

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: P195469

Luminaire Tested: **NAV-AF-01-D-UNV-5NQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195469
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-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 6280 lumens
Efficiency: N/A
Efficacy: 106.4 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

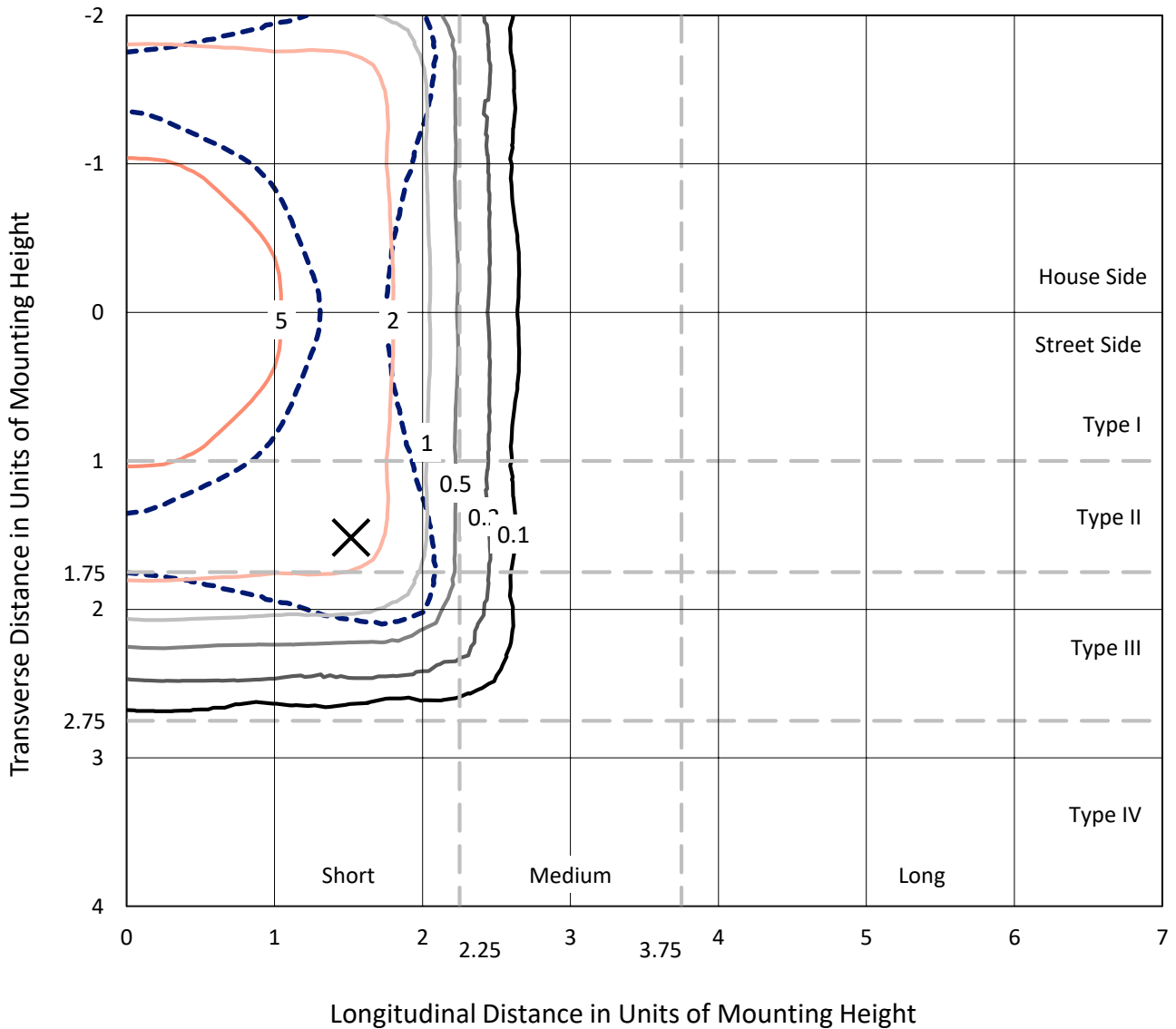
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

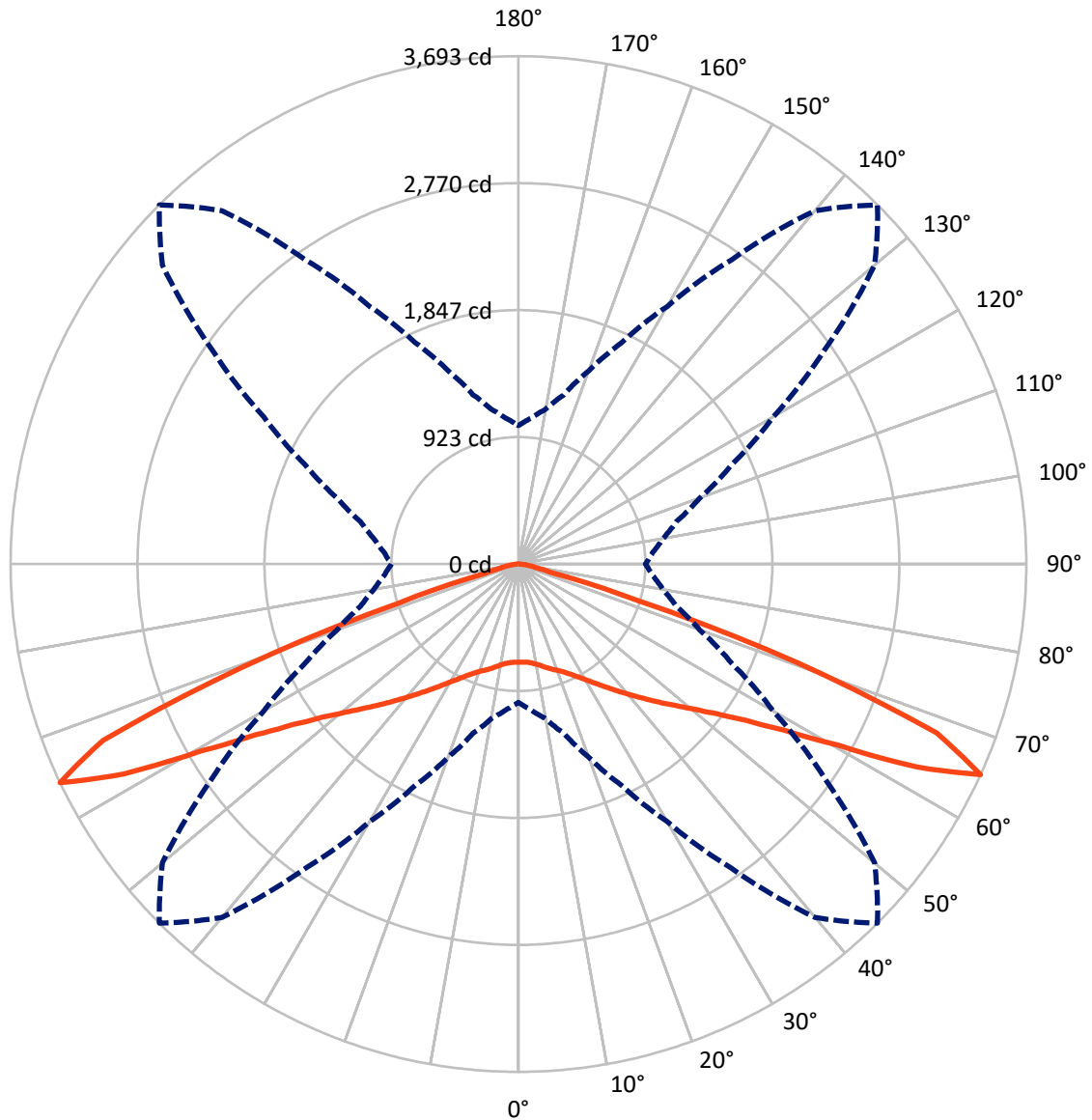
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 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	3140.0	0.0	3140.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3140.0	0.0	3140.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	6280.0	0.0	6280.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	1.1
10°-20°	223.0	3.6
20°-30°	415.9	6.6
30°-40°	701.3	11.2
40°-50°	1139.1	18.1
50°-60°	1784.8	28.4
60°-70°	1684.8	26.8
70°-80°	227.1	3.6
80°-90°	34.6	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°	6280.0	100.0
0°-180°	6280.0	100.0



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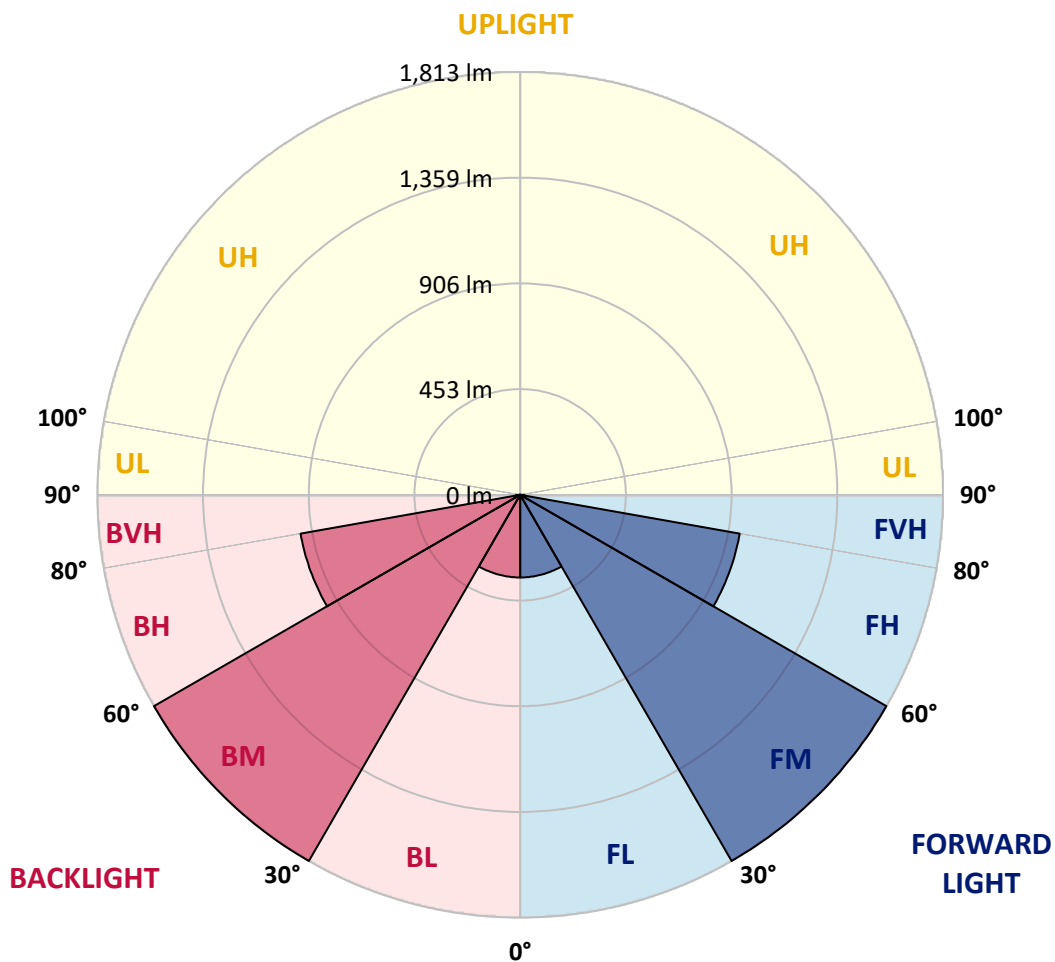
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	354.2	5.6			
FM	(30°-60°)	1812.6	28.9			
