

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: P270329

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270329
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11009.3 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 113
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

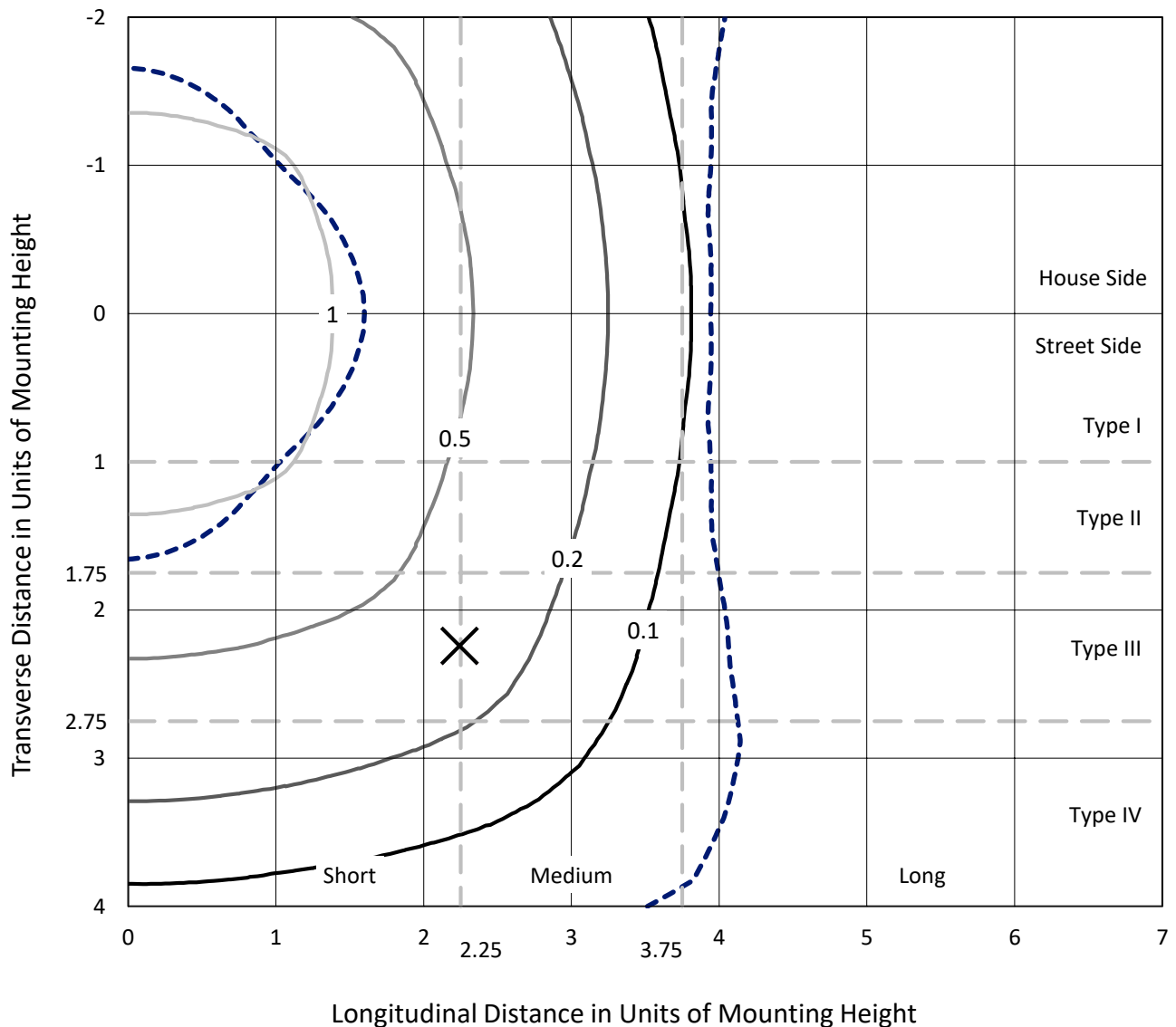


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

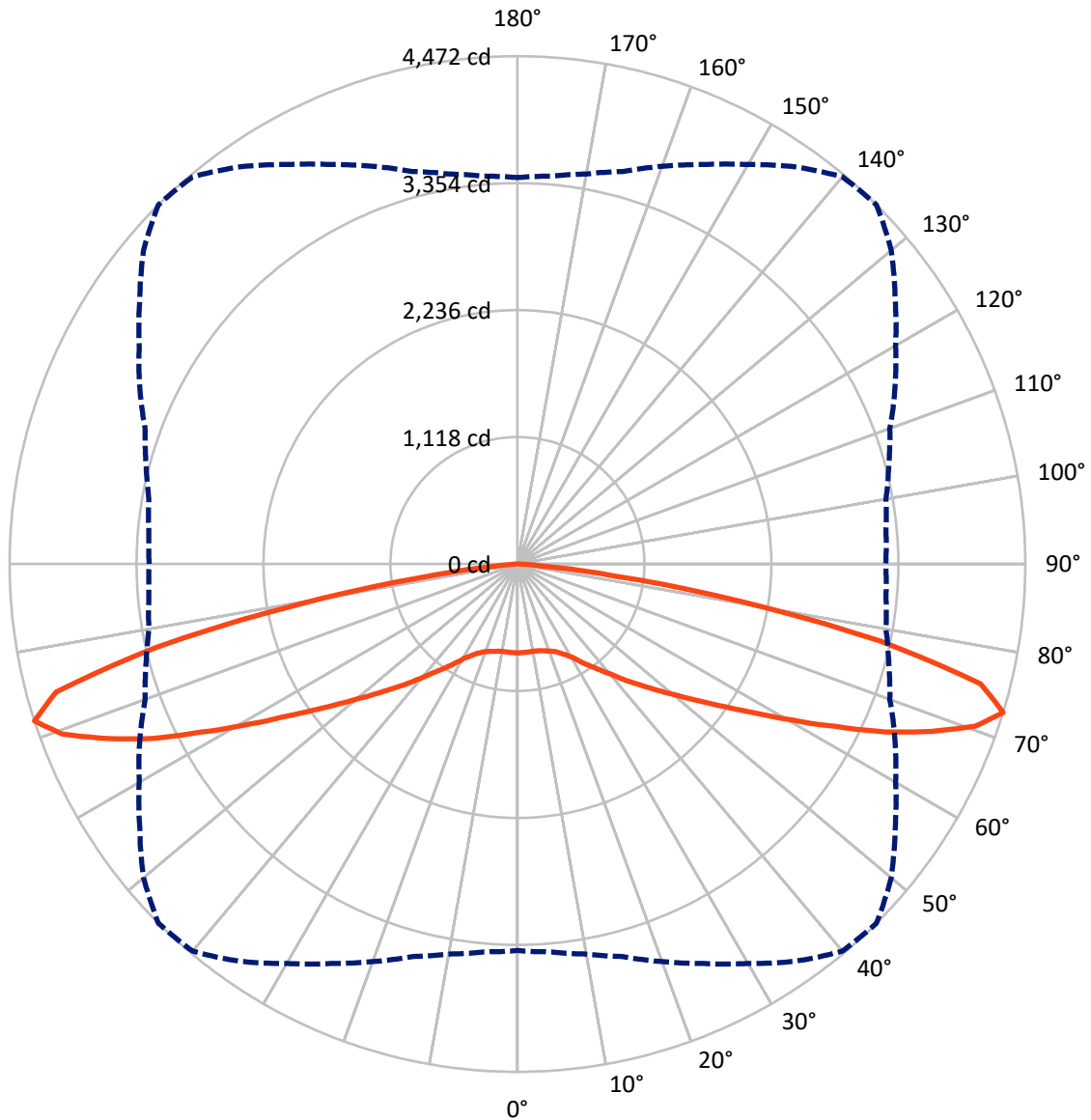


Based on 20 foot mounting height. Maximum calculated value = 2 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5504.6	0.0	5504.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5504.6	0.0	5504.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	11009.3	0.0	11009.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	0.7
10°-20°	226.1	2.1
20°-30°	408.2	3.7
30°-40°	696.2	6.3
40°-50°	1185.3	10.8
50°-60°	1907.6	17.3
60°-70°	3172.3	28.8
70°-80°	3068.8	27.9
80°-90°	270.1	2.5
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°	11009.3	100.0
0°-180°	11009.3	100.0



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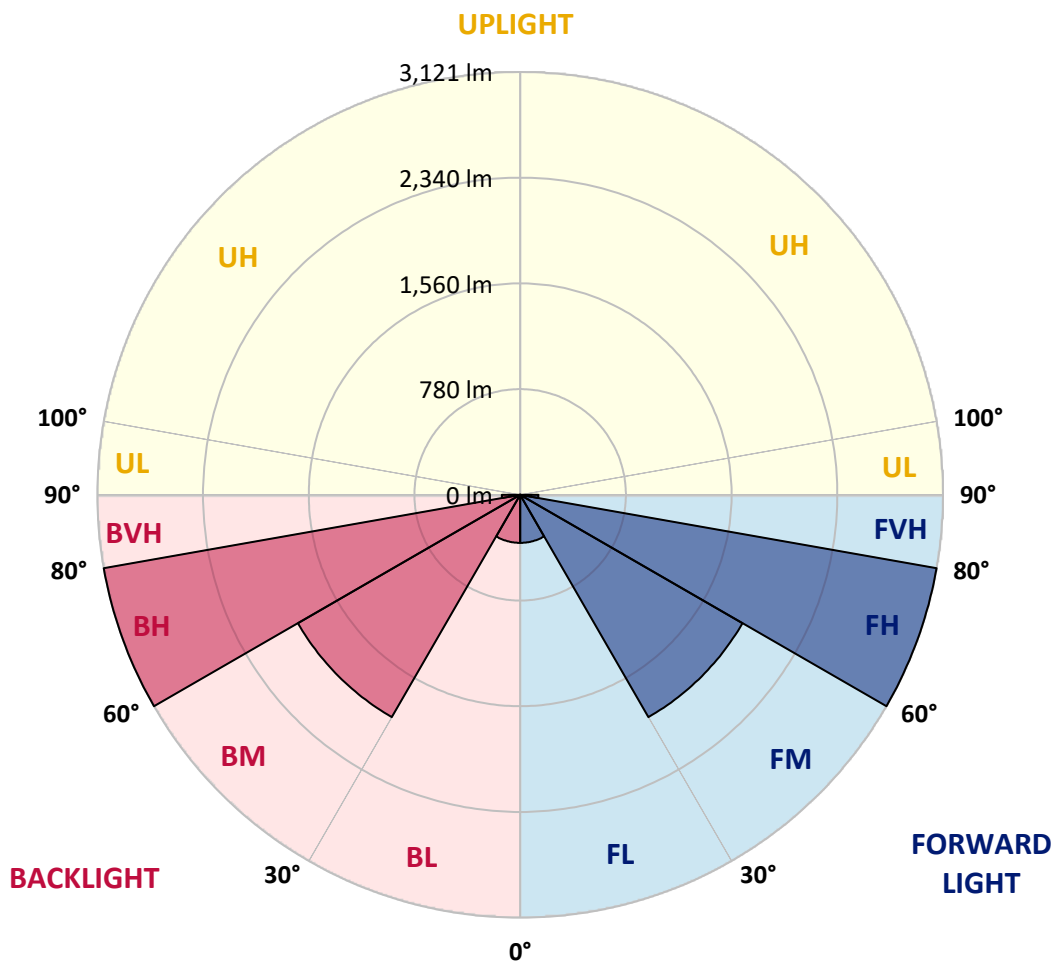
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	354.5	3.2			
FM	(30°-60°)	1894.5	17.2			
FH	(60°-80°)	3120.6	28.3			G2/5000
FVH	(80°-90°)	135.0	1.2			G2/225
