

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: P196874

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196874
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-02-D-UNV-5MQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6974 lumens
Efficiency: N/A
Efficacy: 105.7 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

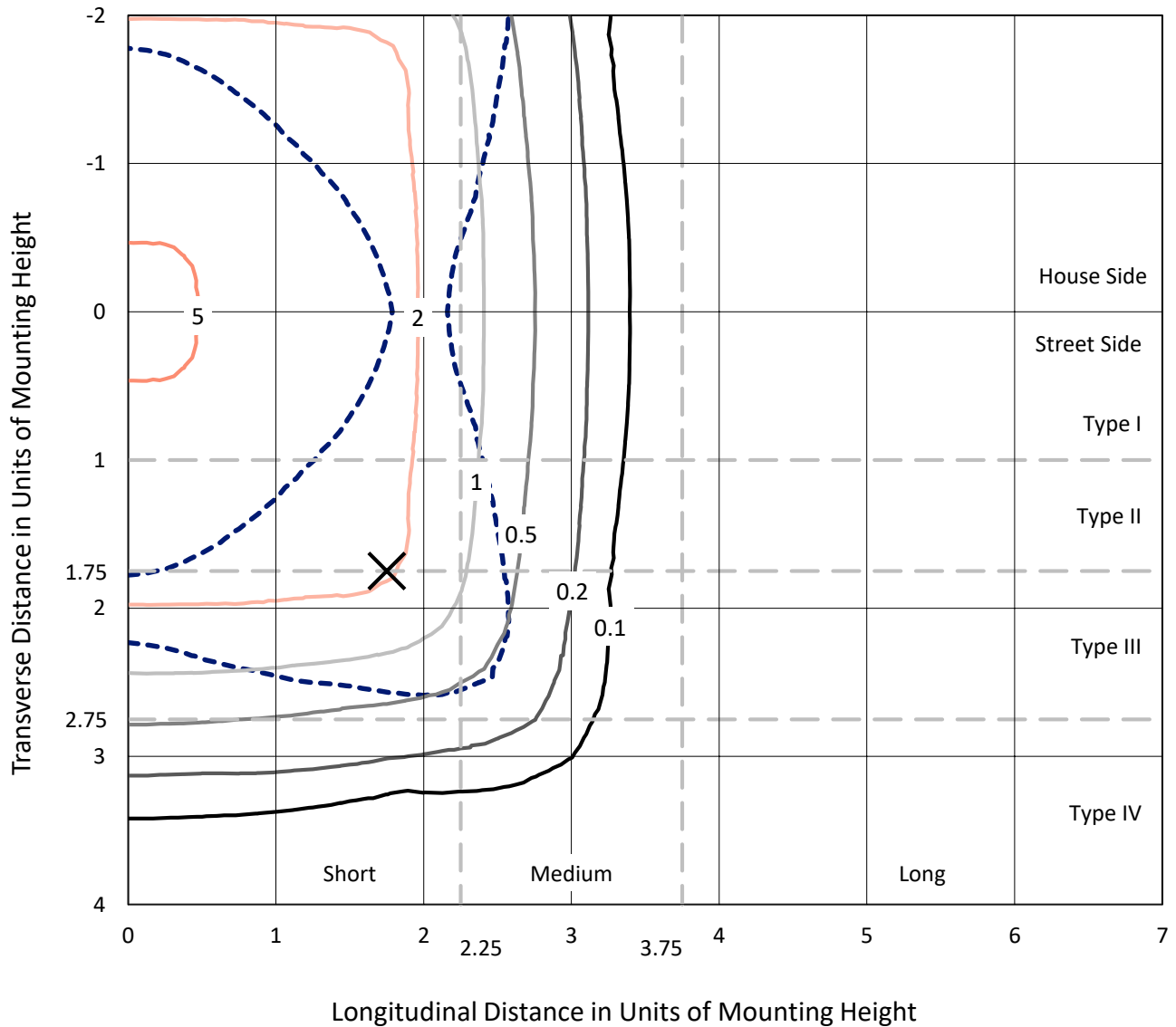
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

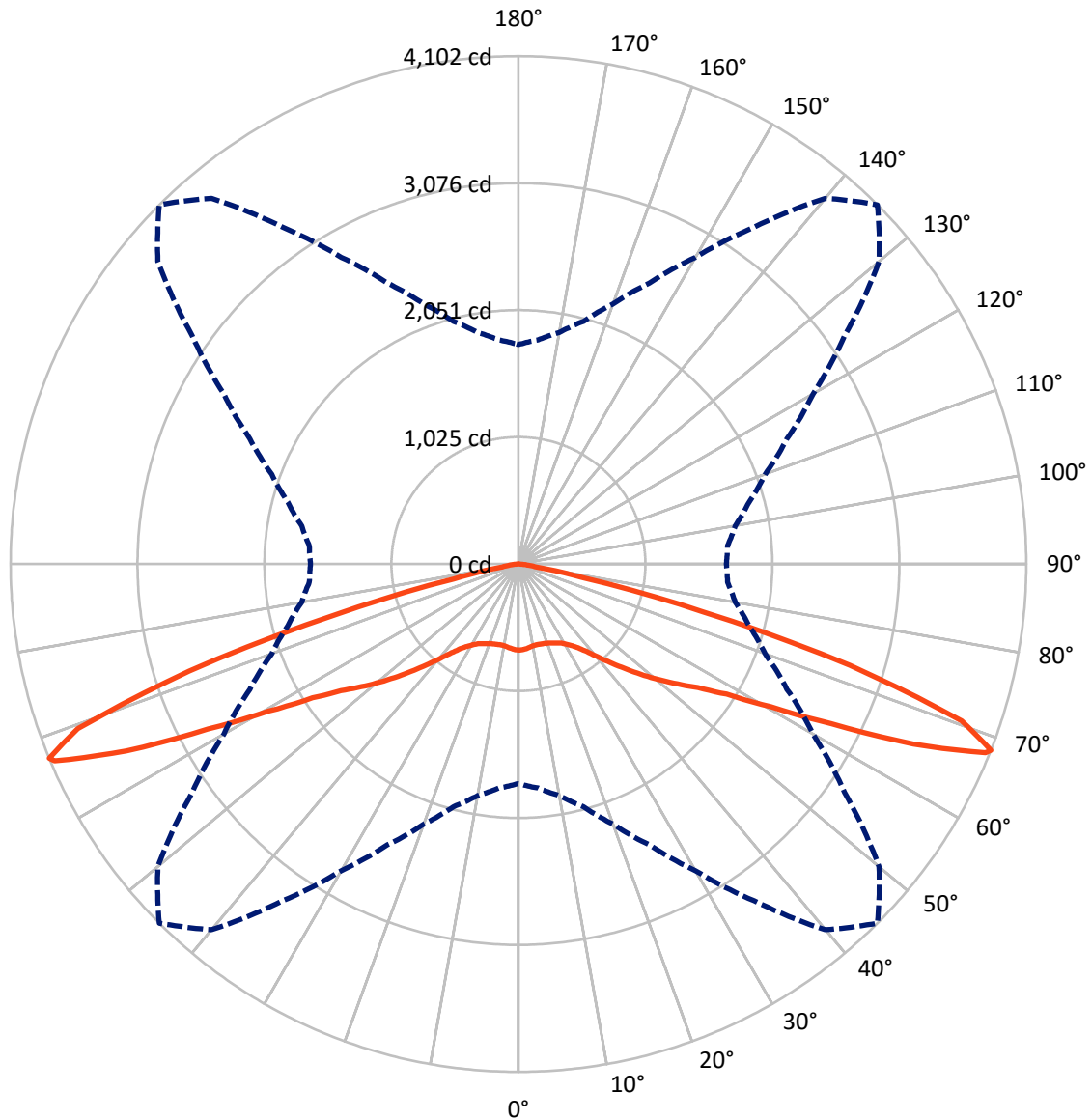
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 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	3487.0	0.0	3487.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3487.0	0.0	3487.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	6974.0	0.0	6974.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	0.9
10°-20°	188.8	2.7
20°-30°	321.0	4.6
30°-40°	525.3	7.5
40°-50°	938.7	13.5
50°-60°	1585.3	22.7
60°-70°	2458.2	35.2
70°-80°	845.2	12.1
80°-90°	46.4	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°	6974.0	100.0
0°-180°	6974.0	100.0



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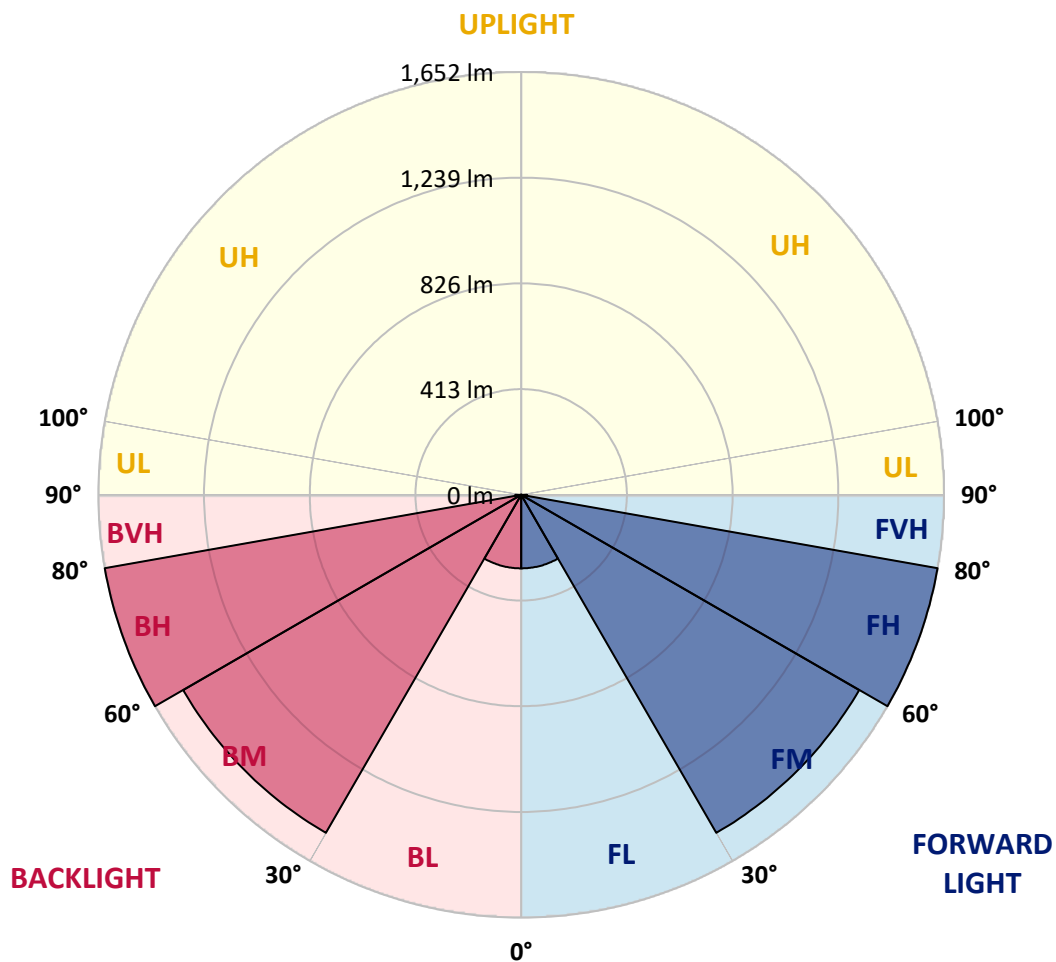
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	287.4	4.1			
FM	(30°-60°)	1524.6	21.9			
FH	(60°-80°)	1651.7	23.7			G1/1800
