

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: P195439

Luminaire Tested: **NAV-AF-01-D-UNV-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195439
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5257 lumens
Efficiency: N/A
Efficacy: 119.5 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

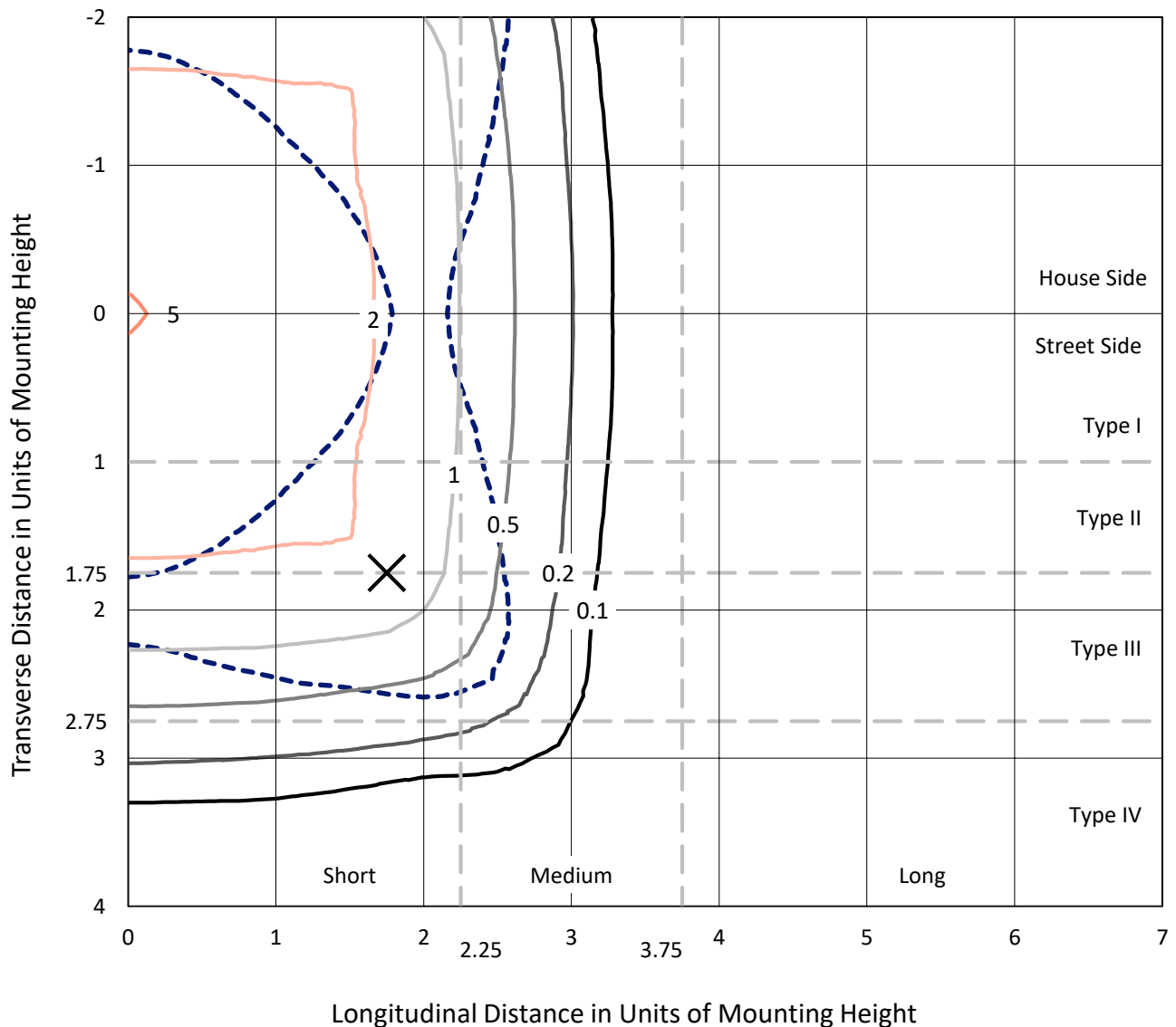
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

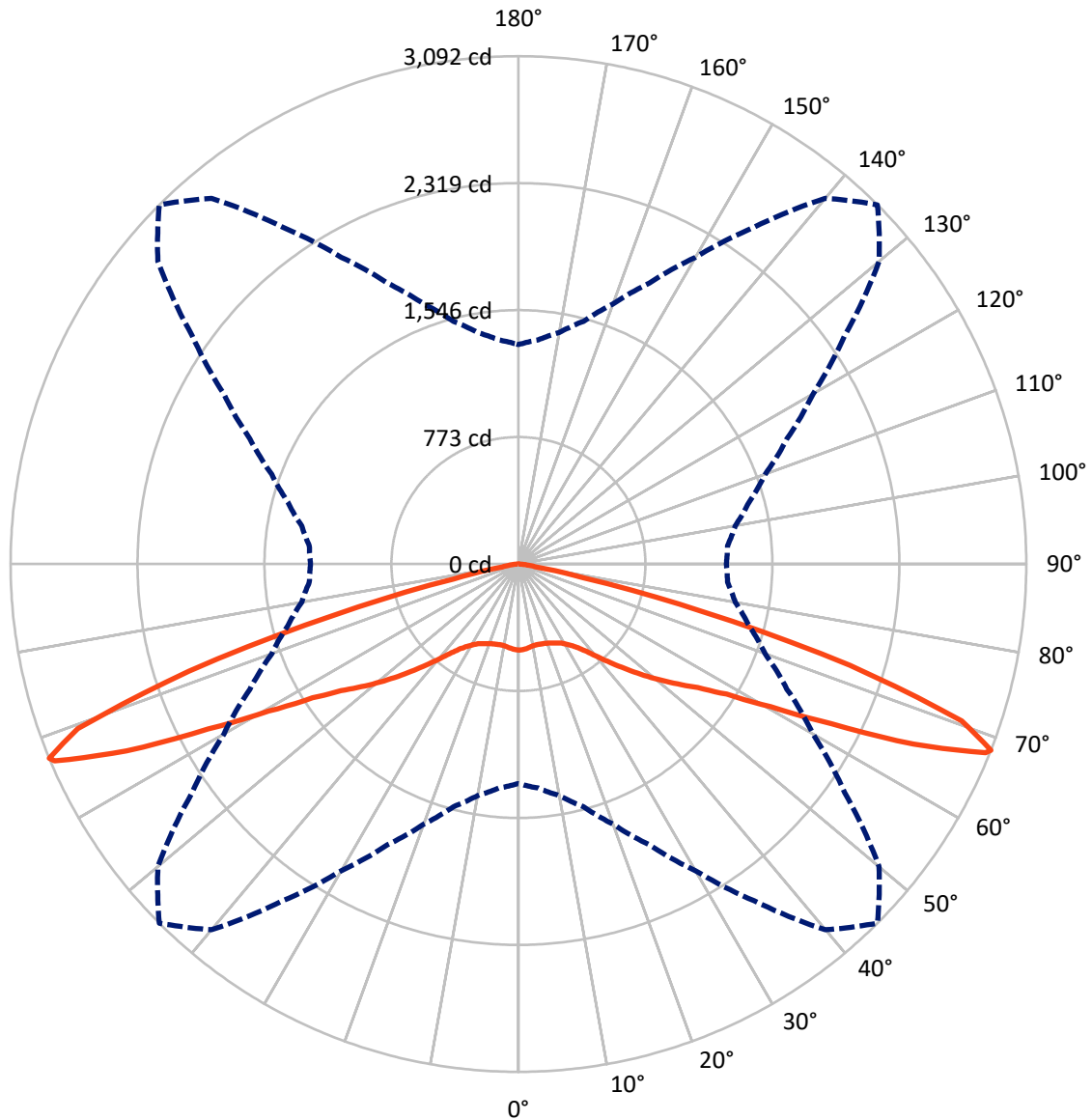
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 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	2628.5	0.0	2628.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2628.5	0.0	2628.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	5257.0	0.0	5257.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.1	0.9
10°-20°	142.3	2.7
20°-30°	241.9	4.6
30°-40°	395.9	7.5
40°-50°	707.6	13.5
50°-60°	1195.0	22.7
60°-70°	1853.0	35.2
70°-80°	637.1	12.1
80°-90°	35.0	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°	5257.0	100.0
0°-180°	5257.0	100.0



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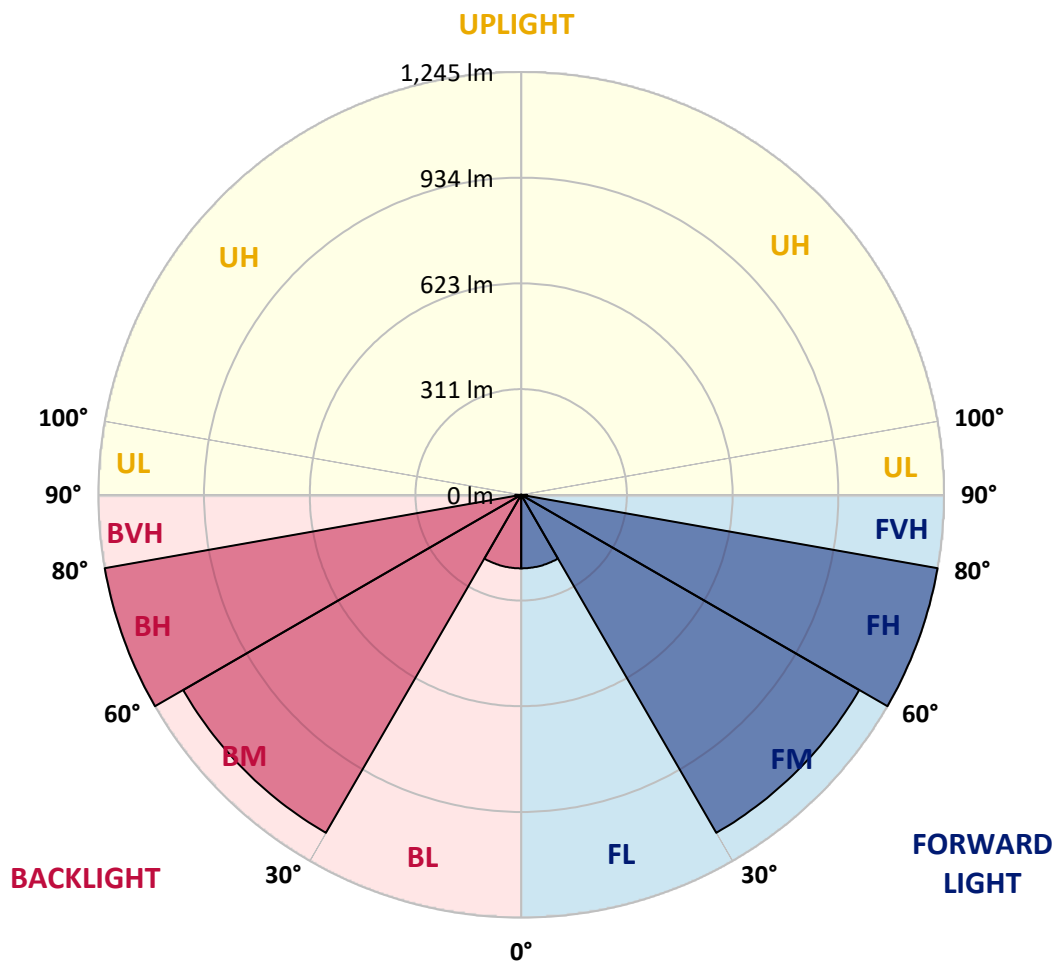
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	216.7	4.1			
FM	(30°-60°)	1149.3	21.9			
FH	(60°-80°)	1245.1	23.7			G1/1800
