

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: INVUE

Report Number: P140455

Luminaire Tested: **ECM-F04-LED-E1-5WQ**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P140455
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33687)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F04-LED-E1-5WQ
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9864.5 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

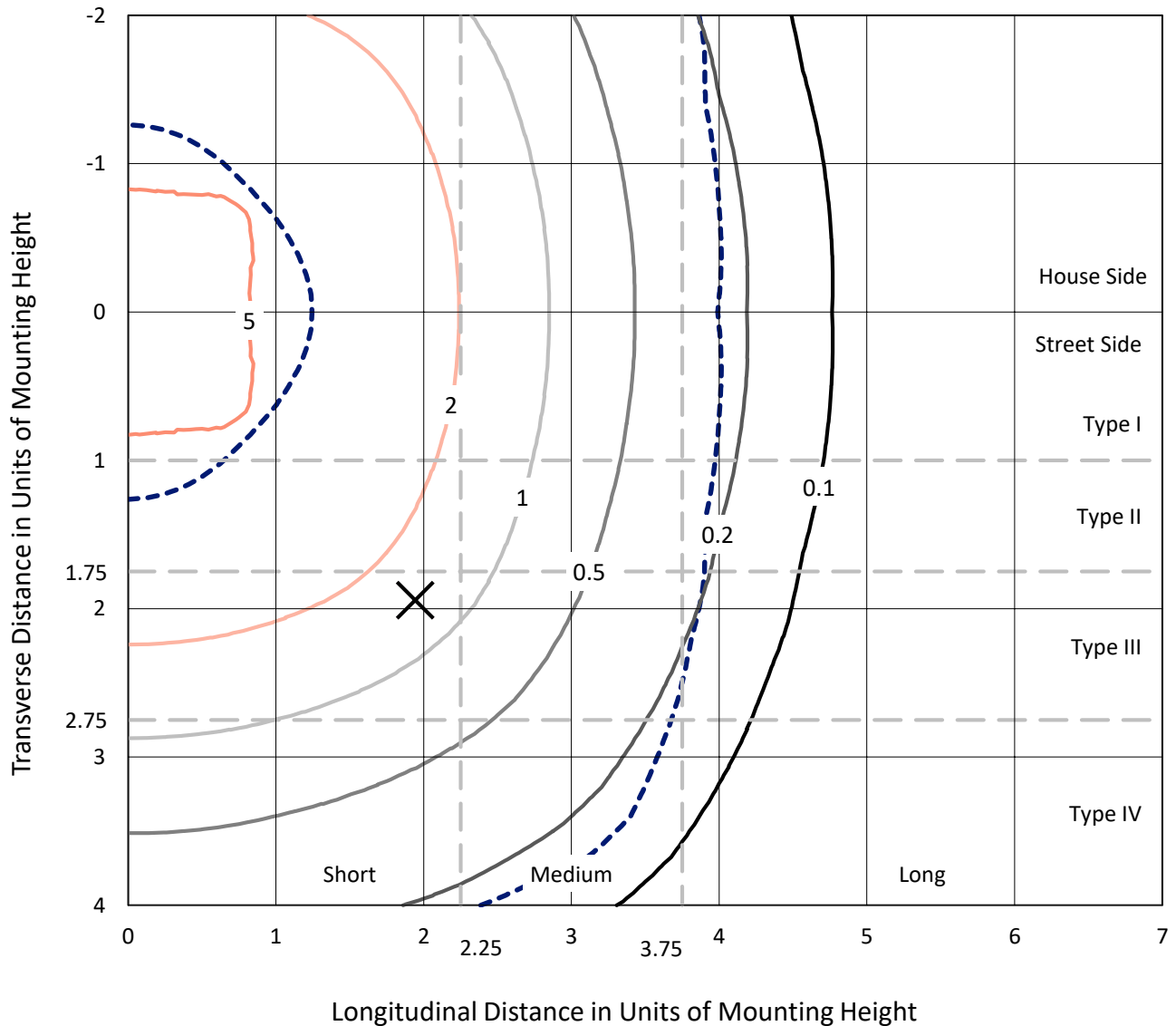
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

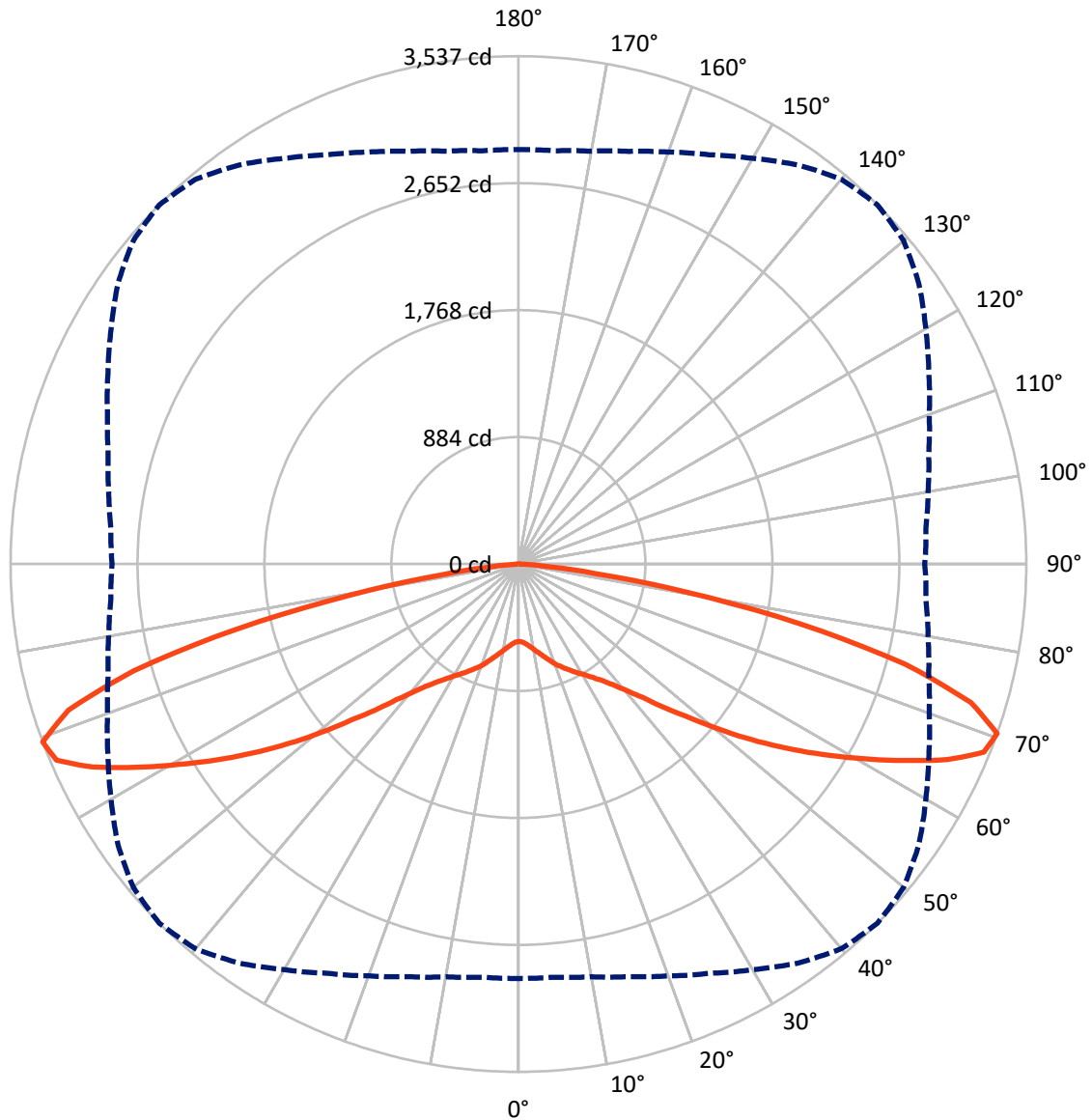
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.2 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4932.2	0.0	4932.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4932.2	0.0	4932.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	9864.5	0.0	9864.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	0.6
10°-20°	191.0	1.9
20°-30°	375.3	3.8
30°-40°	621.0	6.3
40°-50°	1087.1	11.0
50°-60°	1939.0	19.7
60°-70°	2993.5	30.3
70°-80°	2369.6	24.0
80°-90°	233.2	2.4
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°	9864.5	100.0
0°-180°	9864.5	100.0



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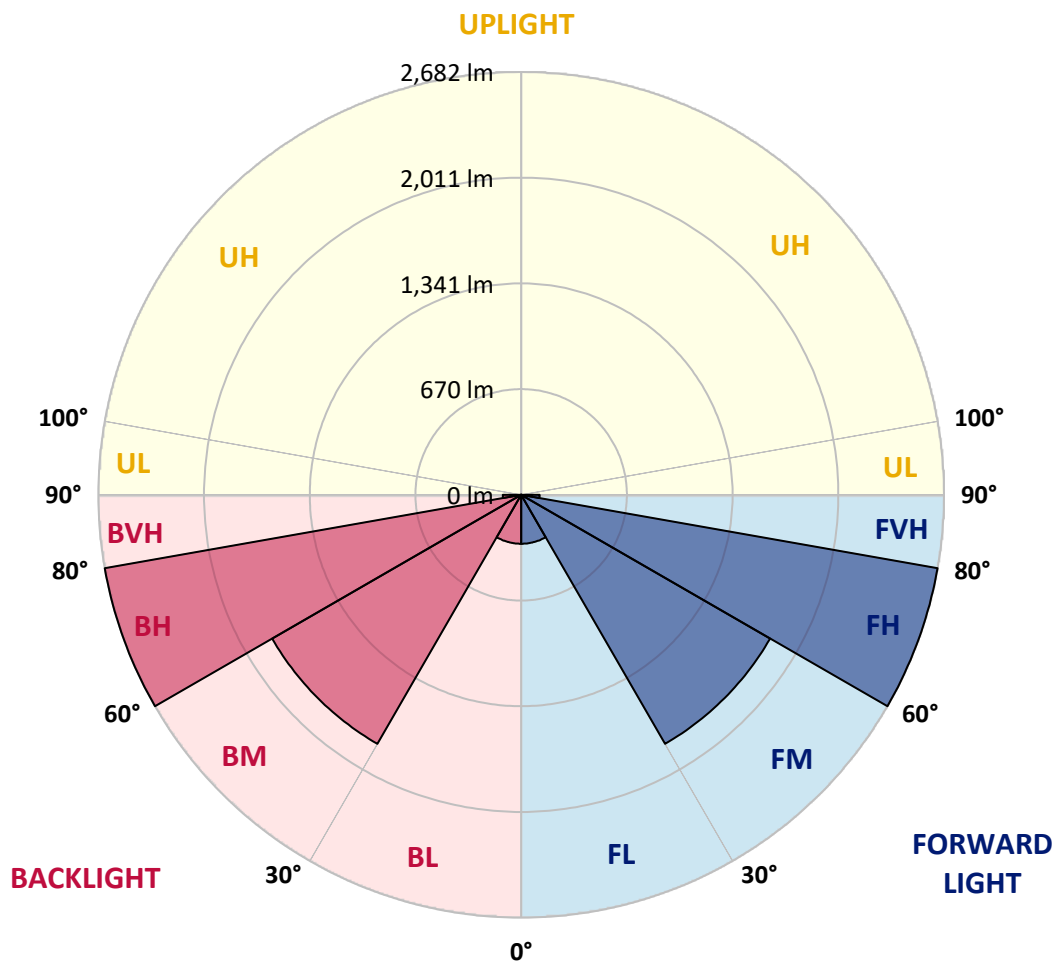
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	310.5	3.1			
