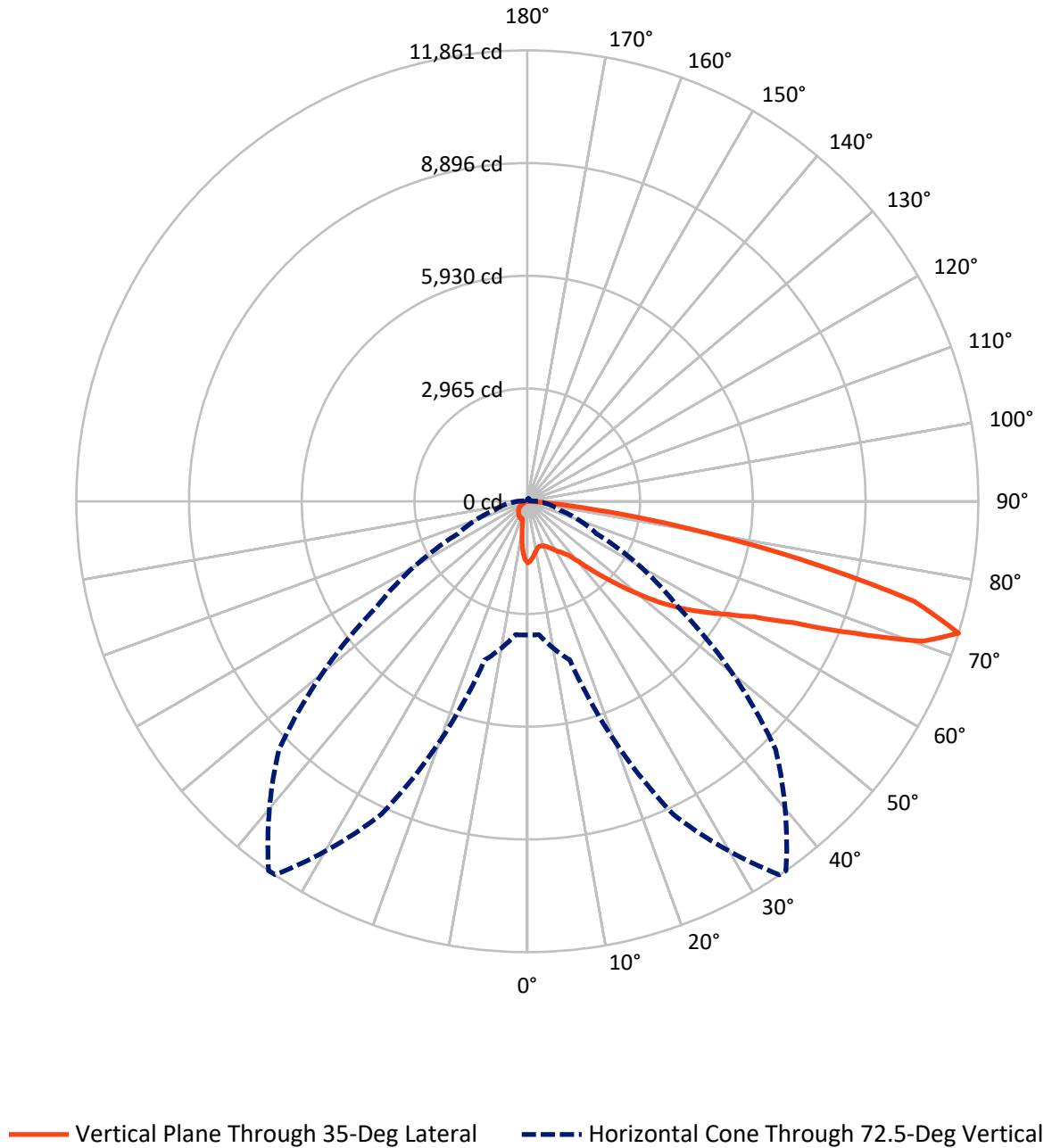
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1258.6	0.0	1258.6
	% Fixture	11.3	0.0	11.3
<b>Street Side</b>	Lumens	9924.4	0.0	9924.4
	% Fixture	88.7	0.0	88.7
<b>Total</b>	Lumens	11183.0	0.0	11183.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.2	1.2
10°-20°	311.6	2.8
20°-30°	506.1	4.5
30°-40°	844.5	7.6
40°-50°	1597.8	14.3
50°-60°	2538.9	22.7
60°-70°	3140.8	28.1
70°-80°	1952.3	17.5
80°-90°	157.8	1.4
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°	11183.0	100.0
0°-180°	11183.0	100.0



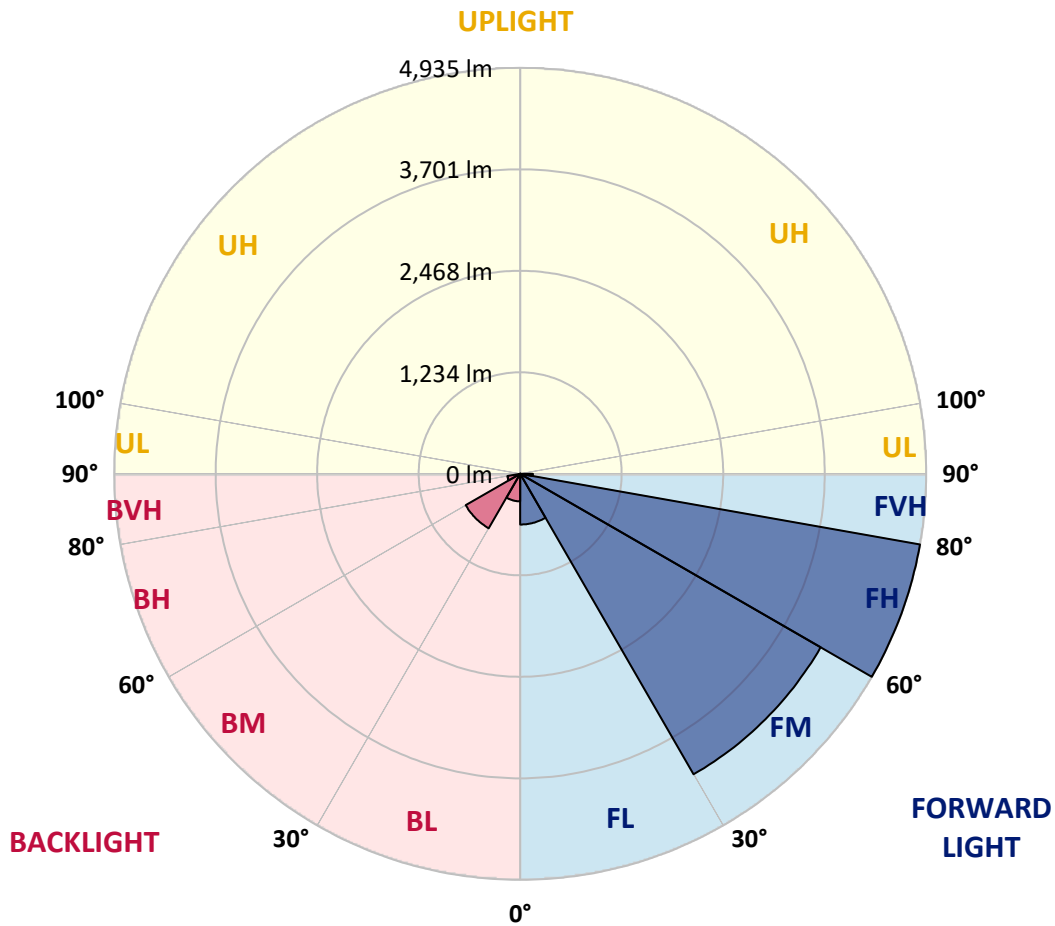
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	616.5	5.5			
FM (30°-60°)	4217.1	37.7			
FH (60°-80°)	4935.2	44.1			G2/5000
FVH (80°-90°)	155.6	1.4			G2/225
BL (0°-30°)	334.4	3.0	B1/500		
BM (30°-60°)	764.1	6.8	B1/1000		
BH (60°-80°)	157.9	1.4	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: B1-U0-G2**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8
2.5°	1548.7	1561.8	1564.3	1568.3	1568.3	1573.3	1581.5	1592.9	1611.8	1621.6	1628.2
5°	1427.4	1437.2	1449.5	1459.4	1478.2	1480.7	1512.6	1543.8	1587.2	1620.0	1642.9
7.5°	1305.3	1316.8	1333.2	1356.9	1381.5	1388.9	1437.2	1489.7	1558.5	1620.0	1658.5
10°	1219.3	1220.1	1234.8	1258.6	1297.9	1307.0	1366.0	1440.5	1526.6	1610.1	1673.2
12.5°	1170.9	1176.7	1183.2	1201.3	1238.9	1244.7	1307.8	1395.5	1494.6	1604.4	1690.4
15°	1170.9	1175.0	1179.1	1188.1	1218.5	1223.4	1279.1	1366.8	1478.2	1606.9	1718.3
17.5°	1183.2	1189.8	1186.5	1197.2	1229.1	1232.4	1281.6	1358.6	1477.4	1622.4	1760.9
20°	1212.7	1217.6	1211.1	1217.6	1249.6	1256.2	1307.0	1374.1	1491.3	1649.5	1814.2
