

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: P270332

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270332
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12077.1 lumens
Efficiency: N/A
Efficacy: 93.6 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): 129
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

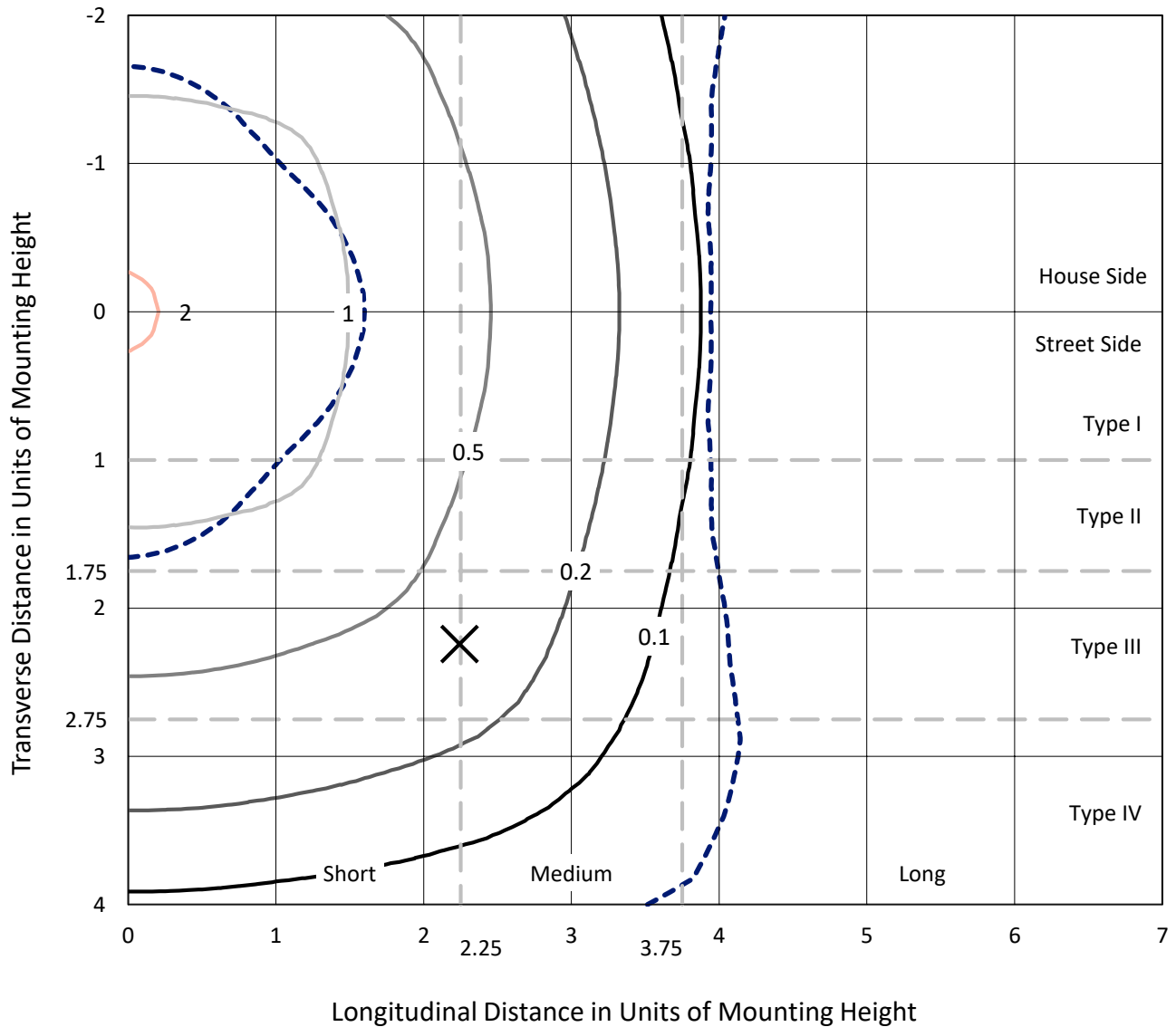


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Iso-Footcandle Lines of Horizontal Illumination

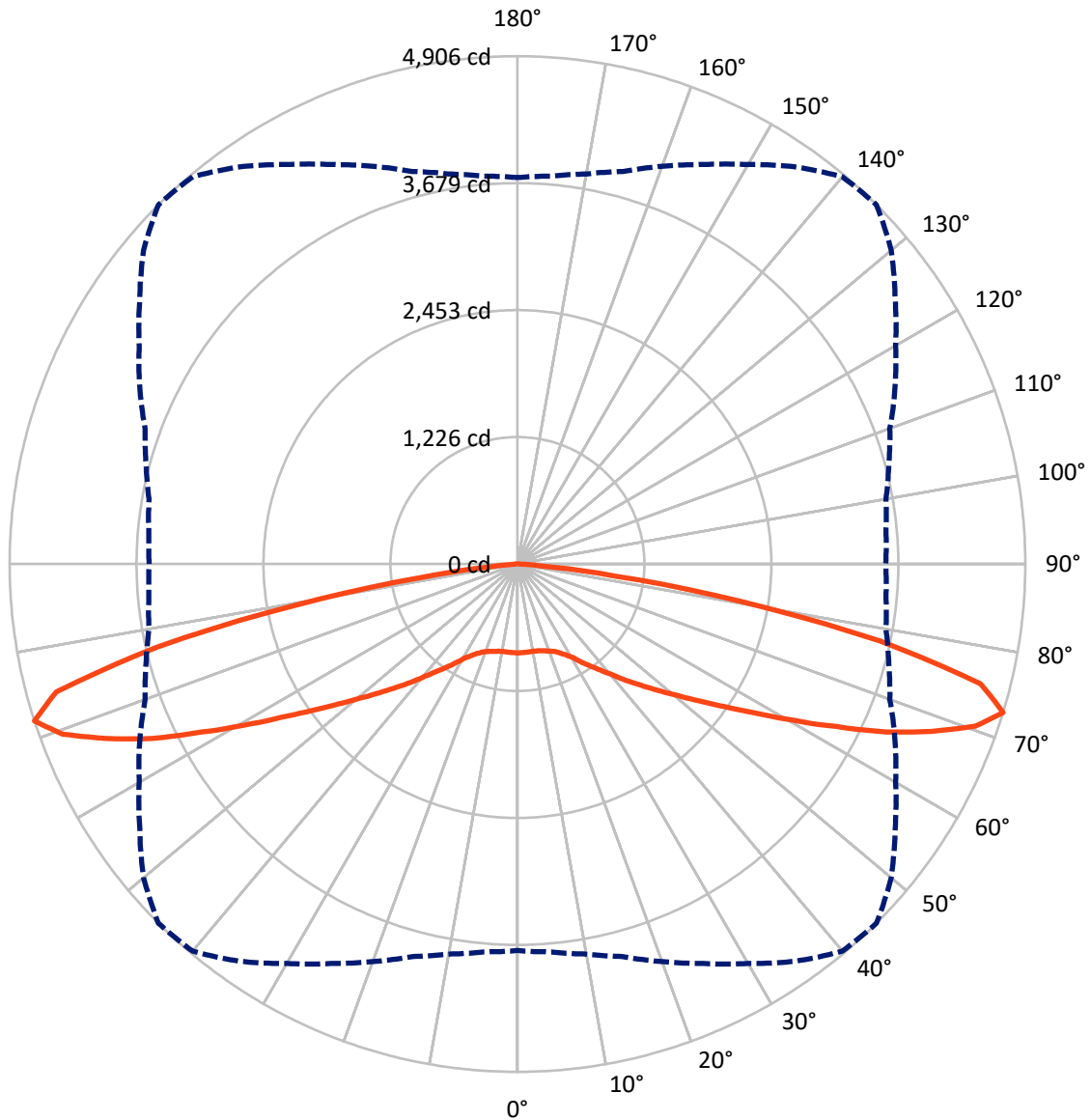
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.1 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	6038.6	0.0	6038.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6038.6	0.0	6038.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	12077.1	0.0	12077.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.0	0.7
10°-20°	248.0	2.1
20°-30°	447.8	3.7
30°-40°	763.7	6.3
40°-50°	1300.3	10.8
50°-60°	2092.6	17.3
60°-70°	3480.0	28.8
70°-80°	3366.5	27.9
80°-90°	296.3	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°	12077.1	100.0
0°-180°	12077.1	100.0

Coefficient of Utilization



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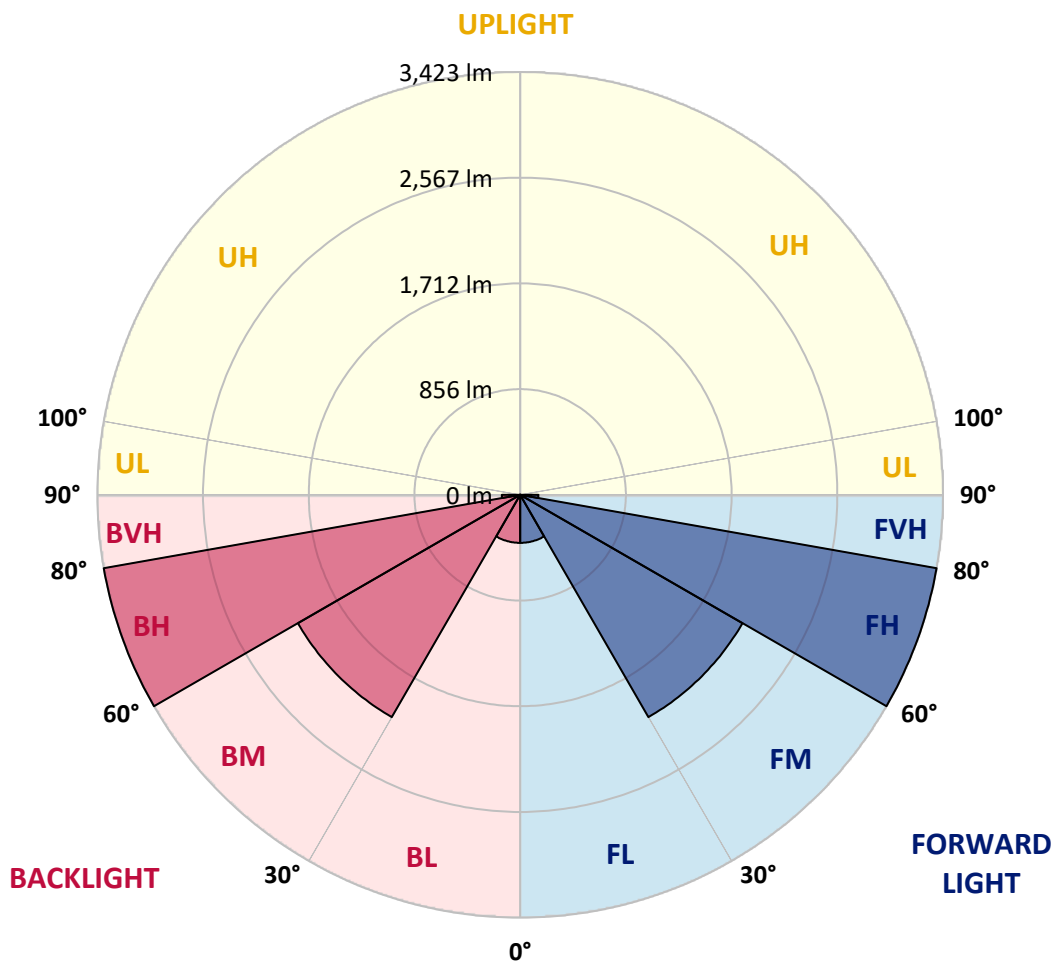
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	388.9	3.2			
