

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: P196443

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196443
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-03-D-UNV-5WQ-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12009.8 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

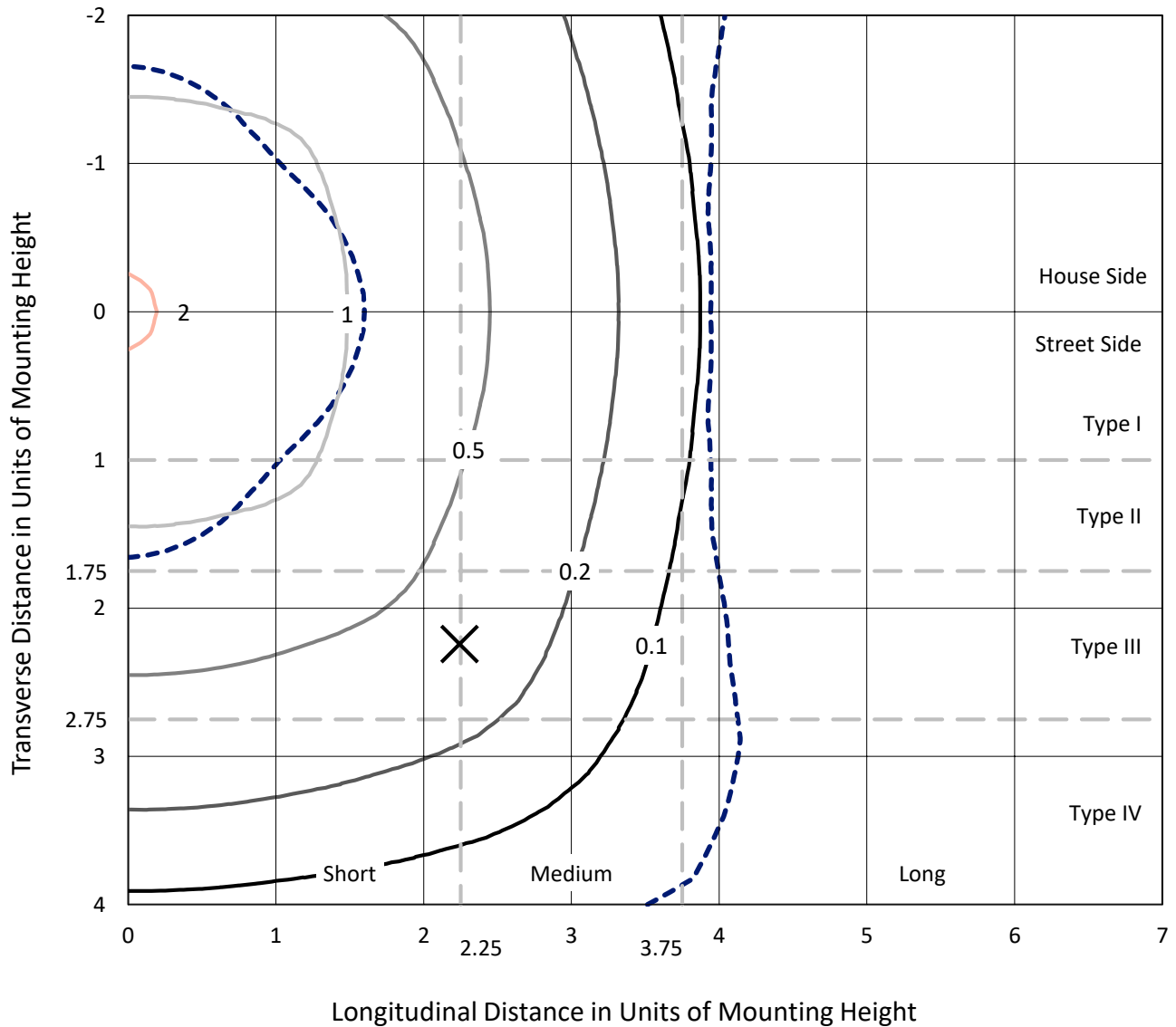
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

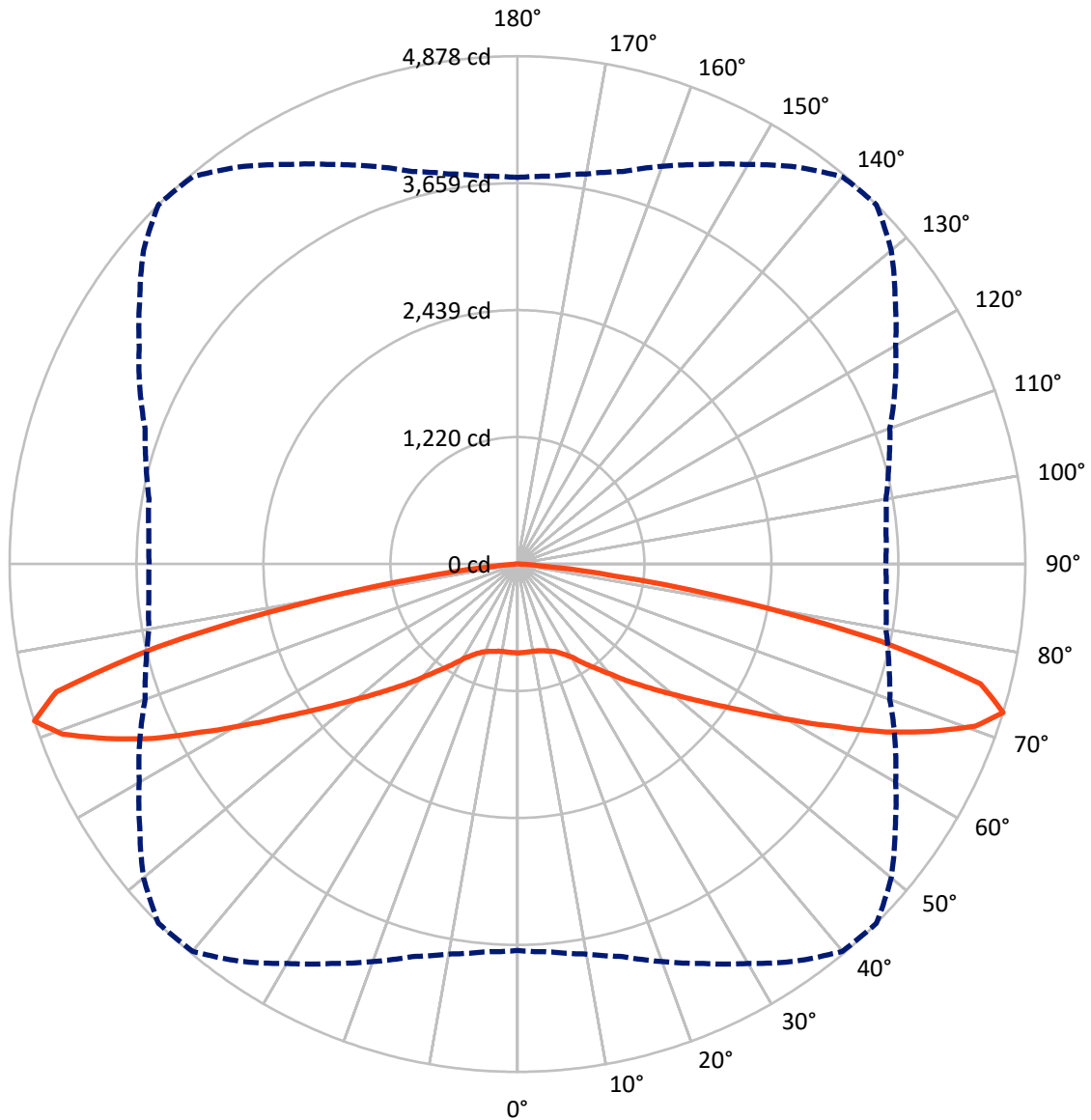
× Max cd
 - - - 1/2 Max cd



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	6004.9	0.0	6004.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6004.9	0.0	6004.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	12009.8	0.0	12009.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	0.7
10°-20°	246.6	2.1
20°-30°	445.3	3.7
30°-40°	759.5	6.3
40°-50°	1293.0	10.8
50°-60°	2080.9	17.3
60°-70°	3460.6	28.8
70°-80°	3347.7	27.9
80°-90°	294.7	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°	12009.8	100.0
0°-180°	12009.8	100.0



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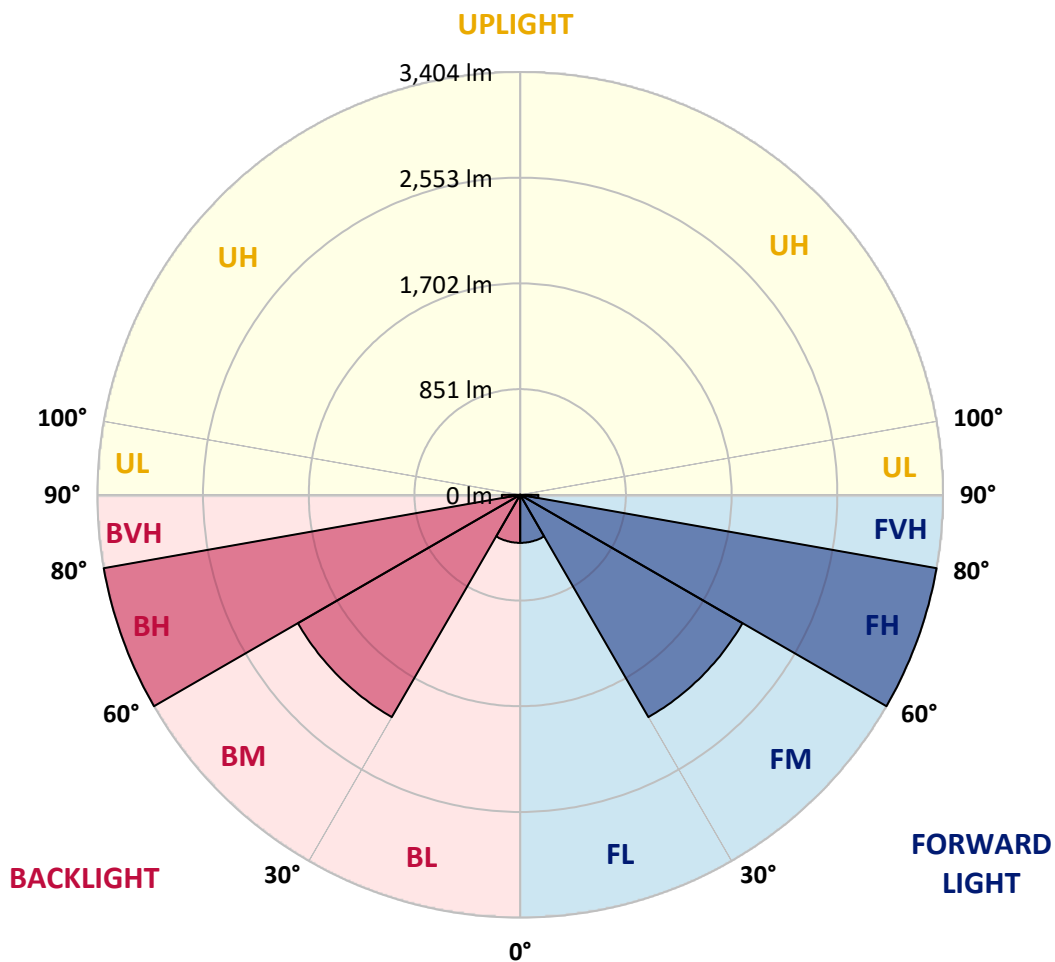
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	386.7	3.2			
FM	(30°-60°)	2066.7	17.2			
FH	(60°-80°)	3404.2	28.3			G2/5000
FVH	(80°-90°)	147.3	1.2			G2/225
BL	(0°-30°)	386.7	3.2	B1/500		
