

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: P196928

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196928
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-5WQ-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8354 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G2

Input Watts (W): 85
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: 25 FT

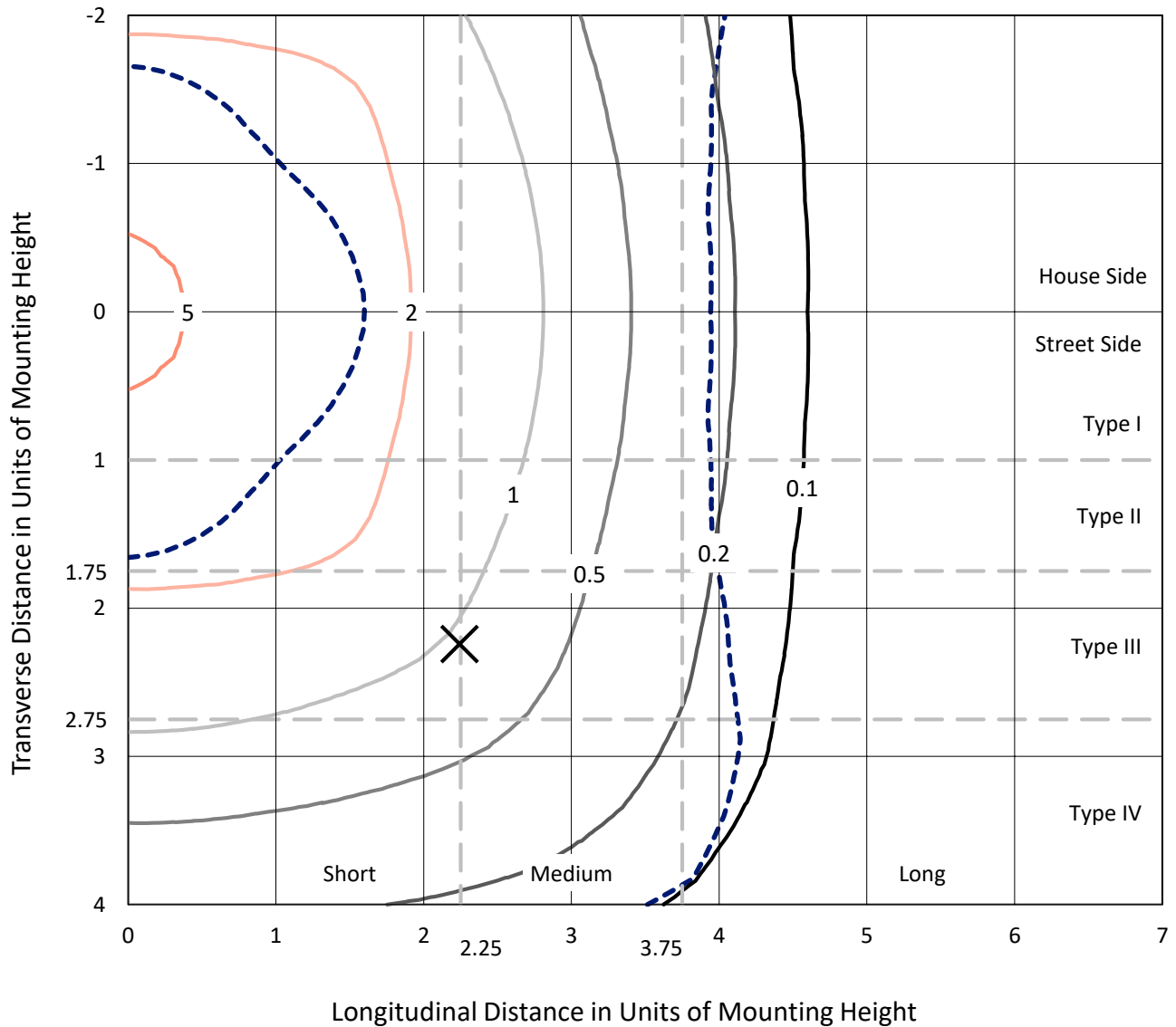


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Iso-Footcandle Lines of Horizontal Illumination

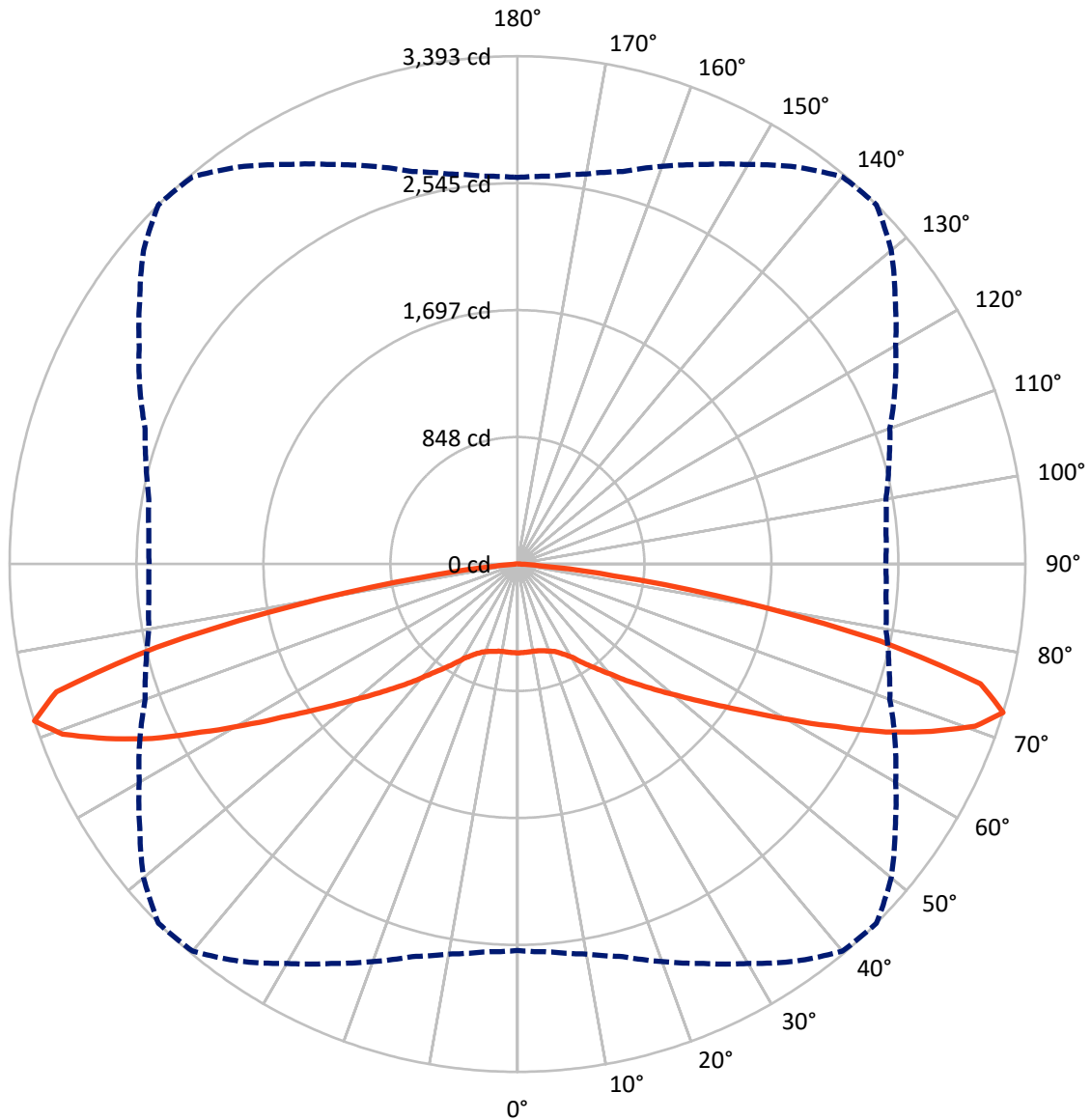
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4177.0	0.0	4177.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4177.0	0.0	4177.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	8354.0	0.0	8354.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	0.7
10°-20°	171.6	2.1
20°-30°	309.7	3.7
30°-40°	528.3	6.3
40°-50°	899.4	10.8
50°-60°	1447.5	17.3
60°-70°	2407.2	28.8
70°-80°	2328.7	27.9
80°-90°	205.0	2.5
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°	8354.0	100.0
0°-180°	8354.0	100.0



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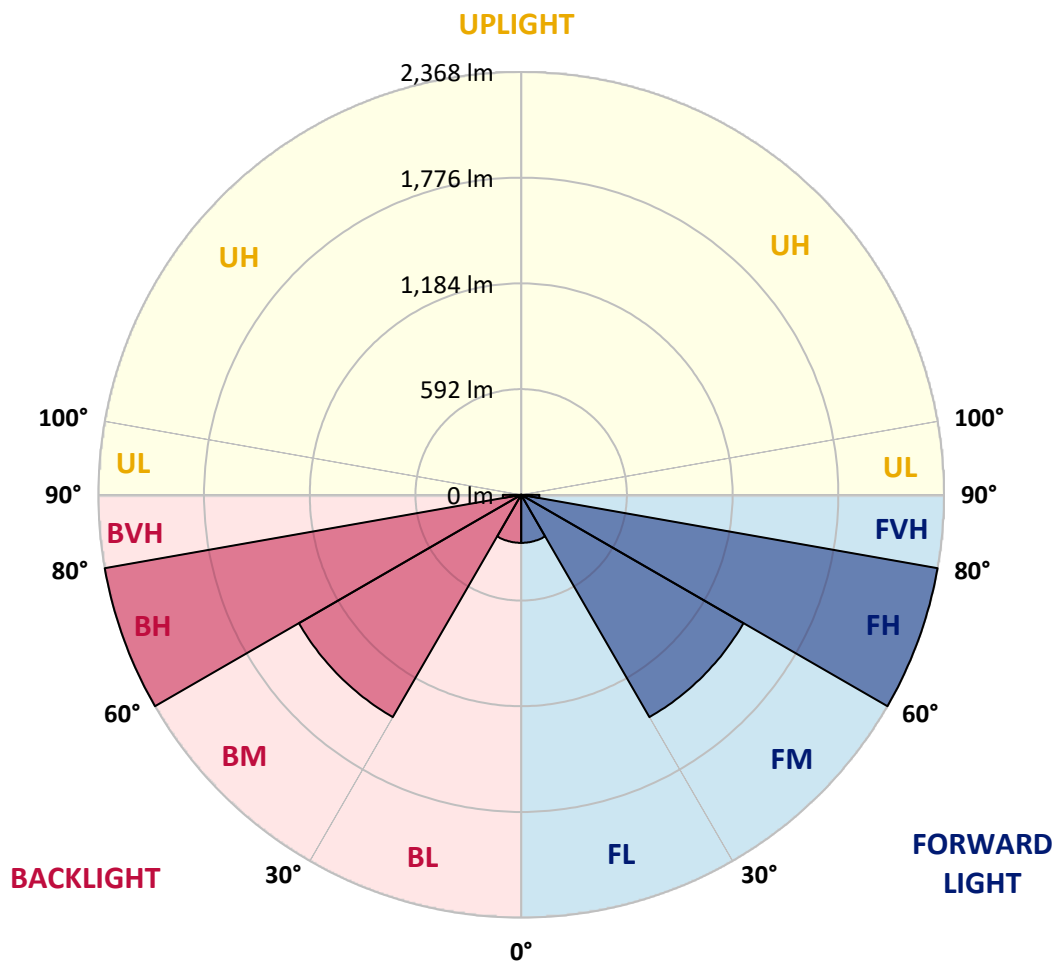
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	269.0	3.2			
FM (30°-60°)	1437.6	17.2			