22.5°	1259.4	1261.9	1246.3	1251.2	1284.0	1292.2	1351.2	1418.4	1524.9	1692.9	1885.5
25°	1318.4	1323.3	1299.6	1305.3	1336.5	1346.3	1414.3	1484.8	1578.2	1752.7	1976.4
27.5°	1386.4	1388.9	1368.4	1367.6	1407.7	1421.7	1490.5	1566.7	1649.5	1828.1	2091.1
30°	1464.3	1471.7	1452.0	1448.7	1499.5	1511.0	1579.0	1667.5	1754.4	1941.2	2254.2
32.5°	1525.7	1531.5	1520.0	1528.2	1579.8	1588.8	1686.3	1810.1	1919.1	2101.8	2476.3
35°	1614.2	1617.5	1591.3	1606.0	1665.0	1688.0	1833.0	2010.0	2126.4	2303.4	2766.3
37.5°	1934.6	1934.6	1823.2	1750.3	1806.8	1827.3	2033.8	2261.6	2382.0	2573.8	3131.8
40°	2377.9	2370.6	2207.5	2058.4	2051.0	2091.1	2319.7	2578.7	2712.2	2898.3	3543.1
42.5°	2850.7	2839.3	2617.2	2469.7	2445.1	2459.0	2650.0	2969.5	3105.6	3294.0	3985.6
45°	3270.3	3267.0	3063.8	2865.5	2821.2	2865.5	3062.1	3426.8	3524.3	3722.6	4427.3
47.5°	3621.8	3621.8	3473.5	3344.0	3321.1	3347.3	3620.2	3934.0	3925.0	4179.0	4857.5
50°	4026.6	4023.3	3882.4	3826.6	3850.4	3887.3	4262.6	4468.2	4339.6	4627.2	5241.8
52.5°	4310.1	4329.8	4281.4	4272.4	4393.7	4457.6	4914.8	4991.0	4710.8	5052.5	5529.4
55°	4534.6	4557.6	4613.3	4676.4	4909.9	4993.5	5546.6	5486.8	5021.3	5421.2	5694.9
57.5°	4852.5	4819.8	4905.8	5030.4	5408.1	5508.9	6158.7	5954.6	5271.3	5720.3	5712.9
60°	5238.5	5243.4	5258.1	5415.5	5905.5	6034.9	6761.8	6397.1	5431.9	5903.8	5513.0
62.5°	5702.3	5709.6	5740.0	5981.7	6573.3	6695.4	7404.2	6759.3	5505.6	5852.2	4996.8
65°	5670.3	5701.5	6039.9	6866.7	7588.5	7709.0	8153.9	7013.3	5394.2	5380.2	4068.4
67.5°	5165.6	5216.4	5782.6	7923.7	9119.2	9253.6	9060.2	7063.3	4913.2	4183.9	2654.1