FVH	(80°-90°)	17.5	0.3			G1/100
BL	(0°-30°)	216.7	4.1	B1/500		
BM	(30°-60°)	1149.3	21.9	B2/2500		
BH	(60°-80°)	1245.1	23.7	B3/2500		G1/1800
BVH	(80°-90°)	17.5	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°	524.4	524.4	524.4	524.4	524.4	524.4	524.4	524.4	524.4	524.4	524.4
2.5°	526.7	526.7	527.3	527.0	526.0	525.0	524.1	523.1	522.5	521.8	521.2
5°	521.2	521.2	522.1	521.5	520.9	519.9	519.3	518.3	517.6	517.0	517.3
7.5°	514.1	514.7	515.4	515.1	513.8	513.5	512.5	512.2	511.5	510.6	510.9
10°	508.0	508.3	508.9	508.6	508.3	507.3	507.0	506.7	506.4	505.1	504.8
12.5°	501.9	502.5	503.2	503.5	503.2	503.5	503.8	504.1	503.8	503.2	503.2
15°	497.0	497.7	498.6	499.6	499.9	501.9	503.2	504.4	505.4	505.7	504.8
17.5°	494.5	495.4	496.7	498.6	500.3	502.5	504.8	506.7	508.3	508.6	507.7
20°	494.1	495.1	497.0	499.3	502.2	505.1	508.6	511.5	513.1	514.1	513.1
22.5°	496.4	497.7	500.3	503.2	506.7	510.6	515.1	518.3	521.5	522.8	521.8
25°	502.8	504.1	507.0	510.6	514.4	519.3	523.8	527.9	531.2	532.8	531.5
27.5°	516.4	516.7	519.9	523.8	528.3	532.4	538.2	540.2	542.8	544.4	542.8
30°	535.3	536.0	538.9	545.0	549.2	554.7	557.9	559.8	562.7	564.3	562.4
32.5°	564.3	565.0	567.5	573.3	577.2	581.4	585.2	586.5	589.4	591.4	589.1
35°	605.2	606.5	608.7	612.6	615.8	619.0	621.9	621.0	622.9	625.5	623.2