BL	(0°-30°)	354.5	3.2	B1/500		
BM	(30°-60°)	1894.5	17.2	B2/2500		
BH	(60°-80°)	3120.6	28.3	B4/5000		G2/5000
BVH	(80°-90°)	135.0	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	782.7	782.7	782.7	782.7	782.7	782.7	782.7	782.7	782.7	782.7	782.7
2.5°	788.8	788.8	789.4	788.8	787.5	786.7	784.7	783.3	782.1	781.3	780.0
5°	789.4	789.4	790.1	789.4	788.2	786.7	785.4	783.3	782.1	780.6	780.0
7.5°	792.1	792.8	793.6	792.8	790.1	788.8	786.7	784.7	782.1	780.6	779.3
10°	797.5	797.5	797.5	796.8	794.9	792.1	789.4	787.5	784.0	780.6	778.7
12.5°	801.6	802.4	802.4	801.0	798.2	794.9	792.1	790.1	787.5	784.7	782.7
15°	807.8	807.8	807.0	804.3	800.3	797.5	796.3	795.5	794.9	793.6	791.4
17.5°	820.0	819.3	817.3	813.1	808.5	806.4	805.1	805.1	805.1	804.3	803.1
20°	837.6	837.6	834.9	828.1	824.0	821.9	820.0	820.0	820.0	817.8	815.9
22.5°	866.1	866.8	862.6	854.5	849.1	845.0	842.3	840.3	838.3	837.0	833.4
25°	904.7	904.0	899.3	889.1	885.0	881.0	875.5	872.2	869.4	867.4	863.4
27.5°	945.2	944.7	939.2	930.5	927.7	921.7	917.4	912.8	909.4	906.0	902.0
30°	997.5	994.2	990.0	983.3	981.8	977.1	971.7	965.0	959.5	954.1	949.4
32.5°	1044.2	1044.2	1038.1	1034.8	1037.5	1035.4	1036.1	1032.1	1028.6	1026.7	1021.9
35°	1109.2	1109.2	1106.6	1102.5	1103.2	1098.4	1097.8	1098.4	1101.1	1101.1	1095.8
