

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: P196898

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196898
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-02-D-UNV-5NQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6732 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

Input Watts (W): 66
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

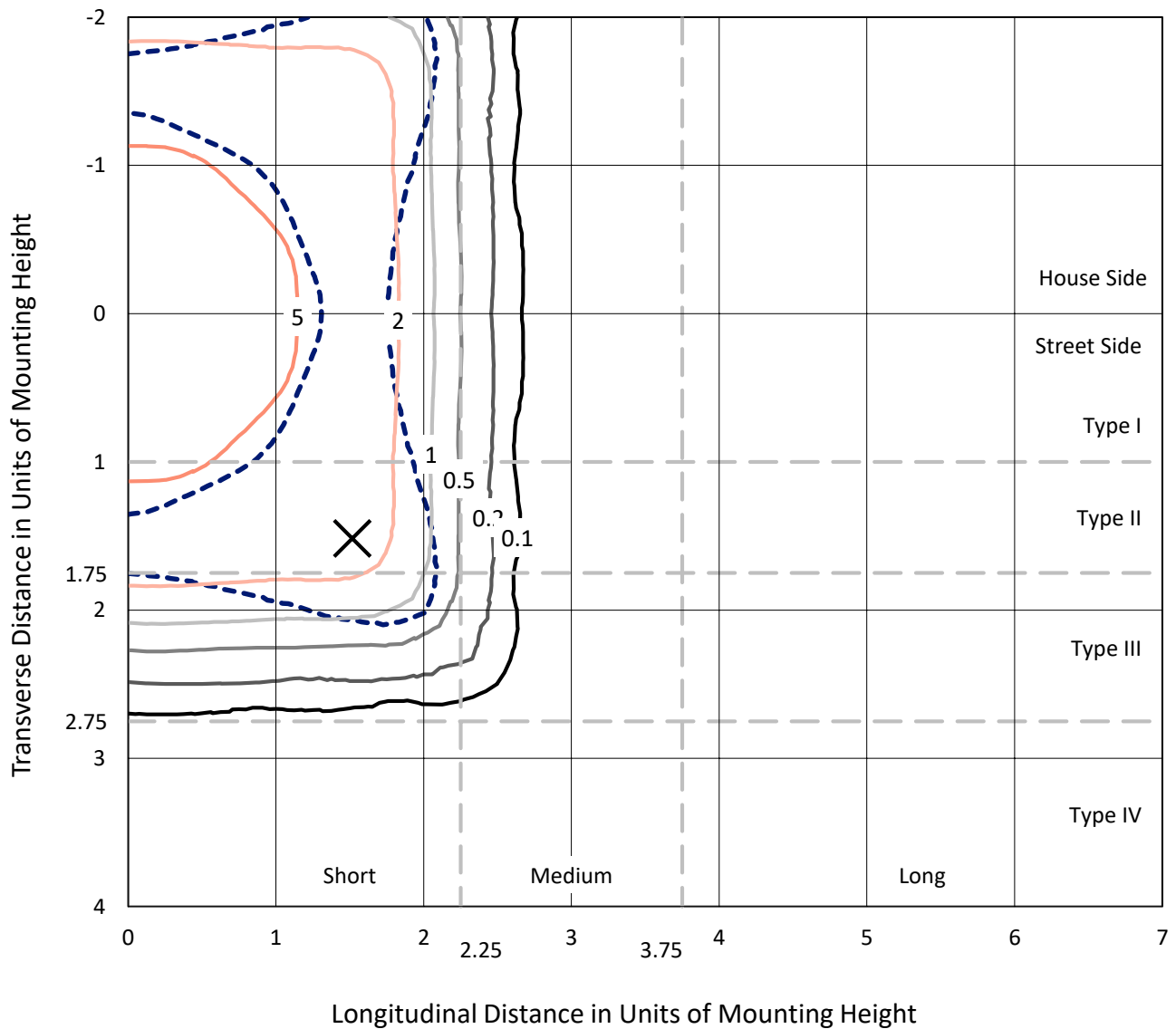


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Iso-Footcandle Lines of Horizontal Illumination

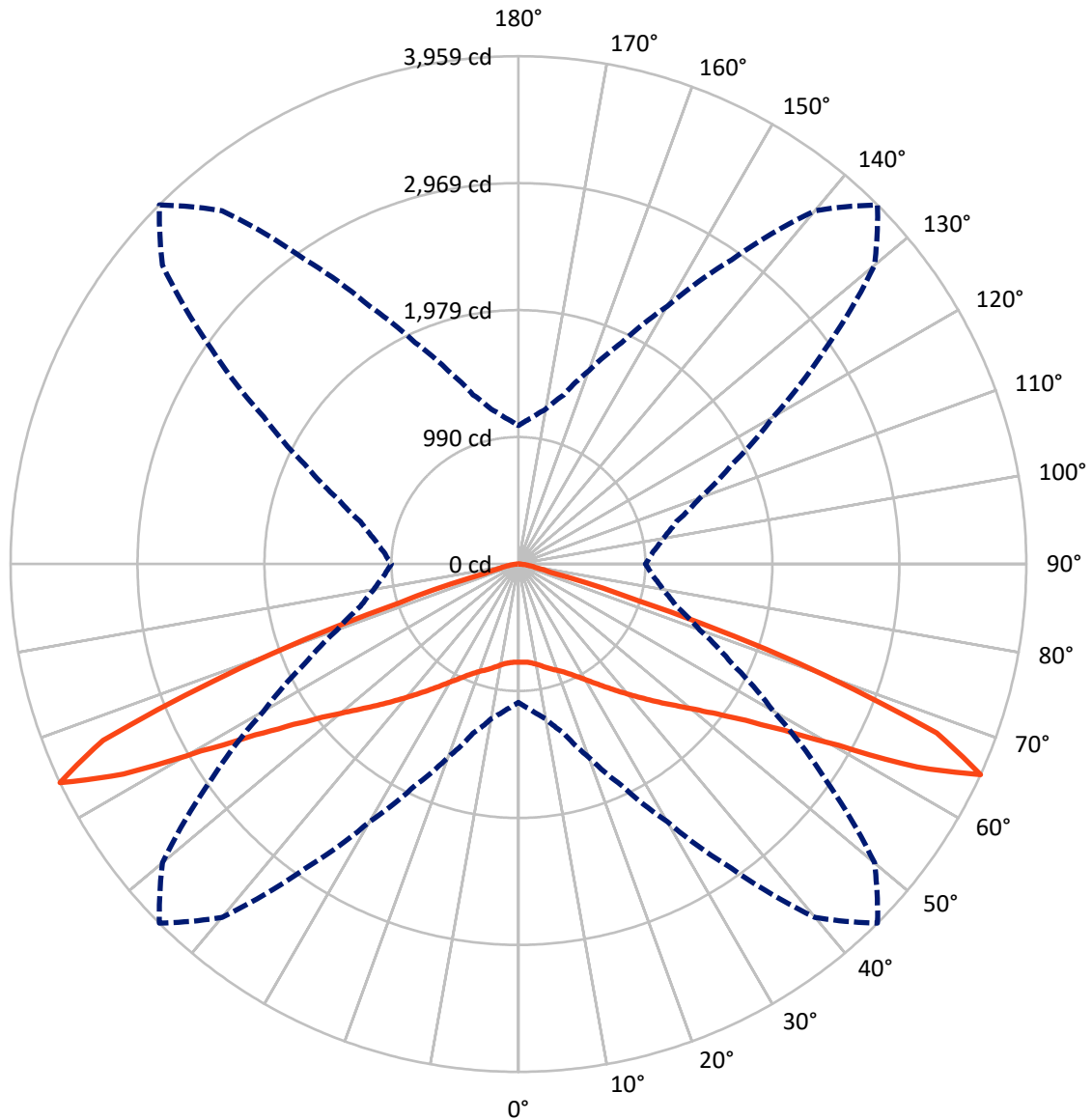
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 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	3366.0	0.0	3366.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3366.0	0.0	3366.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	6732.0	0.0	6732.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	1.1
10°-20°	239.0	3.6
20°-30°	445.8	6.6
30°-40°	751.8	11.2
40°-50°	1221.1	18.1
50°-60°	1913.2	28.4
60°-70°	1806.0	26.8
70°-80°	243.4	3.6
80°-90°	37.1	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°	6732.0	100.0
0°-180°	6732.0	100.0



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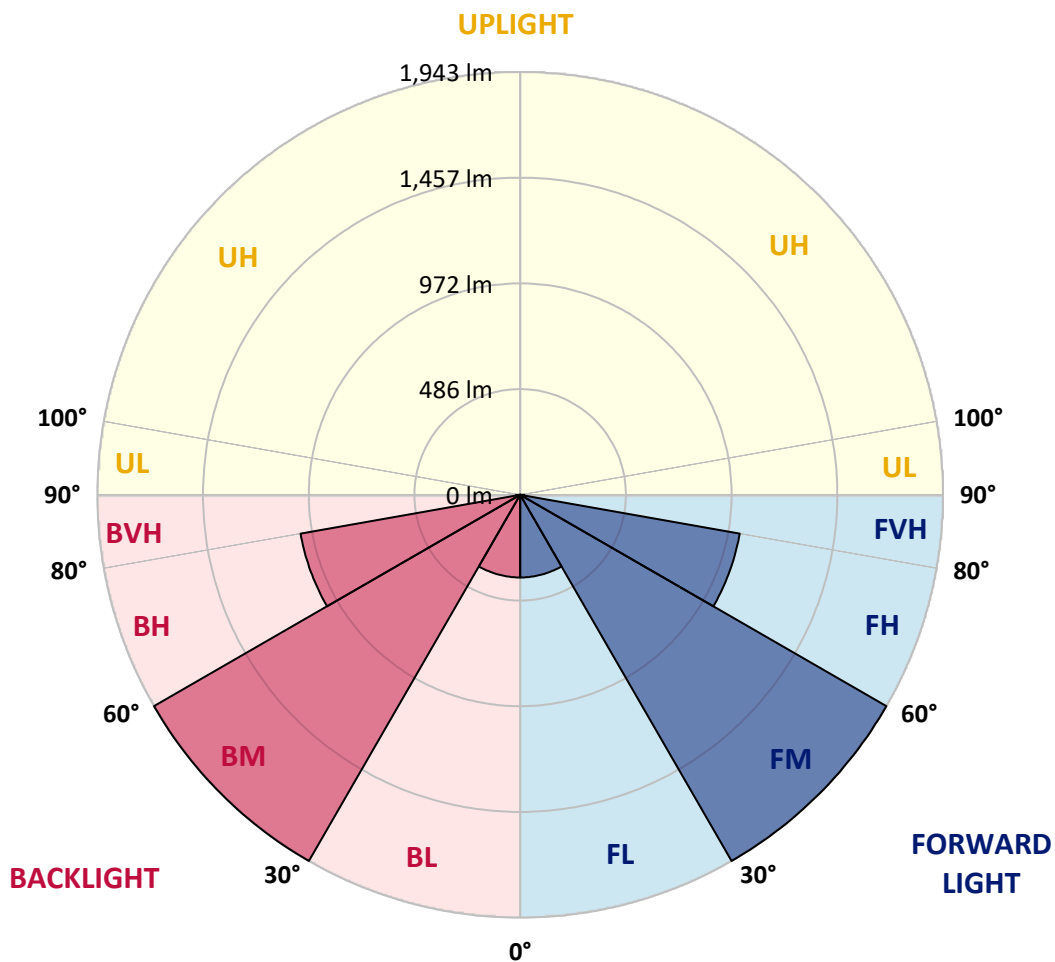
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	379.7	5.6			