FH	(60°-80°)	955.9	15.2			G1/1800
FVH	(80°-90°)	17.3	0.3			G1/100
BL	(0°-30°)	354.2	5.6	B1/500		
BM	(30°-60°)	1812.6	28.9	B2/2500		
BH	(60°-80°)	955.9	15.2	B2/1000		G1/1800
BVH	(80°-90°)	17.3	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°	714.3	714.3	714.3	714.3	714.3	714.3	714.3	714.3	714.3	714.3	714.3
2.5°	720.2	720.2	721.4	721.0	719.4	718.3	717.1	715.5	714.7	714.0	713.6
5°	724.1	724.1	725.3	724.9	723.7	722.2	721.4	720.2	719.0	718.3	718.6
7.5°	733.9	734.3	734.7	734.3	733.1	731.9	730.4	730.0	728.4	727.3	728.0
10°	748.8	748.8	749.2	749.6	748.8	746.0	746.0	745.2	743.7	742.1	742.5
12.5°	765.2	765.2	765.6	765.6	765.6	764.0	764.4	764.0	762.1	761.3	762.1
15°	781.2	781.6	781.6	782.4	782.4	782.8	784.4	784.4	783.6	783.2	783.2
17.5°	800.0	800.8	801.2	802.4	802.8	803.5	805.1	805.5	805.9	804.7	805.1
20°	825.1	825.4	826.6	827.0	828.6	828.6	829.4	829.0	828.2	826.6	826.6
22.5°	853.2	854.0	856.4	856.4	858.3	857.1	857.5	856.4	854.4	853.6	852.8
25°	890.0	891.2	893.1	892.3	893.1	891.2	891.2	891.2	890.0	888.8	888.4
27.5°	936.5	934.6	936.5	935.0	934.6	933.0	933.4	932.6	931.5	931.1	929.5
30°	985.1	982.7	983.9	984.3	983.5	983.1	981.5	980.4	978.4	978.8	977.6
32.5°	1040.6	1038.3	1039.4	1039.8	1039.0	1039.8	1039.4	1036.7	1034.3	1035.9	1035.9