FM (30°-60°)	1823.6	18.5			
FH (60°-80°)	2681.6	27.2			G2/5000
FVH (80°-90°)	116.6	1.2			G2/225
BL (0°-30°)	310.5	3.1	B1/500		
BM (30°-60°)	1823.6	18.5	B2/2500		
BH (60°-80°)	2681.6	27.2	B4/5000		G2/5000
BVH (80°-90°)	116.6	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°	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3
2.5°	545.9	545.9	544.8	544.8	544.8	544.8	543.7	543.7	544.8	543.7	543.7
5°	559.2	560.3	560.3	559.2	559.2	559.2	559.2	559.2	560.3	559.2	559.2
7.5°	579.0	580.1	580.1	579.0	579.0	579.0	579.0	579.0	580.1	580.1	577.9
10°	603.2	604.3	604.3	603.2	603.2	604.3	604.3	604.3	605.4	605.4	604.3
12.5°	631.8	632.9	634.0	632.9	634.0	634.0	635.1	636.2	636.2	636.2	634.0
15°	664.8	668.1	665.9	665.9	667.0	668.1	668.1	671.4	670.3	669.2	668.1
17.5°	703.3	702.2	702.2	703.3	704.4	703.3	704.4	707.8	706.6	705.5	704.4
20°	739.7	739.7	739.7	738.6	740.8	740.8	741.9	743.0	743.0	745.2	741.9
22.5°	774.9	774.9	773.8	773.8	776.0	776.0	778.2	780.4	780.4	780.4	778.2
25°	807.9	807.9	809.0	807.9	809.0	810.1	812.3	814.5	815.6	815.6	815.6
27.5°	837.6	840.9	839.8	840.9	843.1	845.3	847.5	850.8	853.0	854.1	850.8
30°	875.1	875.1	874.0	875.1	877.3	880.6	885.0	890.5	890.5	891.6	891.6
32.5°	914.7	915.8	913.6	915.8	919.1	923.5	927.9	932.3	934.5	938.9	937.8