FM	(30°-60°)	1943.0	28.9			
FH	(60°-80°)	1024.7	15.2			G1/1800
FVH	(80°-90°)	18.5	0.3			G1/100
BL	(0°-30°)	379.7	5.6	B1/500		
BM	(30°-60°)	1943.0	28.9	B2/2500		
BH	(60°-80°)	1024.7	15.2	B3/2500		G1/1800
BVH	(80°-90°)	18.5	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°	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8
2.5°	772.0	772.0	773.3	772.9	771.2	770.0	768.7	767.0	766.2	765.3	764.9
5°	776.2	776.2	777.5	777.1	775.8	774.1	773.3	772.0	770.8	770.0	770.4
7.5°	786.7	787.1	787.6	787.1	785.9	784.6	783.0	782.5	780.9	779.6	780.4
10°	802.7	802.7	803.1	803.5	802.7	799.7	799.7	798.9	797.2	795.5	796.0
12.5°	820.3	820.3	820.7	820.7	820.7	819.0	819.4	819.0	816.9	816.1	816.9
15°	837.5	837.9	837.9	838.7	838.7	839.1	840.8	840.8	840.0	839.6	839.6
17.5°	857.6	858.4	858.9	860.1	860.5	861.4	863.0	863.5	863.9	862.6	863.0
20°	884.4	884.9	886.1	886.5	888.2	888.2	889.0	888.6	887.8	886.1	886.1
22.5°	914.6	915.5	918.0	918.0	920.1	918.8	919.2	918.0	915.9	915.1	914.2
25°	954.1	955.3	957.4	956.6	957.4	955.3	955.3	955.3	954.1	952.8	952.4
27.5°	1004.0	1001.9	1004.0	1002.3	1001.9	1000.2	1000.6	999.8	998.5	998.1	996.4
30°	1056.0	1053.4	1054.7	1055.1	1054.3	1053.9	1052.2	1050.9	1048.8	1049.2	1048.0
32.5°	1115.5	1113.0	1114.2	1114.7	1113.8	1114.7	1114.2	1111.3	1108.8	1110.5	1110.5
