

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: P195433

Luminaire Tested: **NAV-AF-01-D-UNV-5MQ-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195433
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4287 lumens
Efficiency: N/A
Efficacy: 126.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

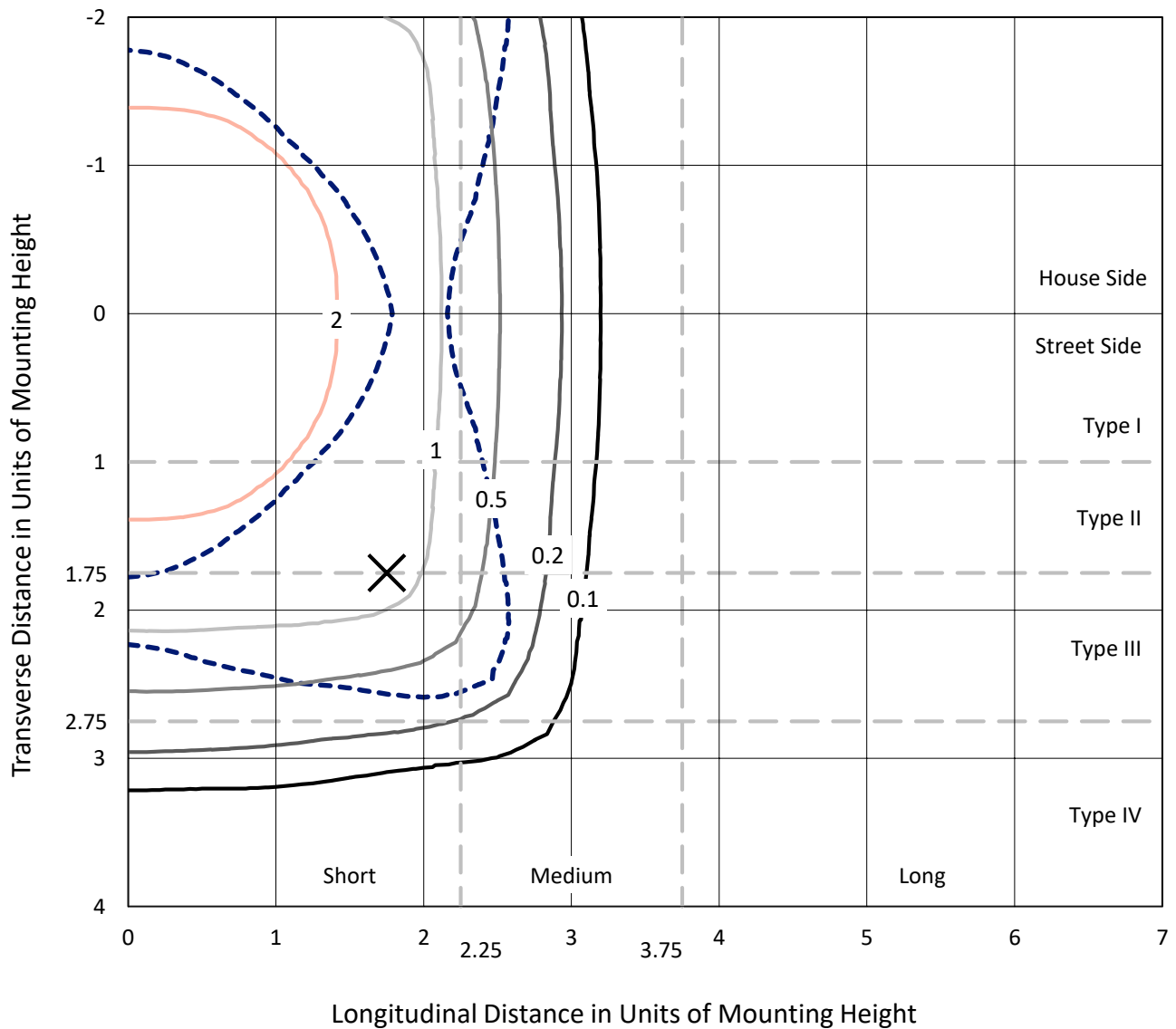
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

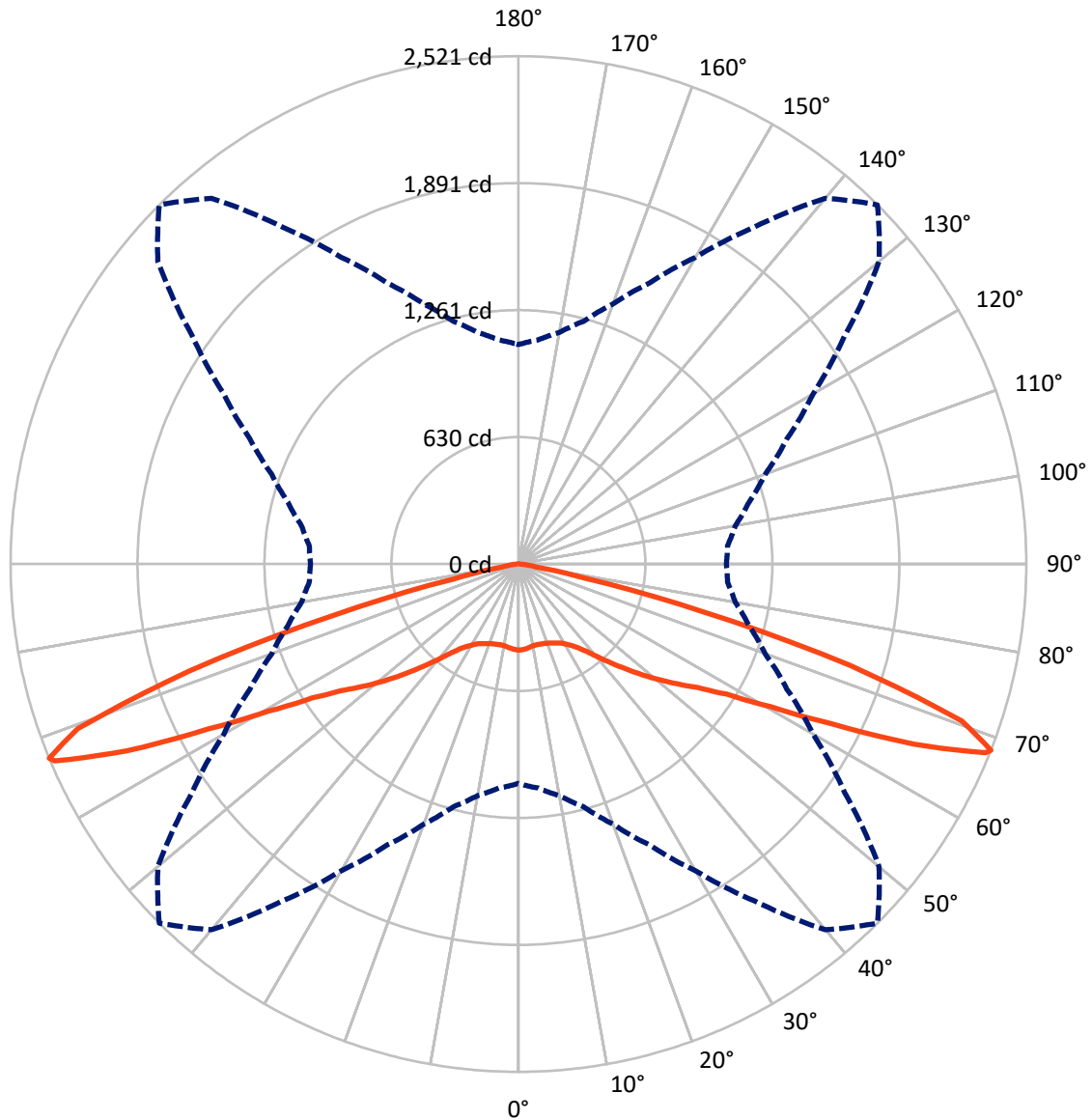
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2143.5	0.0	2143.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2143.5	0.0	2143.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	4287.0	0.0	4287.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	0.9
10°-20°	116.1	2.7
20°-30°	197.3	4.6
30°-40°	322.9	7.5
40°-50°	577.0	13.5
50°-60°	974.5	22.7
60°-70°	1511.1	35.2
70°-80°	519.5	12.1
80°-90°	28.6	0.7
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°	4287.0	100.0
0°-180°	4287.0	100.0



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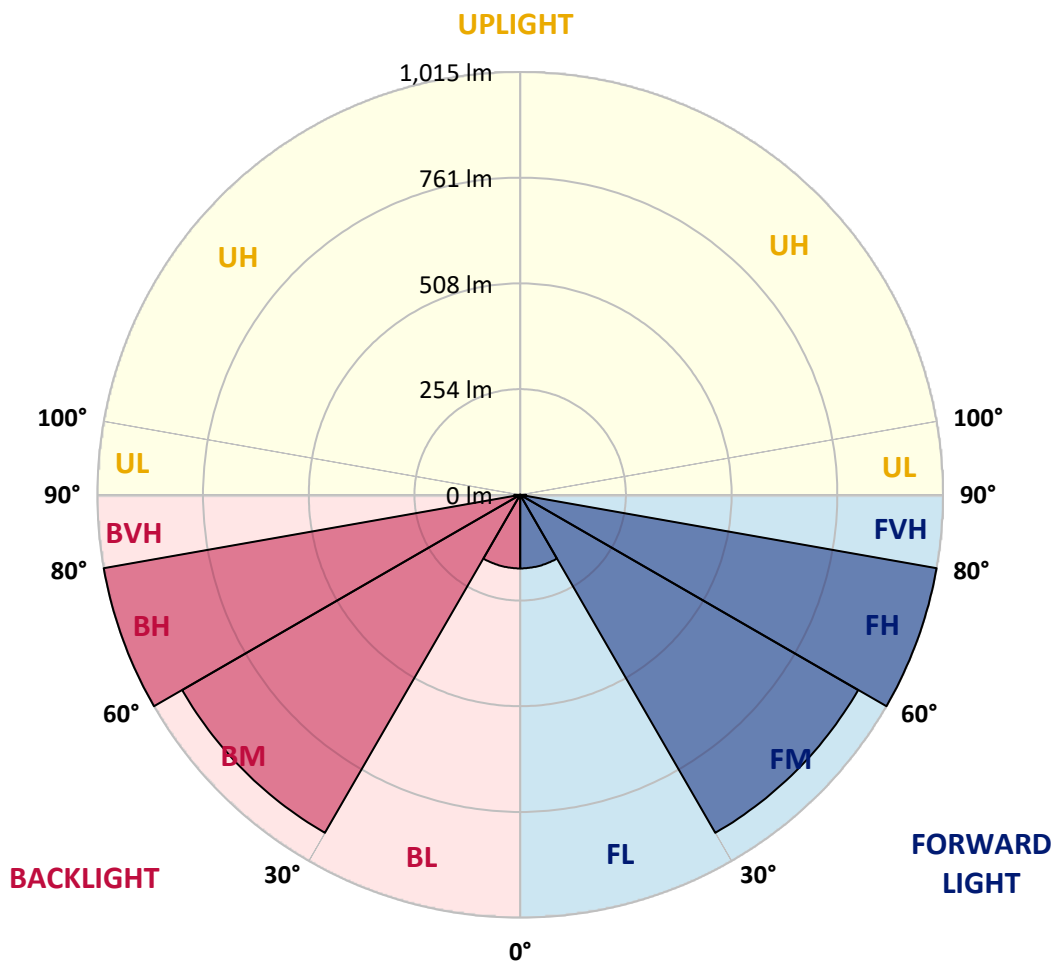
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	176.7	4.1			
FM (30°-60°)	937.2	21.9			
FH (60°-80°)	1015.3	23.7			G1/1800
FVH (80°-90°)	14.3	0.3			G1/100
