

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: P883580

Luminaire Tested: **NAV-SB4A-727-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883580  
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-727-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 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**

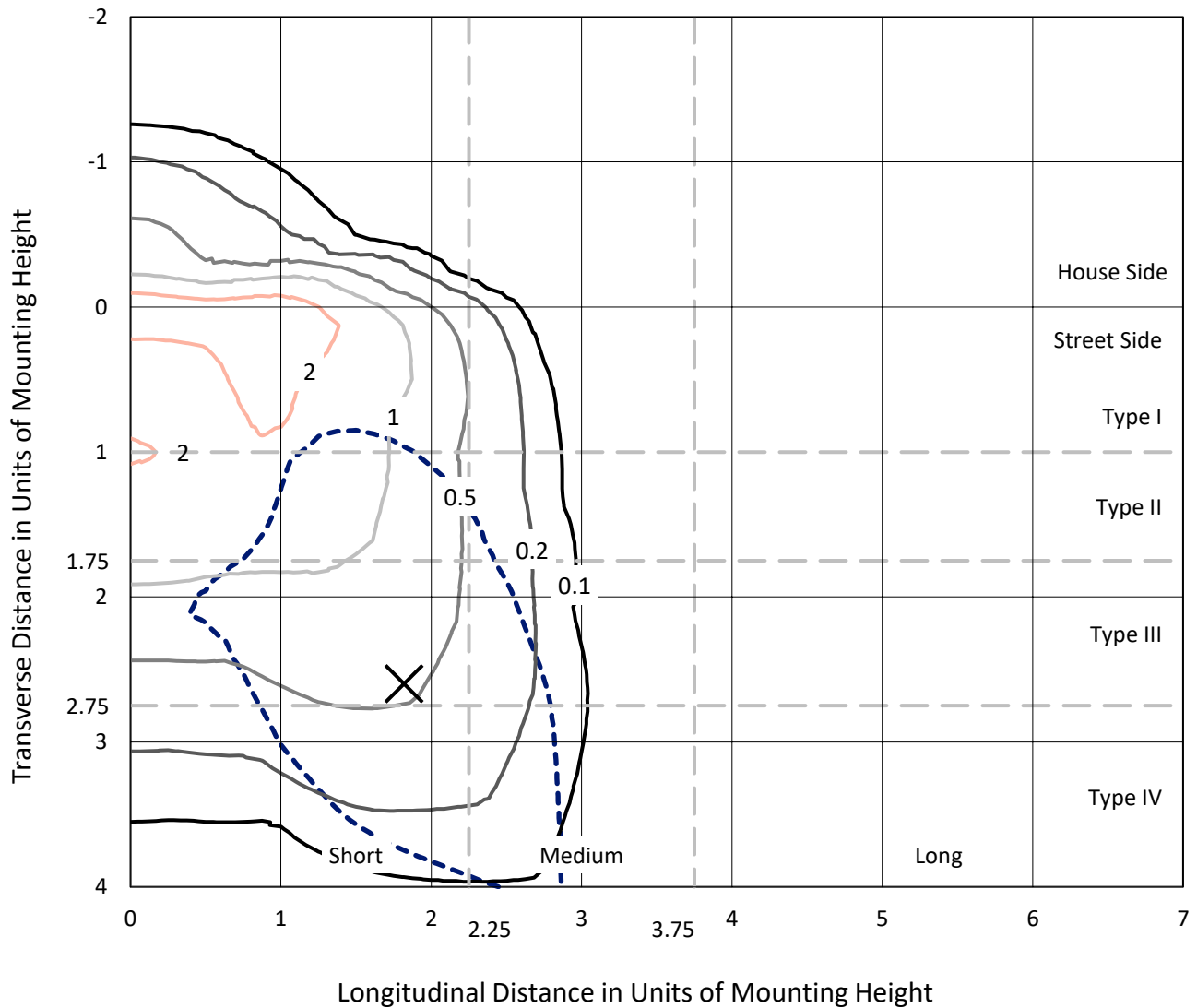
Lumens per Lamp: N/A  
Luminaire Lumens: 12474 lumens  
Efficiency: N/A  
Efficacy: 109.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 114  
Input Voltage (V): 120.0  
Input Current (Ain): 0.952  
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

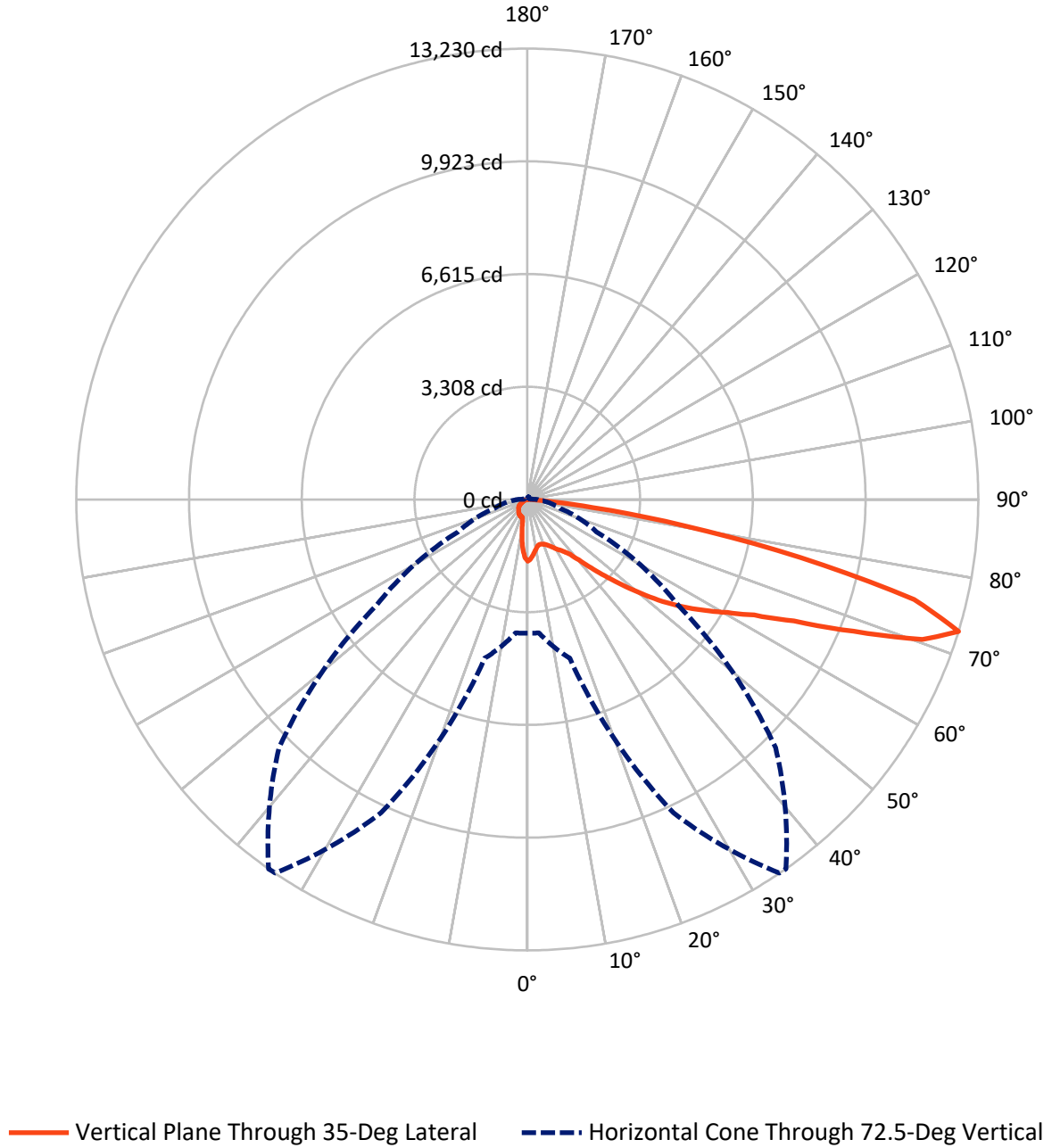
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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	1403.9	0.0	1403.9
	% Fixture	11.3	0.0	11.3
<b>Street Side</b>	Lumens	11070.1	0.0	11070.1
	% Fixture	88.7	0.0	88.7
<b>Total</b>	Lumens	12474.0	0.0	12474.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.6	1.2
10°-20°	347.5	2.8
20°-30°	564.6	4.5
30°-40°	942.0	7.6
40°-50°	1782.3	14.3
50°-60°	2832.0	22.7
60°-70°	3503.4	28.1
70°-80°	2177.7	17.5
80°-90°	176.0	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°	12474.0	100.0
0°-180°	12474.0	100.0

**Coefficient of Utilization**



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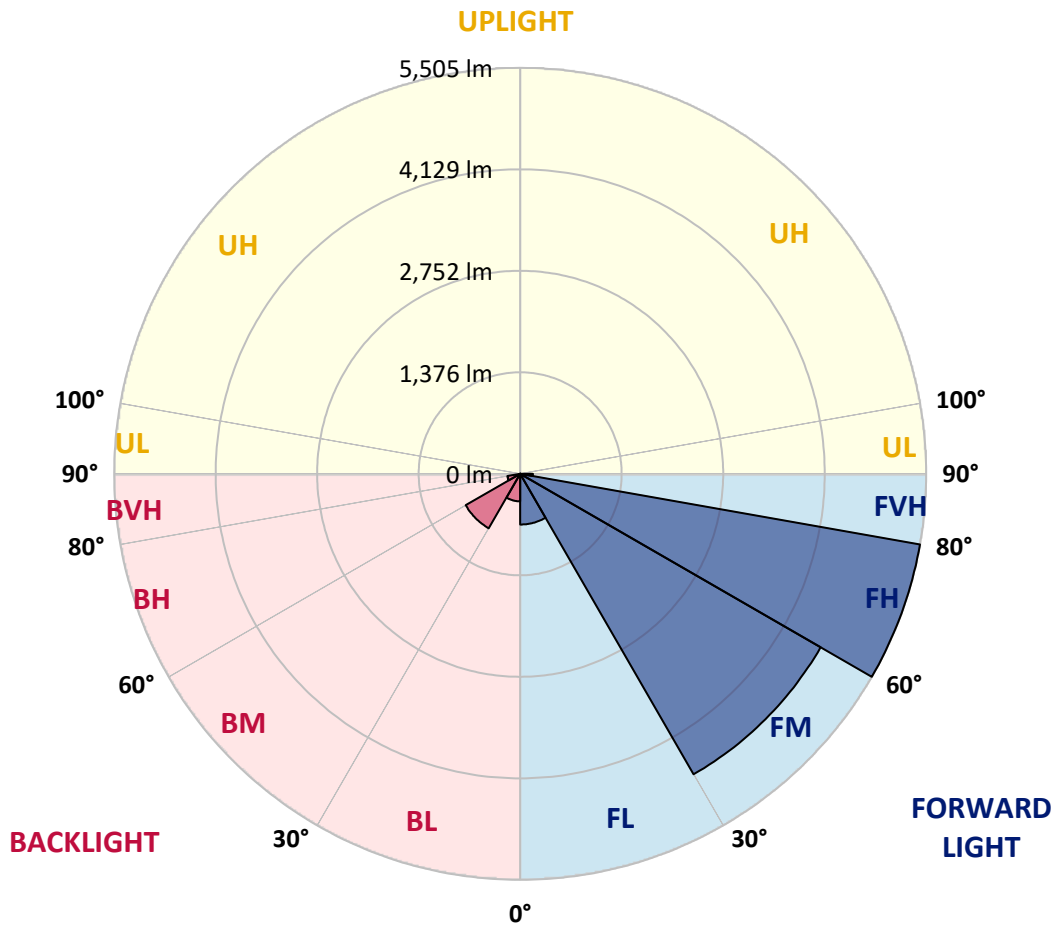
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	687.6	5.5			