35°	1106.7	1105.2	1108.3	1109.5	1107.1	1105.9	1104.4	1101.2	1097.7	1100.1	1100.5
37.5°	1186.1	1184.2	1186.5	1189.7	1185.4	1183.0	1176.7	1172.1	1169.7	1170.9	1172.4
40°	1268.7	1269.1	1275.7	1276.5	1271.8	1269.1	1262.8	1255.8	1249.1	1249.1	1251.1
42.5°	1355.5	1356.7	1364.5	1367.3	1365.7	1360.6	1352.0	1343.4	1334.8	1336.4	1338.7
45°	1453.7	1452.2	1460.4	1467.0	1465.8	1464.3	1456.1	1440.4	1432.6	1432.2	1436.1
47.5°	1557.0	1560.1	1568.7	1580.1	1579.7	1575.8	1565.2	1550.7	1536.3	1537.4	1542.1
50°	1677.5	1681.8	1696.3	1707.6	1709.2	1708.0	1695.5	1678.7	1658.3	1659.5	1665.8
52.5°	1785.5	1791.7	1808.5	1832.0	1846.5	1853.1	1844.9	1829.3	1808.5	1809.7	1816.4
55°	1883.3	1893.0	1918.1	1950.2	1979.1	2006.1	2018.2	2017.8	2002.6	2006.1	2014.7
57.5°	1944.7	1958.4	1996.3	2048.0	2105.5	2159.8	2206.8	2251.0	2260.8	2279.2	2279.2
60°	1862.1	1894.2	1944.7	2033.1	2146.2	2268.2	2400.4	2529.1	2612.1	2677.4	2642.2
62.5°	1555.0	1602.4	1673.2	1789.8	1965.8	2183.7	2449.3	2748.6	3060.8	3251.7	3111.7
65°	1006.2	1065.6	1142.7	1273.8	1495.6	1776.1	2163.0	2700.9	3354.2	3693.0	3380.0
67.5°	398.6	438.9	485.9	579.0	771.5	1046.9	1481.1	2144.6	2961.8	3281.4	2930.5
70°	190.5	197.2	206.2	226.1	274.2	370.1	595.0	1056.6	1816.4	2153.2	1772.9
