

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: P195949

Luminaire Tested: **NAV-AF-01-D-UNV-5NQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195949
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-5NQ
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6424.1 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B2 - U0 - G1

Input Watts (W): 59
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

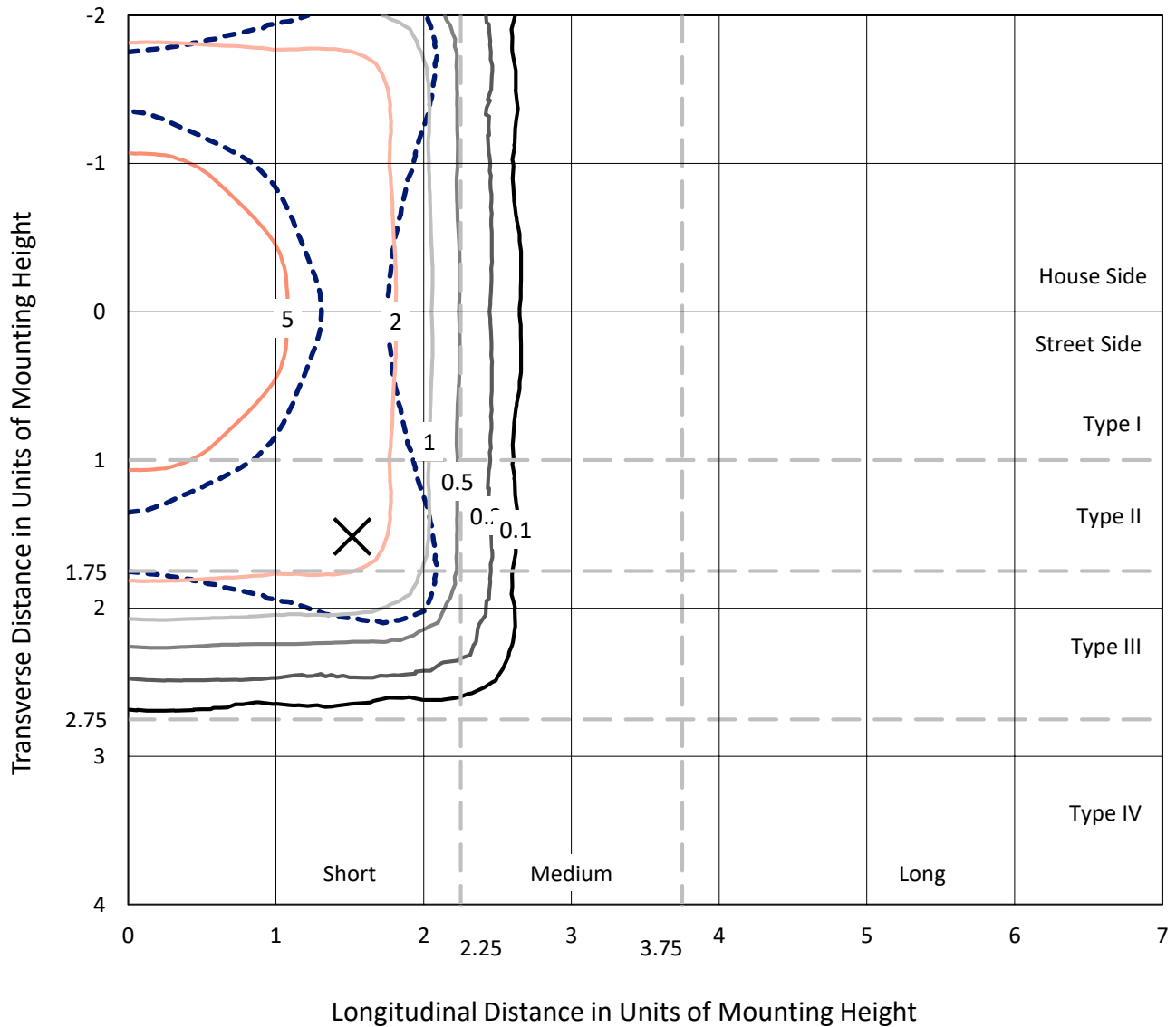


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

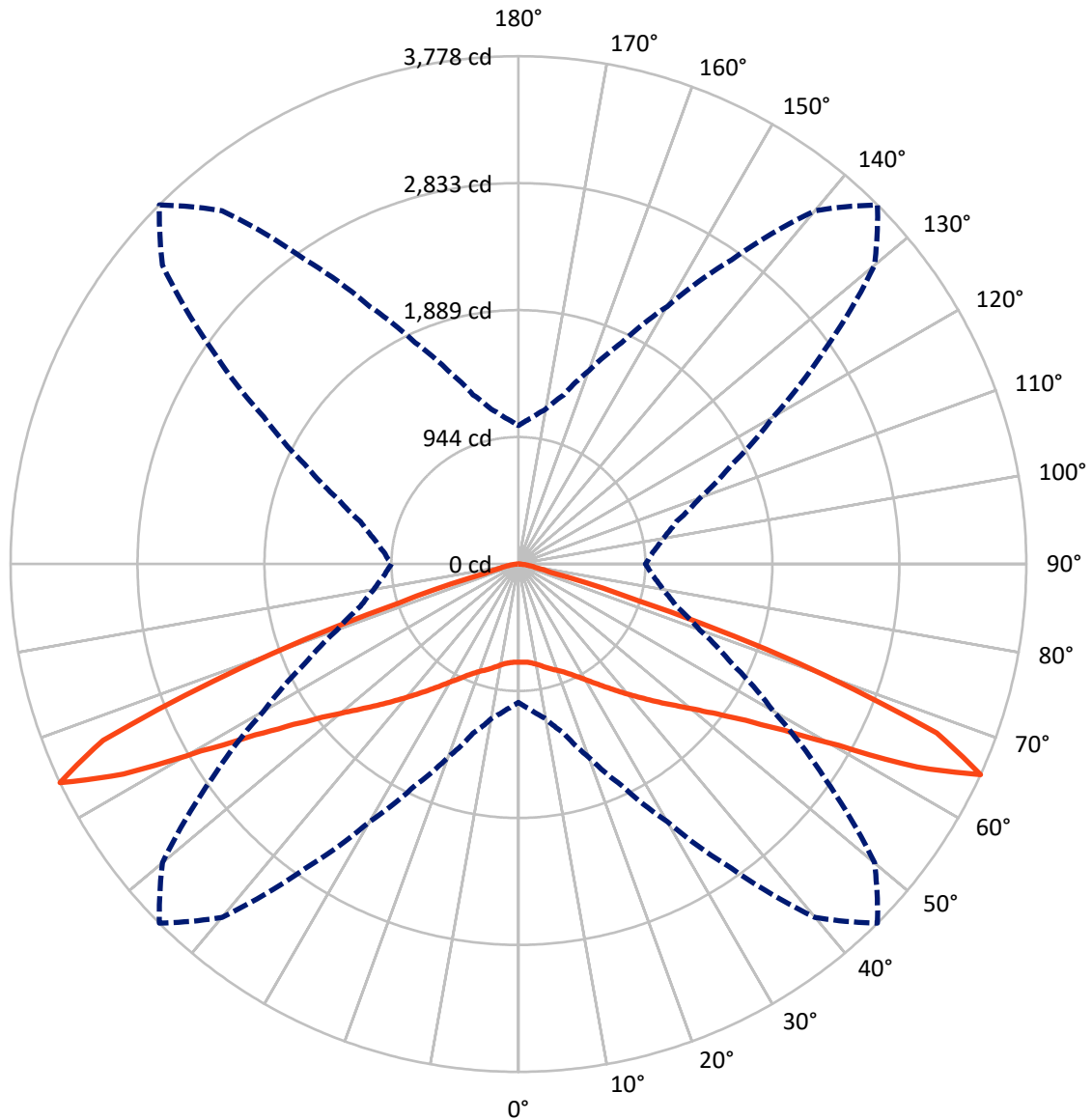


Based on 10 foot mounting height. Maximum calculated value = 7.3 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3212.1	0.0	3212.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3212.1	0.0	3212.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	6424.1	0.0	6424.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	1.1
10°-20°	228.1	3.6
20°-30°	425.5	6.6
30°-40°	717.4	11.2
40°-50°	1165.3	18.1
50°-60°	1825.7	28.4
60°-70°	1723.4	26.8
70°-80°	232.3	3.6
80°-90°	35.4	0.6
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°	6424.1	100.0
0°-180°	6424.1	100.0