FM (30°-60°)	4703.9	37.7			
FH (60°-80°)	5504.9	44.1			G3/7500
FVH (80°-90°)	173.6	1.4			G2/225
BL (0°-30°)	373.0	3.0	B1/500		
BM (30°-60°)	852.3	6.8	B1/1000		
BH (60°-80°)	176.2	1.4	B1/500		G1/500
BVH (80°-90°)	2.4	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-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9
2.5°	1727.5	1742.1	1744.8	1749.4	1749.4	1754.9	1764.0	1776.8	1797.8	1808.8	1816.1
5°	1592.2	1603.2	1616.9	1627.8	1648.9	1651.6	1687.3	1722.0	1770.4	1807.0	1832.6
7.5°	1456.0	1468.8	1487.1	1513.6	1541.0	1549.2	1603.2	1661.7	1738.4	1807.0	1849.9
10°	1360.0	1361.0	1377.4	1403.9	1447.8	1457.8	1523.6	1606.8	1702.8	1796.0	1866.4
12.5°	1306.1	1312.5	1319.8	1339.9	1382.0	1388.4	1458.8	1556.5	1667.1	1789.6	1885.6
15°	1306.1	1310.7	1315.3	1325.3	1359.1	1364.6	1426.8	1524.6	1648.9	1792.4	1916.7
17.5°	1319.8	1327.1	1323.5	1335.4	1371.0	1374.7	1429.5	1515.4	1648.0	1809.7	1964.2
20°	1352.7	1358.2	1350.9	1358.2	1393.9	1401.2	1457.8	1532.8	1663.5	1839.9	2023.6
22.5°	1404.8	1407.6	1390.2	1395.7	1432.2	1441.4	1507.2	1582.1	1701.0	1888.3	2103.1
25°	1470.6	1476.1	1449.6	1456.0	1490.7	1501.7	1577.6	1656.2	1760.4	1955.1	2204.6
27.5°	1546.5	1549.2	1526.4	1525.5	1570.3	1585.8	1662.6	1747.6	1839.9	2039.1	2332.5
30°	1633.3	1641.6	1619.6	1616.0	1672.6	1685.4	1761.3	1860.0	1956.9	2165.3	2514.4
32.5°	1701.9	1708.3	1695.5	1704.6	1762.2	1772.3	1881.0	2019.0	2140.6	2344.4	2762.1
35°	1800.6	1804.2	1775.0	1791.4	1857.3	1882.8	2044.6	2242.1	2371.8	2569.3	3085.7