37.5°	661.2	660.9	661.5	664.4	667.7	669.6	674.1	671.8	673.8	676.0	674.7
40°	726.6	726.6	726.2	731.4	732.7	734.6	739.4	736.5	739.1	741.7	739.4
42.5°	800.9	802.2	803.8	808.0	811.6	812.2	814.4	813.2	816.4	818.6	816.4
45°	886.6	888.5	890.4	900.1	901.7	903.0	904.6	900.4	903.9	905.9	905.2
47.5°	975.4	978.9	983.1	993.1	999.5	1002.4	1003.7	998.9	999.2	1002.1	1002.4
50°	1075.8	1079.7	1083.9	1095.2	1101.3	1106.4	1108.0	1102.6	1103.2	1105.5	1106.1
52.5°	1168.6	1173.1	1182.1	1197.2	1205.9	1214.9	1215.6	1208.8	1211.7	1213.3	1212.0
55°	1255.8	1261.6	1273.5	1293.8	1309.6	1327.3	1335.3	1327.9	1327.9	1326.6	1326.0
57.5°	1357.5	1364.0	1376.2	1399.7	1421.6	1447.0	1468.9	1476.3	1489.8	1494.3	1487.3
60°	1510.8	1517.5	1530.1	1561.0	1588.7	1625.7	1661.7	1691.0	1738.7	1764.4	1741.2
62.5°	1650.8	1661.1	1690.7	1744.8	1804.7	1873.2	1952.7	2009.4	2096.0	2139.1	2080.9
65°	1618.9	1639.8	1697.8	1782.8	1906.4	2055.1	2217.0	2372.5	2551.5	2643.3	2524.8
67.5°	1414.2	1431.9	1494.3	1593.2	1747.4	1952.4	2204.2	2526.1	2895.3	3067.2	2857.6
68°	1336.0	1369.1	1431.2	1529.4	1684.9	1886.4	2155.2	2502.9	2905.9	3091.7	2865.4
70°	1024.3	1036.2	1095.8	1184.0	1351.7	1549.4	1820.8	2217.0	2672.5	2863.8	2631.0
72.5°	486.7	493.8	532.4	619.4	725.9	886.9	1126.4	1500.1	1910.6	2109.5	1877.4