35°	1186.4	1184.7	1188.1	1189.3	1186.8	1185.5	1183.9	1180.5	1176.7	1179.2	1179.7
37.5°	1271.5	1269.4	1271.9	1275.3	1270.7	1268.2	1261.4	1256.4	1253.9	1255.2	1256.8
40°	1360.0	1360.4	1367.5	1368.4	1363.3	1360.4	1353.7	1346.2	1339.0	1339.0	1341.1
42.5°	1453.1	1454.4	1462.7	1465.7	1464.0	1458.5	1449.3	1440.1	1430.9	1432.5	1435.1
45°	1558.4	1556.7	1565.5	1572.6	1571.4	1569.7	1560.9	1544.1	1535.7	1535.3	1539.5
47.5°	1669.1	1672.4	1681.6	1693.8	1693.4	1689.2	1677.9	1662.4	1646.8	1648.1	1653.1
50°	1798.2	1802.8	1818.4	1830.5	1832.2	1830.9	1817.5	1799.5	1777.7	1778.9	1785.6
52.5°	1914.0	1920.7	1938.7	1963.9	1979.4	1986.5	1977.7	1960.9	1938.7	1940.0	1947.1
55°	2018.8	2029.3	2056.1	2090.5	2121.6	2150.5	2163.5	2163.1	2146.7	2150.5	2159.7
57.5°	2084.7	2099.3	2140.0	2195.4	2257.0	2315.3	2365.6	2413.0	2423.5	2443.2	2443.2
60°	1996.2	2030.6	2084.7	2179.4	2300.6	2431.5	2573.2	2711.2	2800.1	2870.1	2832.4
62.5°	1667.0	1717.7	1793.6	1918.6	2107.3	2340.9	2625.6	2946.4	3281.1	3485.7	3335.6
65°	1078.6	1142.3	1225.0	1365.4	1603.2	1903.9	2318.7	2895.3	3595.6	3958.8	3623.3
67.5°	427.3	470.5	520.8	620.7	827.0	1122.2	1587.7	2298.9	3175.0	3517.6	3141.4
70°	204.2	211.4	221.0	242.4	294.0	396.7	637.9	1132.7	1947.1	2308.2	1900.6