BL (0°-30°)	176.7	4.1	B1/500		
BM (30°-60°)	937.2	21.9	B1/1000		
BH (60°-80°)	1015.3	23.7	B3/2500		G1/1800
BVH (80°-90°)	14.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.6	427.6	427.6	427.6	427.6	427.6	427.6	427.6	427.6	427.6	427.6
2.5°	429.5	429.5	430.0	429.7	429.0	428.2	427.4	426.6	426.1	425.5	425.0
5°	425.0	425.0	425.8	425.3	424.8	424.0	423.4	422.7	422.1	421.6	421.9
7.5°	419.2	419.8	420.3	420.0	419.0	418.7	417.9	417.7	417.1	416.4	416.6
10°	414.3	414.5	415.0	414.8	414.5	413.7	413.5	413.2	412.9	411.9	411.6
12.5°	409.3	409.8	410.3	410.6	410.3	410.6	410.8	411.1	410.8	410.3	410.3
15°	405.3	405.9	406.6	407.4	407.7	409.3	410.3	411.4	412.2	412.4	411.6
17.5°	403.2	404.0	405.1	406.6	408.0	409.8	411.6	413.2	414.5	414.8	414.0
20°	403.0	403.8	405.3	407.2	409.5	411.9	414.8	417.1	418.5	419.2	418.5
22.5°	404.8	405.9	408.0	410.3	413.2	416.4	420.0	422.7	425.3	426.3	425.5
25°	410.1	411.1	413.5	416.4	419.5	423.4	427.1	430.5	433.2	434.5	433.4
27.5°	421.1	421.3	424.0	427.1	430.8	434.2	438.9	440.5	442.6	443.9	442.6
30°	436.6	437.1	439.5	444.4	447.9	452.3	454.9	456.5	458.9	460.2	458.6
32.5°	460.2	460.7	462.8	467.5	470.7	474.1	477.3	478.3	480.7	482.2	480.4
35°	493.5	494.6	496.4	499.6	502.2	504.8	507.2	506.4	508.0	510.1	508.2
