

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: P140615

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

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P140615
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33688)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F04-LED-E1-5XQ
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9845.3 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B4 - U0 - G3

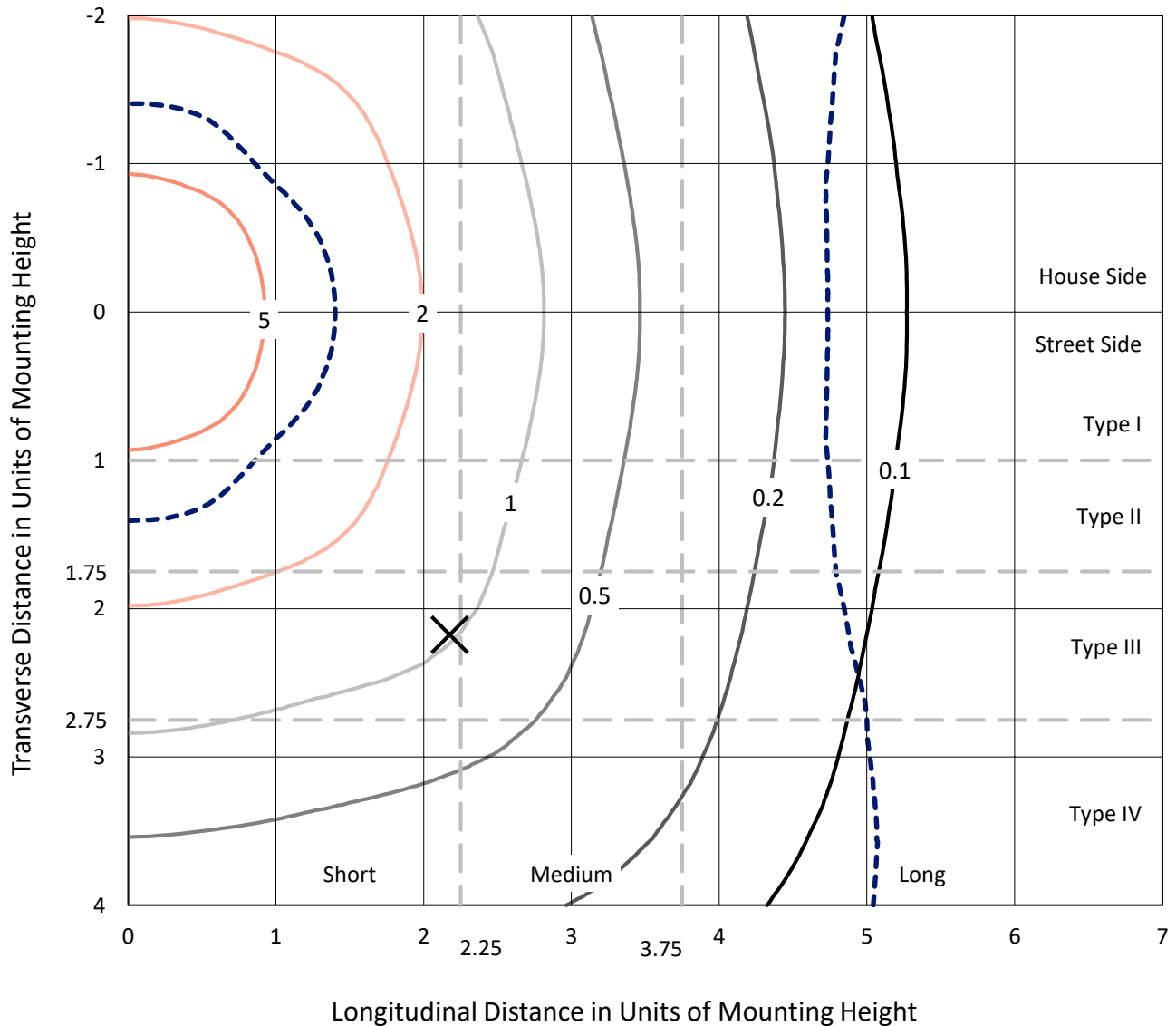
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P140615
 CATALOG NUMBER: ECM-F04-LED-E1-5XQ