75°	178.3	180.0	189.0	209.6	249.5	310.0	424.9	657.4	973.2	1160.5	977.0
77.5°	96.3	96.6	100.1	105.3	112.3	120.4	137.8	184.8	298.1	405.6	314.8
80°	60.5	60.2	63.7	67.9	72.8	76.6	78.2	83.7	94.3	110.4	101.4
82.5°	30.9	33.8	41.8	46.4	53.4	54.7	53.1	52.8	56.0	60.5	62.5
85°	17.1	15.1	22.2	29.6	32.2	33.2	33.5	31.5	30.9	30.3	31.9
87.5°	8.7	8.0	9.7	14.8	15.8	12.9	13.2	11.3	7.7	7.7	8.0
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°	524.4	524.4	524.4	524.4	524.4	524.4	524.4	524.4
2.5°	520.5	520.9	520.2	520.2	520.2	520.5	520.2	519.9
5°	516.4	517.0	517.0	517.3	517.6	517.6	517.6	517.6
7.5°	510.2	510.6	511.2	511.2	511.2	511.2	511.2	511.2
10°	504.4	503.8	503.5	502.8	502.8	501.9	502.2	502.5
12.5°	501.5	500.3	499.6	498.6	498.0	497.0	497.0	497.4
15°	502.8	500.9	499.0	498.3	497.7	497.0	496.4	496.7
17.5°	505.4	503.2	500.9	499.6	498.3	497.4	497.0	497.4
20°	510.9	507.7	504.1	501.9	499.3	498.6	497.7	498.6
22.5°	518.3	514.4	509.9	505.7	502.8	501.5	500.3	501.2
25°	527.3	523.1	518.6	513.8	510.6	509.6	508.0	508.0
27.5°	539.9	536.3	532.4	527.9	524.7	523.8	521.2	521.2
30°	559.8	556.3	552.7	548.9	545.6	544.7	541.5	541.5
32.5°	586.2	582.3	580.1	576.9	574.3	572.7	568.8	568.5
35°	621.6	618.1	617.8	615.5	612.9	613.3	609.4	608.7