Coefficient of Utilization



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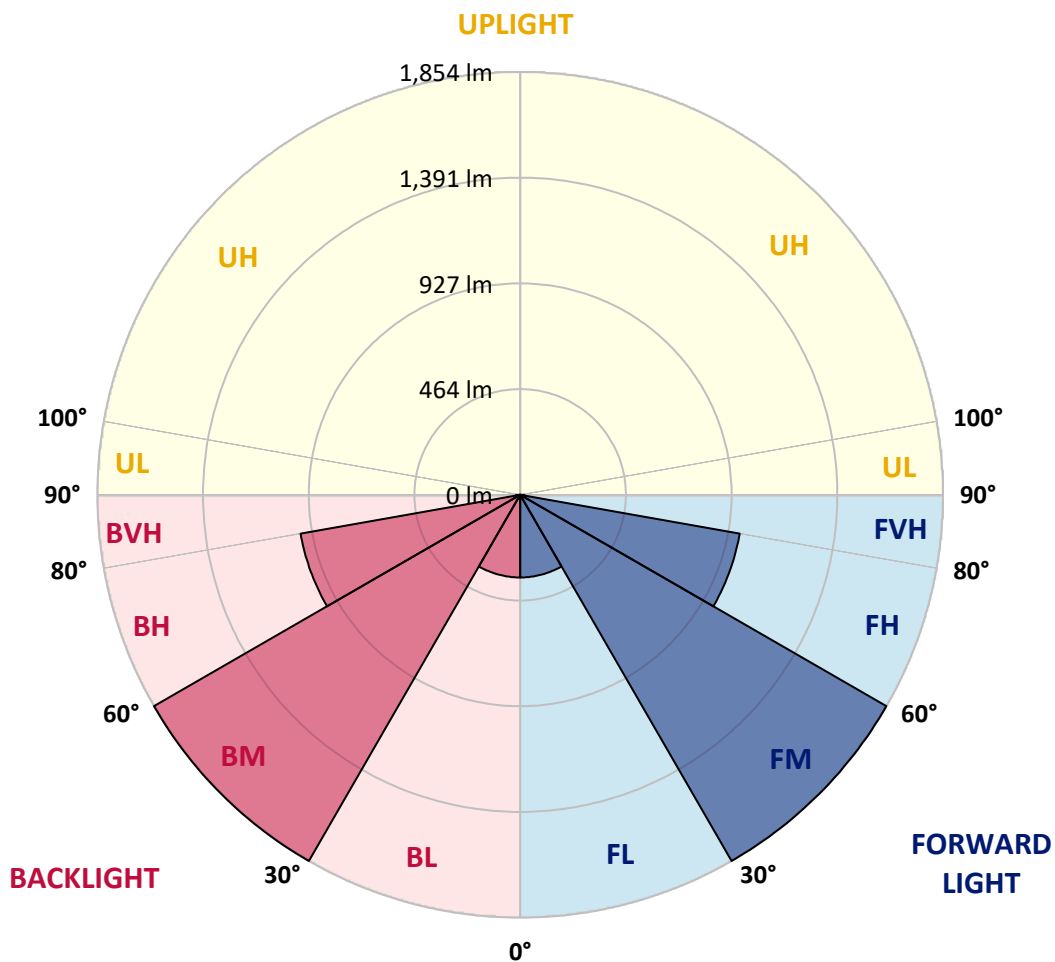
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	362.3	5.6			
FM	(30°-60°)	1854.2	28.9			
FH	(60°-80°)	977.8	15.2			G1/1800
FVH	(80°-90°)	17.7	0.3			G1/100
BL	(0°-30°)	362.3	5.6	B1/500		
BM	(30°-60°)	1854.2	28.9	B2/2500		
BH	(60°-80°)	977.8	15.2	B2/1000		G1/1800
BVH	(80°-90°)	17.7	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	730.7	730.7	730.7	730.7	730.7	730.7	730.7	730.7	730.7	730.7	730.7
2.5°	736.7	736.7	738.0	737.5	735.9	734.8	733.6	731.9	731.1	730.4	730.0
5°	740.7	740.7	741.9	741.5	740.3	738.8	738.0	736.7	735.5	734.8	735.1
7.5°	750.7	751.2	751.6	751.2	749.9	748.7	747.2	746.8	745.1	744.0	744.7
10°	766.0	766.0	766.4	766.8	766.0	763.1	763.1	762.3	760.8	759.1	759.5
12.5°	782.8	782.8	783.2	783.2	783.2	781.5	781.9	781.5	779.6	778.8	779.6
15°	799.1	799.5	799.5	800.4	800.4	800.8	802.4	802.4	801.6	801.2	801.2
17.5°	818.4	819.2	819.6	820.8	821.2	821.9	823.6	824.0	824.4	823.2	823.6
20°	844.0	844.3	845.6	846.0	847.6	847.6	848.4	848.0	847.2	845.6	845.6
22.5°	872.8	873.6	876.1	876.1	878.0	876.8	877.2	876.1	874.0	873.2	872.4
25°	910.4	911.7	913.6	912.8	913.6	911.7	911.7	911.7	910.4	909.2	908.8
27.5°	958.0	956.0	958.0	956.5	956.0	954.4	954.8	954.0	952.9	952.5	950.8
30°	1007.7	1005.3	1006.5	1006.9	1006.1	1005.7	1004.0	1002.9	1000.9	1001.3	1000.0
32.5°	1064.5	1062.1	1063.3	1063.7	1062.8	1063.7	1063.3	1060.5	1058.0	1059.7	1059.7
35°	1132.1	1130.6	1133.7	1135.0	1132.5	1131.3	1129.7	1126.5	1122.9	1125.3	1125.8
37.5°	1213.3	1211.4	1213.7	1217.0	1212.6	1210.2	1203.7	1199.0	1196.5	1197.8	1199.3
40°	1297.8	1298.2	1305.0	1305.8	1301.0	1298.2	1291.8	1284.6	1277.8	1277.8	1279.8