72.5°	137.7	138.9	143.2	149.8	163.9	183.5	223.0	323.1	626.3	910.7	627.1
75°	104.5	106.0	108.4	111.9	119.3	128.7	143.6	172.1	214.4	247.2	214.0
77.5°	79.4	81.0	82.9	86.5	90.4	97.0	102.5	113.8	131.8	138.9	138.1
80°	57.9	60.6	63.8	66.9	69.6	72.8	73.2	78.6	88.8	95.5	93.5
82.5°	36.8	39.1	47.3	50.9	51.2	52.0	51.6	52.0	57.5	62.2	60.6
85°	23.5	25.0	29.3	33.3	32.5	34.0	34.0	33.3	30.9	26.6	31.7
87.5°	11.7	12.1	14.1	17.6	16.8	14.9	14.5	14.5	10.6	9.0	9.8
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°	714.3	714.3	714.3	714.3	714.3	714.3	714.3	714.3
2.5°	712.4	713.2	712.0	712.0	711.6	712.4	711.2	711.2
5°	717.9	719.0	718.6	718.6	719.4	720.2	719.8	719.4
7.5°	727.6	728.4	729.2	729.6	730.4	730.0	730.8	730.4
10°	742.5	741.7	742.9	741.7	742.1	741.3	741.7	741.7
12.5°	761.3	760.1	759.3	758.5	758.5	757.0	757.0	757.4
15°	782.8	780.8	779.3	778.5	777.7	777.7	776.5	777.3
17.5°	803.9	802.0	799.2	799.2	798.1	797.3	796.5	798.5
20°	826.2	824.3	822.7	822.3	820.0	819.2	819.6	821.9
22.5°	852.0	850.9	850.9	850.1	848.5	847.4	847.4	850.1
25°	886.9	884.5	884.9	885.3	884.5	884.5	883.7	885.7
27.5°	929.5	927.5	928.7	929.5	928.7	929.9	928.7	930.3
30°	979.6	978.4	979.6	980.8	978.8	978.8	978.0	979.2
32.5°	1039.4	1037.9	1038.7	1038.7	1035.9	1033.6	1030.4	1032.8