72.5°	147.6	148.9	153.5	160.6	175.7	196.7	239.0	346.4	671.4	976.3	672.2
75°	112.0	113.6	116.2	119.9	127.9	138.0	153.9	184.5	229.8	265.0	229.4
77.5°	85.1	86.8	88.9	92.7	96.9	104.0	109.9	122.0	141.3	148.9	148.0
80°	62.1	65.0	68.4	71.7	74.6	78.0	78.4	84.3	95.2	102.3	100.2
82.5°	39.4	41.9	50.7	54.5	54.9	55.8	55.4	55.8	61.6	66.7	65.0
85°	25.2	26.8	31.5	35.6	34.8	36.5	36.5	35.6	33.1	28.5	34.0
87.5°	12.6	13.0	15.1	18.9	18.0	15.9	15.5	15.5	11.3	9.6	10.5
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°	765.8	765.8	765.8	765.8	765.8	765.8	765.8	765.8
2.5°	763.7	764.5	763.2	763.2	762.8	763.7	762.4	762.4
5°	769.5	770.8	770.4	770.4	771.2	772.0	771.6	771.2
7.5°	780.0	780.9	781.7	782.1	783.0	782.5	783.4	783.0
10°	796.0	795.1	796.4	795.1	795.5	794.7	795.1	795.1
12.5°	816.1	814.8	814.0	813.1	813.1	811.5	811.5	811.9
15°	839.1	837.0	835.4	834.5	833.7	833.7	832.4	833.3
17.5°	861.8	859.7	856.8	856.8	855.5	854.7	853.8	855.9
20°	885.7	883.6	881.9	881.5	879.0	878.1	878.6	881.1
22.5°	913.4	912.1	912.1	911.3	909.6	908.3	908.3	911.3
25°	950.7	948.2	948.6	949.0	948.2	948.2	947.3	949.4
27.5°	996.4	994.3	995.6	996.4	995.6	996.8	995.6	997.2
30°	1050.1	1048.8	1050.1	1051.3	1049.2	1049.2	1048.4	1049.7
32.5°	1114.2	1112.6	1113.4	1113.4	1110.5	1108.0	1104.6	1107.1