BM	(30°-60°)	2066.7	17.2	B2/2500		
BH	(60°-80°)	3404.2	28.3	B4/5000		G2/5000
BVH	(80°-90°)	147.3	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°	853.8	853.8	853.8	853.8	853.8	853.8	853.8	853.8	853.8	853.8	853.8
2.5°	860.4	860.4	861.2	860.4	859.0	858.2	856.0	854.5	853.1	852.3	850.8
5°	861.2	861.2	861.9	861.2	859.8	858.2	856.8	854.5	853.1	851.5	850.8
7.5°	864.1	864.9	865.7	864.9	861.9	860.4	858.2	856.0	853.1	851.5	850.1
10°	870.0	870.0	870.0	869.3	867.1	864.1	861.2	859.0	855.3	851.5	849.4
12.5°	874.5	875.2	875.2	873.7	870.8	867.1	864.1	861.9	859.0	856.0	853.8
15°	881.1	881.1	880.4	877.5	873.0	870.0	868.6	867.8	867.1	865.7	863.3
17.5°	894.5	893.7	891.5	887.0	881.9	879.6	878.2	878.2	878.2	877.5	875.9
20°	913.7	913.7	910.6	903.3	898.8	896.7	894.5	894.5	894.5	892.2	890.0
22.5°	944.8	945.4	941.0	932.2	926.3	921.8	918.9	916.6	914.4	913.0	909.2
25°	986.8	986.2	980.9	969.9	965.5	961.1	955.0	951.4	948.5	946.1	941.9
27.5°	1031.2	1030.6	1024.6	1014.9	1012.0	1005.3	1001.0	995.8	992.1	988.4	983.9
30°	1088.1	1084.4	1080.0	1072.6	1071.2	1066.0	1060.1	1052.6	1046.7	1040.8	1035.7
32.5°	1139.1	1139.1	1132.5	1128.7	1131.7	1129.5	1130.3	1125.8	1122.1	1119.9	1114.8
35°	1210.1	1210.1	1207.2	1202.7	1203.5	1198.2	1197.6	1198.2	1201.2	1201.2	1195.3