FM (30°-60°)	2078.3	17.2			
FH (60°-80°)	3423.3	28.3			G2/5000
FVH (80°-90°)	148.2	1.2			G2/225
BL (0°-30°)	388.9	3.2	B1/500		
BM (30°-60°)	2078.3	17.2	B2/2500		
BH (60°-80°)	3423.3	28.3	B4/5000		G2/5000
BVH (80°-90°)	148.2	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°	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6
2.5°	865.2	865.2	866.1	865.2	863.8	863.0	860.8	859.4	857.8	857.2	855.6
5°	866.1	866.1	866.8	866.1	864.6	863.0	861.6	859.4	857.8	856.4	855.6
7.5°	869.0	869.7	870.5	869.7	866.8	865.2	863.0	860.8	857.8	856.4	854.8
10°	874.9	874.9	874.9	874.2	872.0	869.0	866.1	863.8	860.0	856.4	854.1
12.5°	879.4	880.2	880.2	878.6	875.7	872.0	869.0	866.8	863.8	860.8	858.6
15°	886.1	886.1	885.4	882.3	878.0	874.9	873.4	872.8	872.0	870.5	868.2
17.5°	899.5	898.8	896.5	892.0	886.8	884.7	883.2	883.2	883.2	882.3	880.9
20°	918.7	918.7	915.8	908.4	904.0	901.7	899.5	899.5	899.5	897.2	895.0
22.5°	950.0	950.8	946.4	937.4	931.5	927.1	923.9	921.8	919.5	918.1	914.4
25°	992.4	991.6	986.5	975.3	970.9	966.3	960.5	956.8	953.7	951.6	947.1
27.5°	1037.1	1036.3	1030.4	1020.7	1017.7	1011.0	1006.6	1001.3	997.6	993.9	989.5
30°	1094.2	1090.5	1086.1	1078.7	1077.2	1071.9	1066.0	1058.6	1052.6	1046.6	1041.5
32.5°	1145.5	1145.5	1138.8	1135.1	1138.2	1135.8	1136.6	1132.1	1128.5	1126.3	1121.1