35°	966.4	963.1	964.2	967.5	969.7	974.1	979.6	987.3	991.7	993.9	991.7
37.5°	1025.9	1024.8	1027.0	1027.0	1034.7	1039.1	1049.0	1055.6	1058.9	1064.4	1062.2
40°	1100.7	1105.1	1106.2	1109.5	1113.9	1122.7	1133.7	1144.7	1151.3	1155.7	1156.8
42.5°	1202.0	1204.2	1199.8	1211.9	1224.0	1229.5	1242.7	1258.1	1268.0	1271.3	1272.4
45°	1326.3	1326.3	1332.9	1340.7	1356.1	1367.1	1381.4	1406.7	1415.5	1427.6	1427.6
47.5°	1474.9	1479.3	1479.3	1497.0	1509.1	1531.1	1558.6	1579.5	1598.2	1592.7	1611.4
50°	1646.6	1649.9	1662.1	1672.0	1692.9	1718.2	1743.5	1774.3	1801.8	1805.1	1808.4
52.5°	1826.1	1830.5	1840.4	1863.5	1888.8	1917.4	1963.6	1990.1	2016.5	2030.8	2028.6
55°	2031.9	2029.7	2046.2	2063.8	2101.2	2139.8	2178.3	2215.7	2243.2	2263.0	2261.9
57.5°	2247.6	2255.3	2274.0	2296.1	2328.0	2362.1	2408.3	2445.8	2490.9	2503.0	2485.4
60°	2498.6	2490.9	2509.6	2543.7	2572.3	2616.4	2657.1	2705.5	2737.4	2751.7	2746.2
62.5°	2755.1	2748.4	2762.8	2806.8	2840.9	2872.8	2929.0	2981.8	3008.2	3013.7	3003.8
65°	2943.3	2945.5	2968.6	3007.1	3061.0	3109.5	3172.2	3236.1	3277.9	3284.5	3262.5
67.5°	2987.3	2991.7	3023.6	3073.2	3140.3	3220.6	3314.2	3408.9	3480.4	3495.8	3463.9
70°	2886.0	2888.2	2919.1	2975.2	3052.2	3144.7	3261.4	3392.4	3496.9	3536.5	3501.3
72.5°	2678.0	2686.8	2712.1	2759.5	2820.0	2911.4	3023.6	3140.3	3243.8	3294.4	3294.4