35°	1105.2	1103.2	1104.8	1105.9	1102.8	1100.5	1095.8	1097.7
37.5°	1177.5	1178.3	1180.3	1185.4	1184.6	1180.7	1177.1	1178.7
40°	1258.5	1262.4	1271.0	1274.5	1273.8	1269.9	1265.2	1265.9
42.5°	1350.1	1355.1	1364.1	1370.0	1367.3	1361.8	1355.9	1358.3
45°	1449.8	1457.6	1469.4	1475.2	1471.7	1465.8	1457.6	1461.9
47.5°	1555.4	1571.1	1586.7	1594.6	1593.4	1585.2	1574.6	1575.8
50°	1681.8	1702.5	1722.5	1730.3	1724.4	1711.9	1697.1	1696.7
52.5°	1839.1	1861.4	1877.8	1875.8	1861.4	1841.8	1825.0	1824.2
55°	2035.4	2042.9	2040.5	2023.7	1998.3	1967.8	1946.3	1942.7
57.5°	2272.9	2247.9	2211.1	2160.2	2103.1	2045.2	2006.1	1991.6
60°	2563.2	2450.1	2318.7	2180.2	2053.8	1959.2	1899.3	1862.9
62.5°	2803.0	2475.6	2181.8	1941.2	1744.4	1627.4	1545.7	1495.2
65°	2720.8	2138.7	1713.1	1402.9	1188.1	1067.2	980.8	923.2
67.5°	2102.0	1429.1	994.4	689.3	522.7	442.5	386.5	350.1
70°	1059.8	548.1	332.1	234.3	200.3	186.2	176.8	171.3
72.5°	311.0	207.7	172.5	152.6	140.4	131.8	126.4	123.6
75°	172.1	140.4	124.0	112.7	104.8	99.0	95.5	93.1
77.5°	118.5	102.1	93.9	86.5	80.2	75.9	73.2	70.8
80°	82.9	74.7	71.2	67.3	62.6	59.1	55.2	53.6
82.5°	55.2	51.6	50.9	47.7	45.0	41.1	34.0	31.7
85°	32.5	32.1	32.1	30.9	28.9	25.4	20.3	20.3
87.5°	11.3	11.7	12.1	12.9	12.5	10.6	8.6	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)