FH (60°-80°)	2367.9	28.3			G2/5000
FVH (80°-90°)	102.5	1.2			G2/225
BL (0°-30°)	269.0	3.2	B1/500		
BM (30°-60°)	1437.6	17.2	B2/2500		
BH (60°-80°)	2367.9	28.3	B3/2500		G2/5000
BVH (80°-90°)	102.5	1.2			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	593.9	593.9	593.9	593.9	593.9	593.9	593.9	593.9	593.9	593.9	593.9
2.5°	598.5	598.5	599.0	598.5	597.5	597.0	595.4	594.4	593.4	592.9	591.8
5°	599.0	599.0	599.6	599.0	598.0	597.0	596.0	594.4	593.4	592.4	591.8
7.5°	601.1	601.6	602.1	601.6	599.6	598.5	597.0	595.4	593.4	592.4	591.3
10°	605.2	605.2	605.2	604.7	603.2	601.1	599.0	597.5	594.9	592.4	590.8
12.5°	608.3	608.8	608.8	607.8	605.7	603.2	601.1	599.6	597.5	595.4	593.9
15°	612.9	612.9	612.4	610.4	607.3	605.2	604.2	603.7	603.2	602.1	600.6
17.5°	622.2	621.7	620.1	617.0	613.4	611.9	610.9	610.9	610.9	610.4	609.3
20°	635.6	635.6	633.5	628.4	625.3	623.7	622.2	622.2	622.2	620.6	619.1
22.5°	657.2	657.7	654.6	648.4	644.3	641.2	639.2	637.6	636.1	635.0	632.5
25°	686.5	685.9	682.3	674.6	671.6	668.5	664.4	661.8	659.7	658.2	655.1
27.5°	717.3	716.8	712.7	706.0	703.9	699.3	696.2	692.6	690.1	687.5	684.4
30°	756.9	754.3	751.3	746.1	745.1	741.5	737.4	732.2	728.1	724.0	720.4
32.5°	792.4	792.4	787.8	785.2	787.2	785.7	786.2	783.1	780.6	779.0	775.4