FVH	(80°-90°)	23.2	0.3			G1/100
BL	(0°-30°)	287.4	4.1	B1/500		
BM	(30°-60°)	1524.6	21.9	B2/2500		
BH	(60°-80°)	1651.7	23.7	B3/2500		G1/1800
BVH	(80°-90°)	23.2	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°	695.7	695.7	695.7	695.7	695.7	695.7	695.7	695.7	695.7	695.7	695.7
2.5°	698.7	698.7	699.5	699.1	697.8	696.5	695.3	694.0	693.1	692.3	691.4
5°	691.4	691.4	692.7	691.8	691.0	689.7	688.8	687.6	686.7	685.9	686.3
7.5°	682.0	682.9	683.7	683.3	681.6	681.2	679.9	679.4	678.6	677.3	677.7
10°	673.9	674.3	675.2	674.8	674.3	673.0	672.6	672.2	671.8	670.1	669.6
12.5°	665.8	666.6	667.5	667.9	667.5	667.9	668.3	668.8	668.3	667.5	667.5
15°	659.4	660.2	661.5	662.8	663.2	665.8	667.5	669.2	670.5	670.9	669.6
17.5°	656.0	657.2	659.0	661.5	663.6	666.6	669.6	672.2	674.3	674.8	673.5
20°	655.5	656.8	659.4	662.4	666.2	670.1	674.8	678.6	680.7	682.0	680.7
22.5°	658.5	660.2	663.6	667.5	672.2	677.3	683.3	687.6	691.8	693.5	692.3
25°	667.1	668.8	672.6	677.3	682.4	688.8	694.8	700.4	704.6	706.8	705.1
27.5°	685.0	685.4	689.7	694.8	700.8	706.4	714.0	716.6	720.0	722.2	720.0
30°	710.2	711.1	714.9	723.0	728.6	735.8	740.1	742.7	746.5	748.6	746.1
32.5°	748.6	749.5	752.9	760.6	765.7	771.3	776.4	778.1	781.9	784.5	781.5
35°	802.9	804.6	807.6	812.7	817.0	821.2	825.1	823.8	826.4	829.8	826.8