42.5°	1386.6	1387.8	1395.8	1398.7	1397.0	1391.8	1383.0	1374.2	1365.4	1367.1	1369.4
45°	1487.1	1485.5	1493.9	1500.7	1499.4	1497.9	1489.5	1473.5	1465.5	1465.1	1469.1
47.5°	1592.7	1595.9	1604.7	1616.4	1616.0	1612.0	1601.1	1586.3	1571.6	1572.7	1577.5
50°	1716.0	1720.4	1735.2	1746.8	1748.4	1747.2	1734.4	1717.2	1696.4	1697.6	1704.0
52.5°	1826.5	1832.8	1850.0	1874.0	1888.9	1895.6	1887.2	1871.3	1850.0	1851.2	1858.1
55°	1926.5	1936.4	1962.1	1995.0	2024.5	2052.1	2064.5	2064.1	2048.6	2052.1	2060.9
57.5°	1989.3	2003.3	2042.1	2095.0	2153.8	2209.4	2257.4	2302.7	2312.7	2331.5	2331.5
60°	1904.8	1937.7	1989.3	2079.8	2195.5	2320.3	2455.5	2587.1	2672.0	2738.8	2702.8
62.5°	1590.7	1639.2	1711.6	1830.9	2010.9	2233.8	2505.5	2811.7	3131.0	3326.3	3183.1
65°	1029.3	1090.1	1168.9	1303.0	1529.9	1816.9	2212.6	2762.9	3431.2	3777.8	3457.6
67.5°	407.7	449.0	497.1	592.3	789.2	1070.9	1515.1	2193.8	3029.8	3356.7	2997.8
70°	194.9	201.7	210.9	231.3	280.5	378.6	608.7	1080.8	1858.1	2202.6	1813.6
72.5°	140.9	142.1	146.5	153.2	167.7	187.7	228.1	330.5	640.7	931.6	641.5
75°	106.9	108.4	110.9	114.5	122.0	131.7	146.9	176.0	219.3	252.9	218.9
77.5°	81.2	82.9	84.8	88.5	92.5	99.2	104.9	116.4	134.8	142.1	141.3
80°	59.2	62.0	65.3	68.4	71.2	74.5	74.9	80.4	90.8	97.7	95.6
82.5°	37.6	40.0	48.4	52.1	52.4	53.2	52.8	53.2	58.8	63.6	62.0
85°	24.0	25.6	30.0	34.1	33.2	34.8	34.8	34.1	31.6	27.2	32.4
87.5°	12.0	12.4	14.4	18.0	17.2	15.2	14.8	14.8	10.8	9.2	10.0
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°	730.7	730.7	730.7	730.7	730.7	730.7	730.7	730.7
2.5°	728.8	729.6	728.3	728.3	727.9	728.8	727.5	727.5
5°	734.4	735.5	735.1	735.1	735.9	736.7	736.3	735.9
7.5°	744.3	745.1	745.9	746.3	747.2	746.8	747.6	747.2
10°	759.5	758.7	760.0	758.7	759.1	758.3	758.7	758.7
12.5°	778.8	777.5	776.7	775.9	775.9	774.4	774.4	774.8