37.5°	1304.8	1306.2	1296.6	1295.2	1291.5	1284.1	1280.3	1281.8	1288.5	1292.2	1284.1
40°	1422.2	1425.2	1422.2	1412.6	1408.3	1395.7	1388.2	1388.2	1393.5	1397.1	1394.1
42.5°	1538.4	1543.5	1538.4	1530.9	1527.2	1517.6	1513.9	1516.8	1523.5	1528.0	1523.5
45°	1667.8	1671.3	1664.8	1655.9	1651.5	1646.2	1644.1	1646.2	1653.6	1658.1	1656.6
47.5°	1794.8	1800.0	1791.9	1788.1	1788.1	1783.0	1788.9	1794.8	1801.4	1811.8	1807.3
50°	1919.0	1925.7	1920.6	1921.3	1927.2	1936.7	1947.9	1959.7	1971.5	1982.6	1984.0
52.5°	2029.9	2040.3	2041.0	2054.3	2072.7	2087.6	2118.6	2144.5	2172.6	2182.2	2177.7
55°	2146.7	2160.7	2179.2	2199.9	2229.6	2259.8	2312.3	2358.9	2395.8	2418.8	2415.0
57.5°	2313.8	2327.8	2347.0	2381.1	2425.4	2466.7	2538.5	2611.0	2667.1	2701.9	2684.8
60°	2530.3	2545.2	2570.4	2606.5	2664.2	2720.3	2818.7	2922.9	3010.1	3050.1	3019.0
62.5°	2817.1	2831.2	2847.6	2895.6	2959.9	3032.3	3155.7	3289.6	3400.4	3438.8	3395.2
65°	3226.0	3243.1	3248.2	3287.3	3350.2	3417.4	3550.5	3701.2	3827.7	3890.5	3803.4
67.5°	3686.5	3693.2	3713.8	3759.7	3824.0	3884.6	3989.6	4132.3	4253.5	4288.2	4195.1
70°	3956.4	3969.6	4005.9	4069.5	4146.3	4241.7	4356.2	4510.0	4647.6	4663.7	4545.5
72.5°	3712.4	3739.7	3804.1	3903.1	4064.2	4233.6	4430.9	4657.8	4855.3	4878.1	4688.2
75°	2977.7	3008.7	3085.5	3194.2	3385.0	3636.2	3921.7	4262.4	4558.1	4595.8	4344.4