37.5°	877.2	876.7	877.6	881.4	885.7	888.3	894.3	891.3	893.8	896.8	895.1
40°	963.9	963.9	963.4	970.3	972.0	974.5	981.0	977.1	980.5	983.9	981.0
42.5°	1062.5	1064.2	1066.4	1071.9	1076.6	1077.5	1080.5	1078.7	1083.0	1086.0	1083.0
45°	1176.1	1178.7	1181.2	1194.1	1196.2	1197.9	1200.0	1194.5	1199.2	1201.7	1200.9
47.5°	1294.0	1298.7	1304.2	1317.5	1326.0	1329.9	1331.6	1325.2	1325.6	1329.4	1329.9
50°	1427.2	1432.4	1437.9	1452.9	1461.0	1467.8	1469.9	1462.7	1463.5	1466.5	1467.4
52.5°	1550.2	1556.2	1568.2	1588.2	1599.8	1611.7	1612.6	1603.6	1607.4	1609.6	1607.9
55°	1666.0	1673.6	1689.4	1716.3	1737.3	1760.8	1771.4	1761.6	1761.6	1759.9	1759.1
57.5°	1800.9	1809.4	1825.7	1856.8	1885.9	1919.6	1948.7	1958.5	1976.4	1982.4	1973.0
60°	2004.2	2013.2	2029.8	2070.8	2107.5	2156.6	2204.5	2243.3	2306.5	2340.7	2310.0
62.5°	2190.0	2203.6	2242.9	2314.7	2394.1	2485.0	2590.5	2665.7	2780.6	2837.8	2760.5
65°	2147.7	2175.4	2252.3	2365.0	2529.0	2726.3	2941.1	3147.4	3384.9	3506.6	3349.4
67.5°	1876.1	1899.6	1982.4	2113.5	2318.1	2590.1	2924.1	3351.1	3841.0	4069.0	3791.0
68°	1772.3	1816.3	1898.7	2029.0	2235.2	2502.6	2859.2	3320.4	3855.1	4101.5	3801.2
70°	1358.9	1374.7	1453.7	1570.7	1793.2	2055.4	2415.4	2941.1	3545.4	3799.1	3490.3
72.5°	645.7	655.1	706.4	821.7	963.0	1176.5	1494.3	1990.1	2534.6	2798.5	2490.6