35°	1216.9	1216.9	1213.9	1209.5	1210.1	1204.9	1204.3	1204.9	1208.0	1208.0	1202.0
37.5°	1312.1	1313.5	1303.9	1302.5	1298.7	1291.3	1287.5	1289.0	1295.6	1299.4	1291.3
40°	1430.2	1433.2	1430.2	1420.6	1416.1	1403.5	1396.1	1396.1	1401.3	1404.9	1402.1
42.5°	1546.9	1552.1	1546.9	1539.5	1535.8	1526.1	1522.4	1525.4	1532.1	1536.6	1532.1
45°	1677.0	1680.8	1674.1	1665.2	1660.6	1655.4	1653.3	1655.4	1662.9	1667.3	1665.8
47.5°	1805.0	1810.2	1801.9	1798.1	1798.1	1792.9	1798.9	1805.0	1811.6	1822.0	1817.5
50°	1929.7	1936.4	1931.3	1932.1	1938.0	1947.6	1958.8	1970.7	1982.6	1993.7	1995.2
52.5°	2041.3	2051.6	2052.4	2065.8	2084.3	2099.2	2130.5	2156.6	2184.8	2194.4	2190.0
55°	2158.7	2172.9	2191.4	2212.3	2242.0	2272.5	2325.3	2372.2	2409.3	2432.3	2428.6
57.5°	2326.8	2340.9	2360.1	2394.4	2439.0	2480.6	2552.8	2625.6	2682.1	2717.1	2699.9
60°	2544.5	2559.5	2584.8	2621.2	2679.1	2735.6	2834.5	2939.3	3027.0	3067.2	3035.9
62.5°	2833.0	2847.1	2863.4	2911.8	2976.4	3049.2	3173.4	3308.0	3419.5	3458.1	3414.3
65°	3244.0	3261.1	3266.3	3305.8	3369.0	3436.6	3570.5	3722.0	3849.1	3912.4	3824.7
67.5°	3707.1	3714.0	3734.8	3780.7	3845.5	3906.4	4012.0	4155.4	4277.4	4312.4	4218.6
70°	3978.6	3991.9	4028.3	4092.3	4169.6	4265.4	4380.7	4535.4	4673.6	4690.0	4570.9
72.5°	3733.1	3760.8	3825.4	3925.1	4087.1	4257.2	4455.8	4684.0	4882.5	4905.6	4714.5