35°	841.8	841.8	839.7	836.6	837.1	833.5	833.0	833.5	835.6	835.6	831.5
37.5°	907.6	908.6	901.9	900.9	898.3	893.2	890.6	891.6	896.3	898.8	893.2
40°	989.3	991.4	989.3	982.6	979.6	970.8	965.7	965.7	969.3	971.8	969.8
42.5°	1070.1	1073.7	1070.1	1064.9	1062.3	1055.7	1053.1	1055.1	1059.8	1062.9	1059.8
45°	1160.0	1162.6	1158.0	1151.8	1148.7	1145.1	1143.6	1145.1	1150.3	1153.4	1152.3
47.5°	1248.5	1252.1	1246.4	1243.9	1243.9	1240.3	1244.4	1248.5	1253.1	1260.3	1257.2
50°	1334.9	1339.5	1335.9	1336.4	1340.5	1347.2	1354.9	1363.2	1371.4	1379.1	1380.1
52.5°	1412.0	1419.2	1419.7	1429.0	1441.8	1452.1	1473.7	1491.7	1511.2	1517.9	1514.8
55°	1493.3	1503.0	1515.9	1530.3	1550.8	1571.9	1608.4	1640.8	1666.5	1682.5	1679.9
57.5°	1609.5	1619.2	1632.6	1656.3	1687.1	1715.9	1765.8	1816.2	1855.3	1879.4	1867.6
60°	1760.1	1770.4	1787.9	1813.1	1853.2	1892.3	1960.7	2033.2	2093.8	2121.6	2100.0
62.5°	1959.6	1969.4	1980.7	2014.1	2058.9	2109.3	2195.1	2288.2	2365.3	2392.1	2361.7
65°	2244.0	2255.8	2259.4	2286.7	2330.4	2377.2	2469.7	2574.6	2662.6	2706.3	2645.6
67.5°	2564.3	2569.0	2583.4	2615.2	2660.0	2702.1	2775.2	2874.4	2958.7	2982.9	2918.1
70°	2752.0	2761.3	2786.5	2830.7	2884.2	2950.5	3030.2	3137.2	3232.8	3244.1	3161.8
72.5°	2582.3	2601.4	2646.1	2715.0	2827.1	2944.9	3082.1	3240.0	3377.3	3393.2	3261.1