75°	236.6	238.7	250.7	278.0	331.0	411.3	563.7	872.1	1291.0	1539.5	1296.1
77.5°	127.7	128.1	132.8	139.6	149.0	159.7	182.8	245.1	395.5	538.1	417.7
80°	80.3	79.9	84.6	90.1	96.5	101.6	103.8	111.0	125.1	146.5	134.5
82.5°	41.0	44.8	55.5	61.5	70.9	72.6	70.5	70.0	74.3	80.3	82.8
85°	22.6	20.1	29.5	39.3	42.7	44.0	44.4	41.9	41.0	40.1	42.3
87.5°	11.5	10.7	12.8	19.6	20.9	17.1	17.5	14.9	10.2	10.2	10.7
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°	695.7	695.7	695.7	695.7	695.7	695.7	695.7	695.7
2.5°	690.6	691.0	690.1	690.1	690.1	690.6	690.1	689.7
5°	685.0	685.9	685.9	686.3	686.7	686.7	686.7	686.7
7.5°	676.9	677.3	678.2	678.2	678.2	678.2	678.2	678.2
10°	669.2	668.3	667.9	667.1	667.1	665.8	666.2	666.6
12.5°	665.4	663.6	662.8	661.5	660.7	659.4	659.4	659.8
15°	667.1	664.5	661.9	661.1	660.2	659.4	658.5	659.0
17.5°	670.5	667.5	664.5	662.8	661.1	659.8	659.4	659.8
20°	677.7	673.5	668.8	665.8	662.4	661.5	660.2	661.5
22.5°	687.6	682.4	676.5	670.9	667.1	665.4	663.6	664.9
25°	699.5	694.0	688.0	681.6	677.3	676.0	673.9	673.9
27.5°	716.2	711.5	706.4	700.4	696.1	694.8	691.4	691.4
30°	742.7	738.0	733.3	728.1	723.9	722.6	718.3	718.3
32.5°	777.7	772.5	769.6	765.3	761.9	759.7	754.6	754.2
35°	824.6	820.0	819.5	816.5	813.1	813.5	808.4	807.6