37.5°	1196.1	1197.4	1188.5	1187.2	1183.8	1177.0	1173.6	1175.1	1181.1	1184.5	1177.0
40°	1303.8	1306.5	1303.8	1294.9	1291.0	1279.4	1272.5	1272.5	1277.4	1280.8	1278.0
42.5°	1410.2	1414.9	1410.2	1403.4	1400.0	1391.1	1387.8	1390.5	1396.7	1400.6	1396.7
45°	1528.7	1532.1	1526.0	1518.0	1513.9	1509.2	1507.0	1509.2	1515.9	1519.9	1518.6
47.5°	1645.3	1650.0	1642.6	1639.1	1639.1	1634.5	1639.9	1645.3	1651.4	1660.8	1656.8
50°	1759.2	1765.3	1760.5	1761.1	1766.5	1775.4	1785.7	1796.4	1807.3	1817.5	1818.8
52.5°	1860.7	1870.4	1871.0	1883.1	1900.2	1913.7	1942.1	1965.9	1991.6	2000.3	1996.4
55°	1967.8	1980.8	1997.7	2016.7	2043.7	2071.5	2119.7	2162.4	2196.3	2217.2	2213.9
57.5°	2121.0	2134.0	2151.5	2182.7	2223.3	2261.4	2327.0	2393.4	2444.9	2476.7	2461.1
60°	2319.6	2333.1	2356.2	2389.3	2442.2	2493.8	2583.9	2679.5	2759.4	2796.0	2767.5
62.5°	2582.4	2595.4	2610.3	2654.3	2713.3	2779.6	2892.8	3015.5	3117.2	3152.4	3112.4
65°	2957.2	2972.9	2977.5	3013.5	3071.0	3132.7	3254.6	3393.0	3508.8	3566.5	3486.5
67.5°	3379.5	3385.5	3404.4	3446.4	3505.5	3561.1	3657.2	3788.1	3899.2	3931.1	3845.6
70°	3626.7	3638.9	3672.1	3730.4	3800.9	3888.4	3993.3	4134.3	4260.3	4275.3	4166.8
72.5°	3403.0	3428.2	3487.1	3577.9	3725.7	3880.9	4061.7	4269.9	4450.7	4471.8	4297.6
75°	2729.5	2757.9	2828.5	2928.0	3102.9	3333.3	3594.8	3907.3	4178.3	4213.0	3982.5