37.5°	2158.0	2158.0	2033.7	1952.3	2015.4	2038.2	2268.6	2522.7	2657.0	2870.9	3493.3
40°	2652.4	2644.2	2462.3	2296.0	2287.8	2332.5	2587.5	2876.4	3025.4	3232.8	3952.2
42.5°	3179.8	3167.0	2919.3	2754.8	2727.4	2742.9	2955.9	3312.4	3464.1	3674.3	4445.7
45°	3647.8	3644.1	3417.5	3196.3	3146.9	3196.3	3415.6	3822.4	3931.1	4152.3	4938.4
47.5°	4039.9	4039.9	3874.5	3730.1	3704.5	3733.7	4038.1	4388.1	4378.1	4661.4	5418.2
50°	4491.4	4487.8	4330.6	4268.4	4294.9	4336.0	4754.7	4984.1	4840.6	5161.4	5846.9
52.5°	4807.7	4829.6	4775.7	4765.6	4900.9	4972.2	5482.2	5567.2	5254.6	5635.8	6167.7
55°	5058.1	5083.7	5145.8	5216.2	5476.7	5569.9	6186.9	6120.2	5601.0	6047.1	6352.3
57.5°	5412.7	5376.2	5472.1	5611.1	6032.4	6144.9	6869.7	6642.1	5879.8	6380.7	6372.4
60°	5843.2	5848.7	5865.2	6040.7	6587.2	6731.6	7542.4	7135.6	6058.9	6585.4	6149.4
62.5°	6360.6	6368.8	6402.6	6672.2	7332.1	7468.3	8258.9	7539.6	6141.2	6527.8	5573.6
65°	6324.9	6359.6	6737.1	7659.4	8464.6	8599.0	9095.3	7823.0	6016.9	6001.4	4538.0
67.5°	5761.9	5818.6	6450.1	8838.4	10172.0	10321.9	10106.1	7878.7	5480.4	4666.9	2960.5
70°	5023.4	5043.5	5803.0	9898.7	12148.9	12300.7	11011.0	7265.4	4158.7	2603.1	1326.2
72.5°	3922.9	3927.5	4818.6	10144.5	13222.0	13230.2	10300.8	5393.5	2236.6	999.9	460.7
75°	2802.3	2774.9	3227.3	8227.0	11632.5	11725.8	7722.4	2530.0	854.6	472.5	229.4
77.5°	1502.6	1532.8	1826.2	4879.0	8035.9	8195.0	4213.6	729.4	435.1	321.7	151.7