37.5°	892.1	888.3	889.6	887.0	884.0	886.6	883.6	883.6
40°	978.4	977.1	978.4	976.7	977.1	977.5	975.0	975.8
42.5°	1082.6	1079.2	1086.9	1086.0	1084.7	1088.1	1082.2	1077.9
45°	1202.6	1201.3	1209.0	1210.3	1207.7	1209.9	1199.2	1198.8
47.5°	1332.8	1332.8	1339.7	1338.8	1336.3	1336.7	1323.9	1315.8
50°	1468.7	1467.8	1474.6	1472.9	1469.5	1469.1	1455.8	1447.7
52.5°	1610.0	1610.0	1619.8	1615.1	1607.0	1603.2	1586.9	1576.3
55°	1766.3	1764.2	1767.2	1751.8	1736.0	1724.5	1704.4	1696.3
57.5°	1964.0	1939.3	1917.9	1898.3	1876.1	1862.4	1838.9	1830.4
60°	2244.6	2178.4	2149.8	2110.5	2073.8	2055.4	2024.3	2007.6
62.5°	2633.2	2523.5	2445.8	2359.1	2275.4	2216.4	2169.0	2148.1
65°	3082.5	2843.4	2645.6	2459.9	2302.3	2177.1	2107.5	2085.8
67.5°	3253.3	2814.3	2473.1	2206.6	2015.3	1866.2	1783.0	1765.5
68°	3217.0	2747.7	2393.2	2120.3	1928.2	1777.8	1695.0	1679.2
70°	2837.8	2318.1	1944.0	1672.4	1493.0	1349.9	1291.4	1266.2
72.5°	1934.6	1488.7	1142.0	913.5	779.4	688.8	635.0	616.7
75°	890.4	601.7	401.9	300.2	255.0	233.2	216.5	212.2
77.5°	259.7	188.8	162.3	150.3	141.4	133.7	128.1	127.7
80°	123.4	115.7	112.3	104.6	96.5	89.3	84.1	85.0
82.5°	82.8	80.7	80.7	73.0	60.2	51.7	42.7	38.4
85°	44.0	45.7	48.3	45.7	39.7	29.5	19.2	20.9
87.5°	14.9	17.1	17.9	17.5	15.8	12.0	9.0	9.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)