37.5°	539.2	538.9	539.5	541.8	544.5	546.0	549.7	547.9	549.4	551.3	550.2
40°	592.5	592.5	592.2	596.4	597.5	599.1	603.0	600.6	602.7	604.8	603.0
42.5°	653.1	654.2	655.5	658.9	661.8	662.3	664.2	663.1	665.7	667.6	665.7
45°	723.0	724.5	726.1	734.0	735.3	736.4	737.7	734.3	737.1	738.7	738.2
47.5°	795.4	798.3	801.7	809.9	815.1	817.5	818.5	814.6	814.9	817.2	817.5
50°	877.3	880.5	883.9	893.1	898.1	902.3	903.6	899.1	899.6	901.5	902.0
52.5°	952.9	956.6	964.0	976.3	983.4	990.7	991.3	985.8	988.1	989.4	988.4
55°	1024.1	1028.8	1038.5	1055.1	1067.9	1082.4	1088.9	1082.9	1082.9	1081.8	1081.3
57.5°	1107.0	1112.3	1122.3	1141.4	1159.3	1180.0	1197.9	1203.9	1214.9	1218.6	1212.8
60°	1232.0	1237.5	1247.7	1272.9	1295.5	1325.7	1355.1	1379.0	1417.9	1438.9	1420.0
62.5°	1346.2	1354.6	1378.7	1422.8	1471.7	1527.6	1592.4	1638.6	1709.3	1744.4	1696.9
65°	1320.2	1337.3	1384.5	1453.8	1554.6	1675.9	1808.0	1934.8	2080.7	2155.5	2058.9
67.5°	1153.2	1167.7	1218.6	1299.2	1424.9	1592.2	1797.5	2060.0	2361.1	2501.3	2330.4
68°	1089.4	1116.5	1167.2	1247.2	1374.0	1538.4	1757.6	2041.1	2369.7	2521.2	2336.7
70°	835.3	845.0	893.6	965.5	1102.3	1263.5	1484.8	1808.0	2179.4	2335.4	2145.6
72.5°	396.9	402.7	434.2	505.1	592.0	723.2	918.5	1223.3	1558.0	1720.3	1531.0