80°	464.3	489.9	748.6	2233.8	4551.7	4647.7	1562.0	324.5	303.4	229.4	99.6
82.5°	146.2	151.7	349.1	938.7	1889.2	1933.1	452.4	183.7	207.5	151.7	58.5
85°	42.0	43.0	155.4	350.1	467.1	476.2	127.0	71.3	118.8	94.1	30.2
87.5°	4.6	14.6	58.5	58.5	41.1	40.2	13.7	15.5	33.8	11.9	5.5
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°	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9	1807.9
2.5°	1811.6	1812.5	1800.6	1780.5	1758.5	1740.3	1717.4	1699.1	1686.3	1682.7	1689.1
5°	1824.4	1818.0	1784.1	1722.9	1649.8	1586.7	1516.3	1460.6	1424.0	1408.5	1414.0
7.5°	1843.5	1825.3	1751.2	1630.6	1490.7	1366.4	1240.3	1142.5	1080.4	1049.3	1053.8
10°	1860.0	1823.4	1696.4	1497.1	1283.3	1095.0	925.0	807.1	741.3	710.2	711.1
12.5°	1875.5	1822.5	1625.1	1339.0	1049.3	818.9	660.8	602.3	584.0	577.7	575.8
15°	1904.8	1825.3	1535.5	1158.0	816.2	618.8	561.2	560.3	563.9	562.1	561.2
17.5°	1945.0	1828.0	1434.1	966.1	629.7	545.7	542.9	551.1	556.6	553.9	553.0
20°	1997.1	1839.0	1326.2	776.0	541.1	527.4	533.8	541.1	545.7	541.1	540.2
22.5°	2070.2	1858.2	1208.3	623.4	512.8	516.4	521.9	530.1	534.7	528.3	527.4
25°	2159.8	1888.3	1092.2	542.0	499.0	503.6	511.8	521.0	526.5	520.1	519.2
27.5°	2275.9	1936.8	985.3	523.7	485.3	488.1	500.0	513.7	521.0	512.8	512.8
30°	2444.0	2016.3	893.0	532.0	477.1	470.7	487.2	506.4	514.6	507.3	506.4
32.5°	2667.1	2128.7	836.3	544.7	473.5	450.6	466.1	490.8	504.5	500.0	500.0
35°	2959.5	2299.6	814.4	559.4	470.7	429.6	440.6	467.1	490.8	495.4	495.4