77.5°	1454.8	1490.2	1592.4	1726.6	1976.0	2280.9	2596.0	2952.5	3182.9	3260.8	3094.8
80°	366.6	385.6	435.0	513.7	682.4	928.4	1200.0	1583.6	1869.6	1991.0	1869.6
82.5°	142.3	156.6	170.0	179.7	195.8	229.7	317.1	517.1	696.6	857.9	742.7
85°	54.8	58.3	84.0	95.6	95.6	105.0	120.6	142.3	176.2	192.4	161.2
87.5°	21.6	23.7	29.1	44.7	46.1	40.7	43.4	48.8	37.3	31.3	35.3
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°	782.7	782.7	782.7	782.7	782.7	782.7	782.7	782.7
2.5°	779.3	778.7	777.3	777.9	777.3	777.3	777.3	777.3
5°	778.7	778.7	777.3	777.3	777.3	777.9	777.3	777.3
7.5°	777.9	777.3	775.9	775.1	775.1	774.6	774.6	774.6
10°	776.6	775.1	773.9	773.3	773.3	771.9	771.9	771.9
12.5°	780.0	777.9	776.6	775.9	775.9	775.9	776.6	776.6
15°	789.4	785.4	783.3	782.7	783.3	784.7	785.4	786.0
17.5°	799.6	795.5	792.1	790.8	791.4	793.6	795.5	796.8
20°	812.4	809.2	805.1	803.7	803.7	806.4	807.8	809.8
22.5°	830.8	828.1	824.7	822.7	821.3	824.7	826.7	828.1
25°	859.9	857.3	854.5	852.5	851.9	855.1	856.5	857.3
27.5°	898.6	895.8	894.5	893.9	891.7	893.2	895.3	894.5
30°	948.7	950.8	948.7	948.7	945.2	946.6	945.2	943.9
32.5°	1015.9	1013.7	1007.7	1003.5	998.8	998.8	996.8	994.8
35°	1082.8	1076.1	1072.7	1074.7	1072.7	1074.1	1070.7	1067.2