77.5°	1587.1	1625.6	1737.2	1883.5	2155.5	2488.3	2832.0	3220.9	3472.2	3557.2	3376.0
80°	399.9	420.6	474.6	560.3	744.4	1012.8	1309.2	1727.6	2039.6	2171.8	2039.6
82.5°	155.2	170.8	185.5	195.9	213.6	250.6	346.0	564.0	759.9	935.8	810.1
85°	59.9	63.6	91.7	104.3	104.3	114.6	131.5	155.2	192.2	209.9	175.9
87.5°	23.7	25.9	31.8	48.8	50.3	44.4	47.3	53.2	40.7	34.0	38.5
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°	853.8	853.8	853.8	853.8	853.8	853.8	853.8	853.8
2.5°	850.1	849.4	847.9	848.6	847.9	847.9	847.9	847.9
5°	849.4	849.4	847.9	847.9	847.9	848.6	847.9	847.9
7.5°	848.6	847.9	846.4	845.6	845.6	844.9	844.9	844.9
10°	847.2	845.6	844.2	843.5	843.5	842.0	842.0	842.0
12.5°	850.8	848.6	847.2	846.4	846.4	846.4	847.2	847.2
15°	861.2	856.8	854.5	853.8	854.5	856.0	856.8	857.4
17.5°	872.3	867.8	864.1	862.7	863.3	865.7	867.8	869.3
20°	886.3	882.6	878.2	876.7	876.7	879.6	881.1	883.4
22.5°	906.3	903.3	899.6	897.4	895.9	899.6	901.8	903.3
25°	938.1	935.1	932.2	929.9	929.2	932.8	934.3	935.1
27.5°	980.2	977.3	975.8	975.0	972.9	974.3	976.6	975.8
30°	1034.9	1037.1	1034.9	1034.9	1031.2	1032.7	1031.2	1029.8
32.5°	1108.1	1105.9	1099.2	1094.8	1089.7	1089.7	1087.3	1085.2
35°	1181.3	1173.9	1170.1	1172.5	1170.1	1171.7	1168.0	1164.2