37.5°	3314.2	2537.3	820.8	565.8	462.5	412.2	417.7	440.6	471.6	486.3	489.9
40°	3717.3	2814.2	857.3	559.4	453.3	397.6	398.5	415.9	443.3	465.2	472.5
42.5°	4133.1	3137.8	925.0	535.6	445.1	384.8	382.1	393.9	412.2	427.8	434.2
45°	4528.9	3470.5	991.7	502.7	435.1	372.0	365.6	370.2	373.8	380.2	383.9
47.5°	4874.4	3704.5	972.5	472.5	421.4	357.4	346.4	344.6	333.6	332.7	331.8
50°	5112.9	3755.6	863.7	442.4	401.2	340.9	323.6	312.6	293.4	284.3	285.2
52.5°	5188.8	3553.6	705.6	412.2	368.3	319.0	294.3	276.9	253.2	245.0	244.0
55°	5088.3	3157.9	563.9	375.7	322.6	289.7	262.3	239.5	220.3	210.2	210.2
57.5°	4842.4	2654.3	446.0	332.7	274.2	256.8	229.4	206.6	190.1	180.1	178.2
60°	4434.7	2107.7	352.8	281.5	234.0	221.2	192.9	178.2	163.6	151.7	149.0
62.5°	3816.0	1504.5	276.9	223.0	195.6	181.0	164.5	153.6	136.2	119.7	117.0
65°	2977.8	920.4	213.9	163.6	157.2	149.9	139.8	129.8	108.8	92.3	89.6
67.5°	1878.3	436.0	152.6	123.4	124.3	120.6	116.1	107.9	92.3	77.7	75.9
70°	827.2	211.1	100.5	94.1	92.3	92.3	96.0	93.2	78.6	64.9	62.2
72.5°	281.5	113.3	74.9	71.3	66.7	65.8	80.4	77.7	63.1	50.3	47.5
75°	147.2	75.9	54.8	51.2	40.2	48.4	64.0	60.3	44.8	32.9	30.2
77.5°	96.0	53.9	37.5	32.9	22.9	32.0	47.5	42.0	26.5	16.5	14.6
80°	60.3	35.6	21.9	15.5	11.0	17.4	25.6	18.3	10.1	3.7	2.7
82.5°	32.0	18.3	8.2	5.5	4.6	5.5	6.4	4.6	1.8	0.0	0.0
85°	12.8	6.4	2.7	1.8	0.9	0.0	1.8	0.9	0.0	0.0	0.0
87.5°	4.6	0.9	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)