15°	800.8	798.7	797.2	796.4	795.5	795.5	794.3	795.1
17.5°	822.4	820.4	817.5	817.5	816.4	815.6	814.8	816.8
20°	845.2	843.2	841.6	841.2	838.8	838.0	838.4	840.8
22.5°	871.6	870.4	870.4	869.6	868.0	866.8	866.8	869.6
25°	907.3	904.8	905.2	905.6	904.8	904.8	904.0	906.0
27.5°	950.8	948.8	950.0	950.8	950.0	951.2	950.0	951.7
30°	1002.1	1000.9	1002.1	1003.3	1001.3	1001.3	1000.4	1001.7
32.5°	1063.3	1061.7	1062.5	1062.5	1059.7	1057.3	1054.0	1056.5
35°	1130.6	1128.5	1130.2	1131.3	1128.1	1125.8	1120.9	1122.9
37.5°	1204.5	1205.3	1207.4	1212.6	1211.8	1207.8	1204.1	1205.8
40°	1287.4	1291.4	1300.2	1303.8	1303.0	1299.0	1294.2	1295.0
42.5°	1381.1	1386.2	1395.4	1401.4	1398.7	1393.1	1387.0	1389.5
45°	1483.1	1491.1	1503.1	1509.1	1505.5	1499.4	1491.1	1495.5
47.5°	1591.1	1607.2	1623.1	1631.2	1630.0	1621.6	1610.7	1612.0
50°	1720.4	1741.6	1762.0	1770.0	1764.0	1751.2	1736.0	1735.6
52.5°	1881.3	1904.1	1920.9	1918.9	1904.1	1884.1	1866.9	1866.1
55°	2082.1	2089.8	2087.3	2070.1	2044.2	2013.0	1991.0	1987.3
57.5°	2325.1	2299.5	2261.8	2209.8	2151.4	2092.1	2052.1	2037.3
60°	2622.0	2506.3	2371.9	2230.2	2100.9	2004.2	1942.9	1905.7
62.5°	2867.3	2532.4	2231.9	1985.8	1784.4	1664.8	1581.2	1529.5
65°	2783.2	2187.8	1752.4	1435.1	1215.4	1091.7	1003.3	944.4
67.5°	2150.2	1461.9	1017.2	705.1	534.7	452.7	395.4	358.1
70°	1084.1	560.7	339.7	239.7	204.9	190.5	180.9	175.2
72.5°	318.1	212.5	176.5	156.1	143.6	134.8	129.3	126.4
75°	176.0	143.6	126.8	115.3	107.2	101.3	97.7	95.2
77.5°	121.2	104.4	96.1	88.5	82.0	77.6	74.9	72.4
80°	84.8	76.4	72.8	68.8	64.0	60.5	56.5	54.8
82.5°	56.5	52.8	52.1	48.8	46.0	42.0	34.8	32.4
85°	33.2	32.8	32.8	31.6	29.6	26.0	20.8	20.8
87.5°	11.6	12.0	12.4	13.2	12.8	10.8	8.8	8.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)