75°	2302.7	2322.5	2334.6	2350.0	2402.8	2476.6	2567.9	2660.4	2751.7	2780.4	2700.0
77.5°	1643.3	1610.3	1618.0	1703.9	1691.8	1775.4	1876.7	1942.7	2024.2	2012.1	1896.5
80°	754.0	735.3	778.2	835.4	908.1	964.2	1073.2	1084.2	1177.7	1183.3	1099.6
82.5°	150.8	158.5	189.3	233.3	290.6	353.3	410.6	459.0	522.8	534.9	496.4
85°	47.3	51.7	64.9	71.5	74.8	85.9	98.0	132.1	151.9	157.4	147.5
87.5°	9.9	15.4	25.3	28.6	29.7	28.6	28.6	27.5	22.0	17.6	20.9
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°	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3
2.5°	542.6	542.6	543.7	543.7	543.7	542.6	541.5	542.6
5°	558.1	558.1	558.1	558.1	555.9	555.9	554.8	554.8
7.5°	577.9	576.8	576.8	575.7	574.6	574.6	573.5	574.6
10°	604.3	602.1	601.0	599.9	598.8	598.8	597.7	596.6
12.5°	632.9	631.8	630.7	628.5	627.4	625.2	625.2	625.2
15°	665.9	664.8	663.7	660.4	660.4	657.1	658.2	658.2
17.5°	702.2	700.0	696.7	695.6	694.5	691.2	691.2	691.2
20°	739.7	735.3	733.1	730.9	730.9	727.6	726.5	726.5
22.5°	776.0	771.6	767.2	765.0	762.8	761.7	759.5	758.4
25°	812.3	807.9	803.5	800.2	795.8	793.6	791.4	791.4
27.5°	848.6	844.2	837.6	833.2	828.8	824.4	822.2	823.3
30°	886.1	881.7	875.1	869.6	864.0	859.6	857.4	856.3
32.5°	933.4	927.9	920.2	914.7	904.8	900.4	898.2	899.3
35°	988.4	980.7	975.2	966.4	958.7	953.2	949.9	949.9