75°	145.4	146.7	154.1	170.9	203.5	252.8	346.5	536.1	793.6	946.4	796.7
77.5°	78.5	78.8	81.6	85.8	91.6	98.2	112.4	150.7	243.1	330.8	256.7
80°	49.4	49.1	52.0	55.4	59.3	62.5	63.8	68.3	76.9	90.0	82.7
82.5°	25.2	27.6	34.1	37.8	43.6	44.6	43.3	43.1	45.7	49.4	50.9
85°	13.9	12.3	18.1	24.2	26.3	27.0	27.3	25.7	25.2	24.7	26.0
87.5°	7.1	6.6	7.9	12.1	12.9	10.5	10.8	9.2	6.3	6.3	6.6
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°	427.6	427.6	427.6	427.6	427.6	427.6	427.6	427.6
2.5°	424.5	424.8	424.2	424.2	424.2	424.5	424.2	424.0
5°	421.1	421.6	421.6	421.9	422.1	422.1	422.1	422.1
7.5°	416.1	416.4	416.9	416.9	416.9	416.9	416.9	416.9
10°	411.4	410.8	410.6	410.1	410.1	409.3	409.5	409.8
12.5°	409.0	408.0	407.4	406.6	406.1	405.3	405.3	405.6
15°	410.1	408.5	406.9	406.4	405.9	405.3	404.8	405.1
17.5°	412.2	410.3	408.5	407.4	406.4	405.6	405.3	405.6
20°	416.6	414.0	411.1	409.3	407.2	406.6	405.9	406.6
22.5°	422.7	419.5	415.8	412.4	410.1	409.0	408.0	408.7
25°	430.0	426.6	422.9	419.0	416.4	415.6	414.3	414.3
27.5°	440.2	437.4	434.2	430.5	427.9	427.1	425.0	425.0
30°	456.5	453.6	450.7	447.6	445.0	444.2	441.6	441.6
32.5°	478.0	474.9	473.1	470.4	468.3	467.0	463.9	463.6
35°	506.9	504.0	503.8	501.9	499.8	500.1	496.9	496.4