37.5°	1162.1	1158.0	1157.5	1163.6	1162.1	1163.6	1163.6	1158.8
40°	1267.1	1264.5	1269.2	1279.4	1283.5	1282.8	1284.1	1278.0
42.5°	1387.8	1383.1	1385.0	1393.9	1398.7	1400.0	1399.3	1393.9
45°	1508.4	1509.8	1509.8	1519.3	1524.1	1526.7	1522.0	1519.9
47.5°	1644.6	1646.7	1641.9	1648.0	1649.4	1654.0	1650.0	1646.7
50°	1801.8	1794.5	1783.6	1785.7	1785.7	1784.3	1779.5	1775.4
52.5°	1977.3	1960.5	1940.1	1933.3	1925.8	1918.4	1908.9	1901.4
55°	2177.2	2148.1	2111.6	2094.6	2080.4	2063.4	2041.8	2034.3
57.5°	2409.1	2358.9	2310.1	2279.5	2243.0	2220.6	2192.9	2191.4
60°	2684.1	2616.4	2530.3	2484.9	2448.3	2421.9	2400.9	2392.7
62.5°	3002.0	2885.4	2792.7	2743.8	2701.1	2684.9	2658.4	2661.8
65°	3328.0	3209.4	3119.2	3079.8	3040.0	3029.1	3004.7	3013.5
67.5°	3681.0	3583.3	3484.4	3447.9	3411.3	3400.4	3375.3	3382.7
70°	3997.4	3873.4	3760.9	3689.1	3626.7	3576.6	3544.7	3531.9
72.5°	4060.3	3845.6	3668.8	3489.1	3385.5	3294.8	3257.4	3243.2
75°	3648.5	3315.0	3063.0	2852.2	2735.7	2603.5	2589.3	2569.6
77.5°	2837.9	2458.5	2153.5	1882.5	1726.0	1564.7	1509.2	1467.1
80°	1692.8	1301.0	1008.3	706.7	576.7	464.2	436.3	407.2
82.5°	605.7	388.2	261.5	203.9	182.3	168.1	157.3	143.0
85°	146.3	123.3	116.6	105.7	104.4	88.8	63.1	56.2
87.5°	46.7	42.7	43.4	41.3	43.4	32.5	26.4	23.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)