70°	4503.5	4521.5	5202.4	8874.2	10891.6	11027.6	9871.4	6513.5	3728.3	2333.7	1189.0
72.5°	3516.9	3521.0	4319.9	9094.6	11853.6	11860.9	9234.7	4835.3	2005.1	896.4	413.0
75°	2512.3	2487.7	2893.3	7375.5	10428.6	10512.2	6923.2	2268.1	766.1	423.6	205.7
77.5°	1347.1	1374.1	1637.2	4374.0	7204.2	7346.8	3777.5	653.9	390.0	288.4	136.0
80°	416.3	439.2	671.1	2002.6	4080.7	4166.7	1400.4	290.9	272.0	205.7	89.3
82.5°	131.1	136.0	313.0	841.5	1693.7	1733.1	405.6	164.7	186.0	136.0	52.4
85°	37.7	38.5	139.3	313.8	418.7	426.9	113.9	63.9	106.5	84.4	27.0
87.5°	4.1	13.1	52.4	52.4	36.9	36.1	12.3	13.9	30.3	10.7	4.9
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°	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8	1620.8
2.5°	1624.1	1624.9	1614.2	1596.2	1576.5	1560.2	1539.7	1523.3	1511.8	1508.5	1514.3
5°	1635.5	1629.8	1599.5	1544.6	1479.0	1422.5	1359.4	1309.4	1276.6	1262.7	1267.6
7.5°	1652.7	1636.4	1570.0	1461.8	1336.5	1225.0	1111.9	1024.3	968.5	940.7	944.8
10°	1667.5	1634.7	1520.8	1342.2	1150.5	981.7	829.2	723.5	664.5	636.7	637.5
12.5°	1681.4	1633.9	1456.9	1200.4	940.7	734.2	592.4	540.0	523.6	517.9	516.2
15°	1707.6	1636.4	1376.6	1038.2	731.7	554.7	503.1	502.3	505.6	503.9	503.1
17.5°	1743.7	1638.8	1285.7	866.1	564.6	489.2	486.7	494.1	499.0	496.6	495.7
20°	1790.4	1648.7	1189.0	695.7	485.1	472.8	478.5	485.1	489.2	485.1	484.3
22.5°	1856.0	1665.9	1083.3	558.8	459.7	463.0	467.9	475.3	479.4	473.6	472.8
25°	1936.3	1692.9	979.2	485.9	447.4	451.5	458.9	467.1	472.0	466.2	465.4
27.5°	2040.3	1736.3	883.3	469.5	435.1	437.6	448.2	460.5	467.1	459.7	459.7
30°	2191.1	1807.6	800.6	476.9	427.7	422.0	436.7	454.0	461.3	454.8	454.0