37.5°	548.4	546.0	546.8	545.2	543.4	545.0	543.1	543.1
40°	601.4	600.6	601.4	600.4	600.6	600.9	599.3	599.9
42.5°	665.5	663.4	668.1	667.6	666.8	668.9	665.2	662.6
45°	739.2	738.5	743.2	744.0	742.4	743.7	737.1	736.9
47.5°	819.3	819.3	823.5	823.0	821.4	821.7	813.8	808.8
50°	902.8	902.3	906.5	905.4	903.3	903.1	894.9	889.9
52.5°	989.7	989.7	995.7	992.8	987.9	985.5	975.5	969.0
55°	1085.8	1084.5	1086.3	1076.8	1067.1	1060.0	1047.7	1042.7
57.5°	1207.3	1192.1	1179.0	1166.9	1153.2	1144.8	1130.4	1125.2
60°	1379.8	1339.1	1321.5	1297.4	1274.8	1263.5	1244.3	1234.1
62.5°	1618.7	1551.2	1503.4	1450.1	1398.7	1362.5	1333.3	1320.5
65°	1894.9	1747.8	1626.3	1512.1	1415.2	1338.3	1295.5	1282.1
67.5°	1999.9	1730.0	1520.2	1356.4	1238.8	1147.2	1096.0	1085.2
68°	1977.5	1689.0	1471.1	1303.4	1185.3	1092.9	1041.9	1032.2
70°	1744.4	1424.9	1195.0	1028.0	917.8	829.8	793.9	778.4
72.5°	1189.2	915.1	702.0	561.5	479.1	423.4	390.4	379.1
75°	547.3	369.9	247.0	184.5	156.7	143.3	133.1	130.5
77.5°	159.6	116.0	99.8	92.4	86.9	82.2	78.8	78.5
80°	75.9	71.1	69.0	64.3	59.3	54.9	51.7	52.2
82.5°	50.9	49.6	49.6	44.9	37.0	31.8	26.3	23.6
85°	27.0	28.1	29.7	28.1	24.4	18.1	11.8	12.9
87.5°	9.2	10.5	11.0	10.8	9.7	7.4	5.5	5.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)