35°	1184.7	1182.6	1184.3	1185.5	1182.2	1179.7	1174.6	1176.7
37.5°	1262.3	1263.1	1265.2	1270.7	1269.8	1265.6	1261.9	1263.5
40°	1349.1	1353.3	1362.5	1366.3	1365.4	1361.3	1356.2	1357.1
42.5°	1447.2	1452.7	1462.3	1468.6	1465.7	1459.8	1453.5	1456.0
45°	1554.2	1562.5	1575.1	1581.4	1577.6	1571.4	1562.5	1567.2
47.5°	1667.4	1684.2	1700.9	1709.3	1708.1	1699.3	1687.9	1689.2
50°	1802.8	1825.1	1846.5	1854.8	1848.6	1835.1	1819.2	1818.8
52.5°	1971.4	1995.3	2012.9	2010.8	1995.3	1974.4	1956.3	1955.5
55°	2181.9	2189.9	2187.4	2169.4	2142.1	2109.4	2086.3	2082.6
57.5°	2436.5	2409.7	2370.2	2315.7	2254.5	2192.4	2150.5	2135.0
60°	2747.7	2626.5	2485.6	2337.1	2201.7	2100.2	2036.0	1997.0
62.5°	3004.7	2653.7	2338.8	2080.9	1869.9	1744.6	1656.9	1602.8
65°	2916.7	2292.7	1836.4	1503.8	1273.6	1144.0	1051.3	989.7
67.5°	2253.2	1531.9	1066.0	738.9	560.3	474.3	414.3	375.3
70°	1136.1	587.5	356.0	251.2	214.7	199.6	189.6	183.7
72.5°	333.4	222.7	184.9	163.6	150.6	141.3	135.5	132.5
75°	184.5	150.6	132.9	120.8	112.4	106.1	102.3	99.8
77.5°	127.1	109.5	100.6	92.7	86.0	81.4	78.4	75.9
80°	88.9	80.1	76.3	72.1	67.1	63.3	59.1	57.5
82.5°	59.1	55.4	54.5	51.2	48.2	44.0	36.5	34.0
85°	34.8	34.4	34.4	33.1	31.0	27.3	21.8	21.8
87.5°	12.2	12.6	13.0	13.8	13.4	11.3	9.2	8.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)