37.5°	1267.7	1263.4	1262.6	1269.3	1267.7	1269.3	1269.3	1264.1
40°	1382.3	1379.4	1384.6	1395.7	1400.0	1399.4	1400.8	1394.1
42.5°	1513.9	1508.8	1510.9	1520.6	1525.8	1527.2	1526.5	1520.6
45°	1645.6	1647.0	1647.0	1657.4	1662.5	1665.4	1660.3	1658.1
47.5°	1794.1	1796.3	1791.2	1797.8	1799.3	1804.4	1800.0	1796.3
50°	1965.6	1957.5	1945.7	1947.9	1947.9	1946.4	1941.2	1936.7
52.5°	2157.1	2138.5	2116.4	2109.0	2100.8	2092.8	2082.4	2074.3
55°	2375.1	2343.4	2303.4	2284.9	2269.5	2251.0	2227.2	2219.2
57.5°	2627.9	2573.3	2520.1	2486.7	2446.9	2422.4	2392.1	2390.7
60°	2928.0	2854.2	2760.2	2710.7	2670.9	2642.0	2619.1	2610.2
62.5°	3274.7	3147.6	3046.3	2993.1	2946.5	2928.8	2900.0	2903.7
65°	3630.3	3501.0	3402.7	3359.8	3316.1	3304.3	3277.8	3287.3
67.5°	4015.5	3909.0	3801.1	3761.1	3721.3	3709.5	3682.0	3690.2
70°	4360.6	4225.4	4102.6	4024.3	3956.4	3901.6	3866.9	3852.8
72.5°	4429.5	4195.1	4002.1	3806.3	3693.2	3594.1	3553.4	3538.0
75°	3980.0	3616.3	3341.2	3111.3	2984.2	2840.0	2824.6	2803.1
77.5°	3095.9	2681.9	2349.3	2053.5	1882.7	1706.8	1646.2	1600.4
80°	1846.6	1419.3	1099.9	771.1	629.2	506.4	476.1	444.2
82.5°	660.9	423.6	285.3	222.6	198.9	183.3	171.5	156.0
85°	159.6	134.5	127.2	115.3	113.8	96.8	68.8	61.4
87.5°	51.1	46.6	47.3	45.2	47.3	35.5	28.9	25.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)