75°	2994.3	3025.5	3102.8	3212.1	3403.9	3656.6	3943.6	4286.3	4583.6	4621.5	4368.7
77.5°	1596.0	1634.6	1746.9	1894.0	2167.7	2502.1	2847.8	3238.8	3491.6	3577.1	3395.0
80°	402.3	423.0	477.2	563.4	748.6	1018.4	1316.5	1737.2	2051.0	2184.0	2051.0
82.5°	156.1	171.8	186.6	197.0	214.9	252.1	348.0	567.2	764.2	941.2	814.8
85°	60.1	63.9	92.2	104.8	104.8	115.3	132.3	156.1	193.2	211.1	177.0
87.5°	23.7	26.1	32.0	49.0	50.6	44.6	47.6	53.4	41.0	34.1	38.6
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°	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6
2.5°	854.8	854.1	852.6	853.4	852.6	852.6	852.6	852.6
5°	854.1	854.1	852.6	852.6	852.6	853.4	852.6	852.6
7.5°	853.4	852.6	851.1	850.4	850.4	849.6	849.6	849.6
10°	852.0	850.4	848.9	848.2	848.2	846.7	846.7	846.7
12.5°	855.6	853.4	852.0	851.1	851.1	851.1	852.0	852.0
15°	866.1	861.6	859.4	858.6	859.4	860.8	861.6	862.4
17.5°	877.1	872.8	869.0	867.6	868.2	870.5	872.8	874.2
20°	891.3	887.5	883.2	881.6	881.6	884.7	886.1	888.3
22.5°	911.4	908.4	904.8	902.4	901.0	904.8	906.8	908.4
25°	943.3	940.3	937.4	935.1	934.3	938.1	939.5	940.3
27.5°	985.7	982.7	981.3	980.5	978.3	979.7	981.9	981.3
30°	1040.7	1042.9	1040.7	1040.7	1037.1	1038.5	1037.1	1035.6
32.5°	1114.3	1112.1	1105.4	1101.0	1095.8	1095.8	1093.4	1091.4
35°	1187.9	1180.5	1176.8	1178.9	1176.8	1178.2	1174.5	1170.9