75°	2071.2	2092.8	2146.3	2221.9	2354.5	2529.4	2727.9	2964.9	3170.6	3196.8	3022.0
77.5°	1104.0	1130.7	1208.4	1310.2	1499.4	1730.8	1969.9	2240.4	2415.2	2474.4	2348.4
80°	278.2	292.6	330.1	389.8	517.8	704.5	910.7	1201.7	1418.7	1510.7	1418.7
82.5°	108.0	118.8	129.1	136.3	148.6	174.3	240.6	392.3	528.6	651.0	563.6
85°	41.7	44.2	63.8	72.5	72.5	79.7	91.5	108.0	133.7	146.0	122.4
87.5°	16.5	18.0	22.1	33.9	35.0	30.9	32.9	37.0	28.3	23.7	26.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	593.9	593.9	593.9	593.9	593.9	593.9	593.9	593.9
2.5°	591.3	590.8	589.8	590.3	589.8	589.8	589.8	589.8
5°	590.8	590.8	589.8	589.8	589.8	590.3	589.8	589.8
7.5°	590.3	589.8	588.8	588.3	588.3	587.7	587.7	587.7
10°	589.3	588.3	587.2	586.7	586.7	585.7	585.7	585.7
12.5°	591.8	590.3	589.3	588.8	588.8	588.8	589.3	589.3
15°	599.0	596.0	594.4	593.9	594.4	595.4	596.0	596.5
17.5°	606.8	603.7	601.1	600.1	600.6	602.1	603.7	604.7
20°	616.5	614.0	610.9	609.8	609.8	611.9	612.9	614.5
22.5°	630.4	628.4	625.8	624.2	623.2	625.8	627.3	628.4
25°	652.5	650.5	648.4	646.9	646.4	648.9	650.0	650.5
27.5°	681.8	679.8	678.8	678.2	676.7	677.7	679.3	678.8
30°	719.9	721.4	719.9	719.9	717.3	718.3	717.3	716.3
32.5°	770.8	769.3	764.6	761.5	757.9	757.9	756.4	754.9
35°	821.7	816.6	814.0	815.5	814.0	815.0	812.4	809.9