37.5°	1058.9	1052.3	1046.8	1038.0	1027.0	1020.3	1015.9	1019.2
40°	1150.2	1144.7	1133.7	1120.5	1111.7	1106.2	1101.8	1102.9
42.5°	1266.9	1255.9	1246.0	1238.3	1225.1	1217.4	1205.3	1209.7
45°	1414.4	1402.3	1392.4	1380.3	1368.2	1352.8	1348.4	1339.6
47.5°	1592.7	1583.9	1561.9	1550.9	1535.5	1513.5	1502.5	1493.6
50°	1789.7	1773.2	1757.8	1730.3	1712.7	1687.4	1677.5	1674.2
52.5°	2012.1	1984.6	1959.2	1933.9	1898.7	1874.5	1854.7	1859.1
55°	2232.2	2200.3	2164.0	2136.5	2108.9	2079.2	2058.3	2046.2
57.5°	2464.5	2429.2	2390.7	2351.1	2328.0	2292.8	2279.5	2272.9
60°	2703.3	2671.4	2632.9	2596.6	2564.6	2523.9	2501.9	2493.1
62.5°	2967.5	2923.5	2877.2	2832.1	2796.9	2767.2	2744.0	2728.6
65°	3210.7	3150.2	3102.9	3045.6	3007.1	2964.2	2935.6	2930.1
67.5°	3392.4	3298.8	3216.2	3142.5	3083.1	3030.2	2993.9	2979.6
70°	3404.5	3275.7	3153.5	3044.5	2957.6	2897.0	2848.6	2829.9
72.5°	3168.9	3009.3	2844.2	2737.4	2645.0	2561.3	2527.2	2519.5
75°	2577.8	2444.7	2307.1	2186.0	2122.1	2080.3	2051.7	2009.9
77.5°	1790.8	1668.7	1594.9	1459.5	1435.3	1401.2	1372.6	1345.1
80°	1002.7	896.0	813.4	728.7	676.9	648.3	618.6	602.1
82.5°	450.2	369.8	293.9	227.8	188.2	148.6	111.2	117.8
85°	112.3	94.7	72.6	60.5	55.0	50.6	40.7	36.3
87.5°	20.9	19.8	17.6	17.6	18.7	15.4	8.8	7.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)