37.5°	1274.9	1270.5	1269.7	1276.4	1274.9	1276.4	1276.4	1271.1
40°	1390.0	1387.2	1392.4	1403.5	1408.0	1407.3	1408.7	1402.1
42.5°	1522.4	1517.1	1519.5	1529.2	1534.3	1535.8	1535.1	1529.2
45°	1654.8	1656.2	1656.2	1666.6	1671.8	1674.8	1669.6	1667.3
47.5°	1804.2	1806.4	1801.2	1807.8	1809.4	1814.5	1810.2	1806.4
50°	1976.6	1968.5	1956.6	1958.8	1958.8	1957.2	1952.0	1947.6
52.5°	2169.1	2150.5	2128.3	2120.9	2112.6	2104.5	2094.0	2086.0
55°	2388.5	2356.4	2316.3	2297.8	2282.1	2263.5	2239.7	2231.6
57.5°	2642.6	2587.7	2534.2	2500.7	2460.5	2436.1	2405.5	2404.0
60°	2944.5	2870.2	2775.8	2725.9	2685.8	2656.7	2633.8	2624.8
62.5°	3293.1	3165.3	3063.4	3010.0	2963.1	2945.3	2916.3	2920.0
65°	3650.7	3520.5	3421.7	3378.6	3334.8	3322.9	3296.2	3305.8
67.5°	4038.1	3931.0	3822.4	3782.3	3742.1	3730.2	3702.8	3710.9
70°	4385.2	4249.2	4125.7	4047.0	3978.6	3923.4	3888.6	3874.5
72.5°	4454.2	4218.6	4024.5	3827.6	3714.0	3614.3	3573.4	3557.7
75°	4002.3	3636.6	3360.0	3128.8	3001.0	2856.0	2840.4	2818.8
77.5°	3113.3	2696.9	2362.5	2065.1	1893.4	1716.4	1655.4	1609.5
80°	1856.9	1427.2	1106.2	775.3	632.5	509.2	478.7	446.7
82.5°	664.6	425.9	287.0	223.8	200.0	184.3	172.5	156.8
85°	160.5	135.3	127.9	116.1	114.4	97.3	69.1	61.8
87.5°	51.4	46.8	47.6	45.4	47.6	35.8	28.9	26.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)