32.5°	2391.0	1908.4	749.8	488.4	424.5	404.0	417.9	440.0	452.3	448.2	448.2
35°	2653.2	2061.6	730.1	501.5	422.0	385.1	395.0	418.7	440.0	444.1	444.1
37.5°	2971.2	2274.7	735.8	507.2	414.6	369.6	374.5	395.0	422.8	435.9	439.2
40°	3332.5	2523.0	768.6	501.5	406.4	356.4	357.3	372.8	397.4	417.1	423.6
42.5°	3705.4	2813.0	829.2	480.2	399.1	345.0	342.5	353.2	369.6	383.5	389.2
45°	4060.2	3111.3	889.1	450.7	390.0	333.5	327.8	331.9	335.1	340.9	344.2
47.5°	4369.9	3321.1	871.9	423.6	377.7	320.4	310.6	308.9	299.1	298.3	297.4
50°	4583.8	3367.0	774.3	396.6	359.7	305.6	290.1	280.2	263.0	254.8	255.7
52.5°	4651.8	3185.9	632.6	369.6	330.2	286.0	263.8	248.3	227.0	219.6	218.8
55°	4561.7	2831.1	505.6	336.8	289.3	259.8	235.2	214.7	197.5	188.5	188.5
57.5°	4341.2	2379.6	399.9	298.3	245.8	230.3	205.7	185.2	170.4	161.4	159.8
60°	3975.8	1889.6	316.3	252.4	209.8	198.3	172.9	159.8	146.7	136.0	133.6
62.5°	3421.0	1348.7	248.3	199.9	175.4	162.2	147.5	137.7	122.1	107.3	104.9
65°	2669.6	825.1	191.7	146.7	140.9	134.4	125.4	116.4	97.5	82.8	80.3
67.5°	1683.9	390.9	136.8	110.6	111.4	108.2	104.1	96.7	82.8	69.6	68.0
70°	741.6	189.3	90.1	84.4	82.8	82.8	86.0	83.6	70.5	58.2	55.7
72.5°	252.4	101.6	67.2	63.9	59.8	59.0	72.1	69.6	56.5	45.1	42.6
75°	131.9	68.0	49.2	45.9	36.1	43.4	57.4	54.1	40.2	29.5	27.0
77.5°	86.0	48.3	33.6	29.5	20.5	28.7	42.6	37.7	23.8	14.7	13.1
80°	54.1	32.0	19.7	13.9	9.8	15.6	22.9	16.4	9.0	3.3	2.5
82.5°	28.7	16.4	7.4	4.9	4.1	4.9	5.7	4.1	1.6	0.0	0.0
85°	11.5	5.7	2.5	1.6	0.8	0.0	1.6	0.8	0.0	0.0	0.0
87.5°	4.1	0.8	0.0	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	0.0

(END OF REPORT)