37.5°	881.9	878.8	878.3	882.9	881.9	882.9	882.9	879.3
40°	961.6	959.5	963.1	970.8	973.9	973.4	974.4	969.8
42.5°	1053.1	1049.5	1051.0	1057.7	1061.3	1062.3	1061.8	1057.7
45°	1144.6	1145.6	1145.6	1152.8	1156.4	1158.5	1154.9	1153.4
47.5°	1248.0	1249.5	1245.9	1250.5	1251.6	1255.2	1252.1	1249.5
50°	1367.3	1361.6	1353.4	1354.9	1354.9	1353.9	1350.3	1347.2
52.5°	1500.4	1487.6	1472.2	1467.0	1461.4	1455.7	1448.5	1442.9
55°	1652.1	1630.0	1602.3	1589.4	1578.6	1565.8	1549.3	1543.6
57.5°	1828.0	1789.9	1752.9	1729.8	1702.0	1685.0	1664.0	1662.9
60°	2036.8	1985.3	1920.0	1885.6	1857.8	1837.8	1821.8	1815.7
62.5°	2277.9	2189.5	2119.0	2082.0	2049.6	2037.3	2017.2	2019.8
65°	2525.3	2435.3	2366.9	2337.1	2306.7	2298.5	2280.0	2286.7
67.5°	2793.2	2719.1	2644.0	2616.3	2588.5	2580.3	2561.3	2566.9
70°	3033.3	2939.2	2853.8	2799.3	2752.0	2714.0	2689.8	2680.0
72.5°	3081.1	2918.1	2783.9	2647.6	2569.0	2500.1	2471.8	2461.0
75°	2768.5	2515.5	2324.2	2164.3	2075.8	1975.6	1964.8	1949.9
77.5°	2153.5	1865.5	1634.1	1428.5	1309.7	1187.3	1145.1	1113.3
80°	1284.5	987.3	765.1	536.3	437.6	352.2	331.1	309.0
82.5°	459.7	294.6	198.5	154.8	138.3	127.5	119.3	108.5
85°	111.1	93.6	88.4	80.2	79.2	67.4	47.8	42.7
87.5°	35.5	32.4	32.9	31.4	32.9	24.7	20.1	18.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)