37.5°	672.5	669.6	670.6	668.6	666.4	668.3	666.0	666.0
40°	737.5	736.5	737.5	736.2	736.5	736.9	734.9	735.6
42.5°	816.1	813.5	819.3	818.6	817.7	820.2	815.7	812.5
45°	906.5	905.6	911.3	912.3	910.4	912.0	903.9	903.6
47.5°	1004.7	1004.7	1009.9	1009.2	1007.3	1007.6	997.9	991.8
50°	1107.1	1106.4	1111.6	1110.3	1107.7	1107.4	1097.4	1091.3
52.5°	1213.6	1213.6	1221.0	1217.5	1211.4	1208.5	1196.2	1188.2
55°	1331.4	1329.8	1332.1	1320.5	1308.6	1299.9	1284.8	1278.7
57.5°	1480.5	1461.8	1445.7	1430.9	1414.2	1403.9	1386.2	1379.7
60°	1692.0	1642.1	1620.5	1590.9	1563.2	1549.4	1525.9	1513.3
62.5°	1984.9	1902.2	1843.6	1778.3	1715.2	1670.7	1635.0	1619.2
65°	2323.6	2143.3	1994.3	1854.2	1735.4	1641.1	1588.7	1572.2
67.5°	2452.4	2121.4	1864.2	1663.3	1519.1	1406.8	1344.0	1330.8
68°	2425.0	2071.2	1804.0	1598.3	1453.5	1340.1	1277.7	1265.8
70°	2139.1	1747.4	1465.4	1260.6	1125.4	1017.6	973.5	954.5
72.5°	1458.3	1122.2	860.8	688.6	587.5	519.3	478.7	464.8
75°	671.2	453.6	302.9	226.3	192.2	175.8	163.2	160.0
77.5°	195.7	142.3	122.3	113.3	106.6	100.8	96.6	96.3
80°	93.0	87.2	84.7	78.9	72.8	67.3	63.4	64.1
82.5°	62.5	60.8	60.8	55.0	45.4	39.0	32.2	29.0
85°	33.2	34.4	36.4	34.4	29.9	22.2	14.5	15.8
87.5°	11.3	12.9	13.5	13.2	11.9	9.0	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)