Iso-Footcandle Lines of Horizontal Illumination

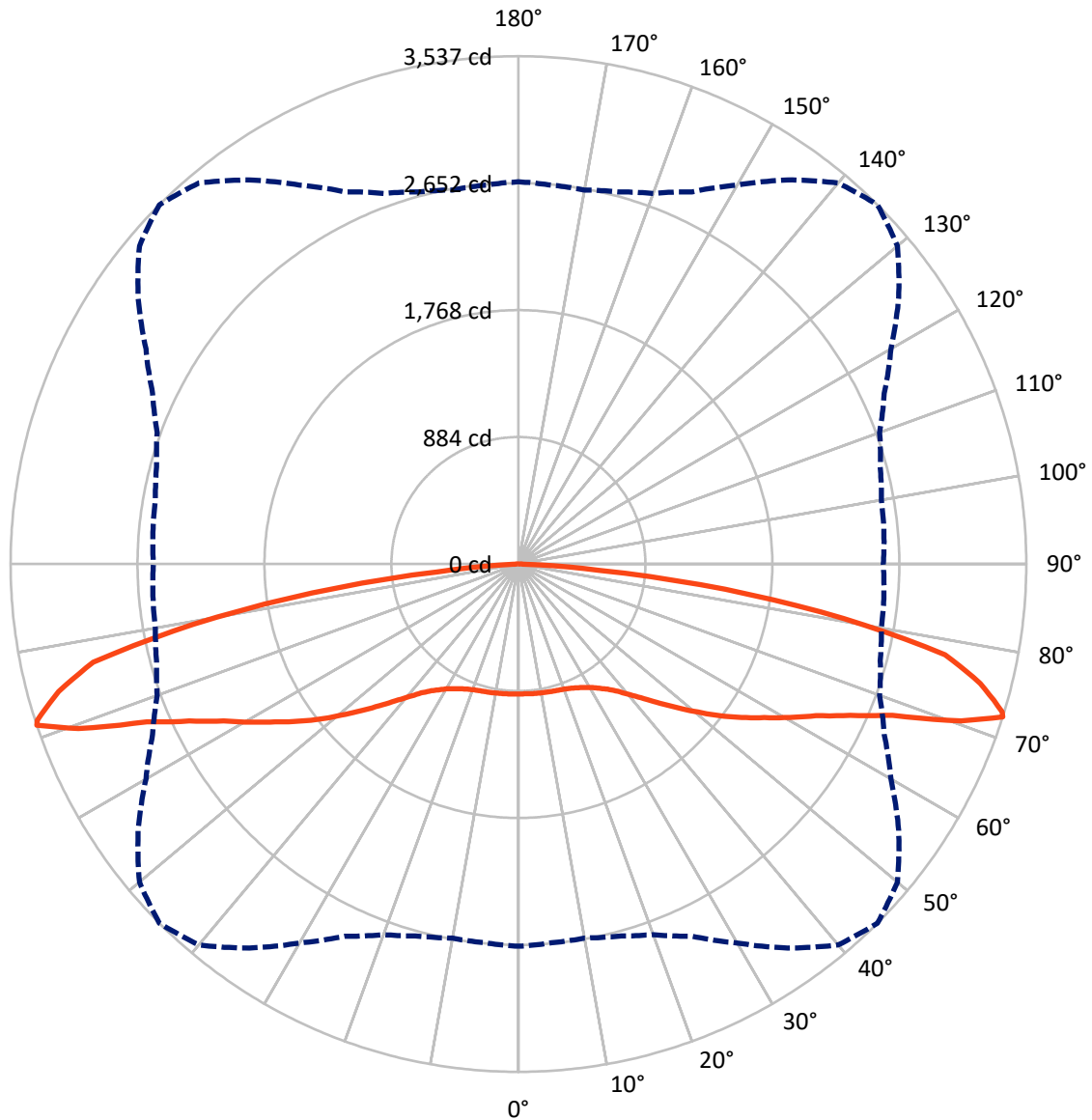
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type V - Short - Non-Cutoff

REPORT NUMBER: P140615
CATALOG NUMBER: ECM-F04-LED-E1-5XQ

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P140615

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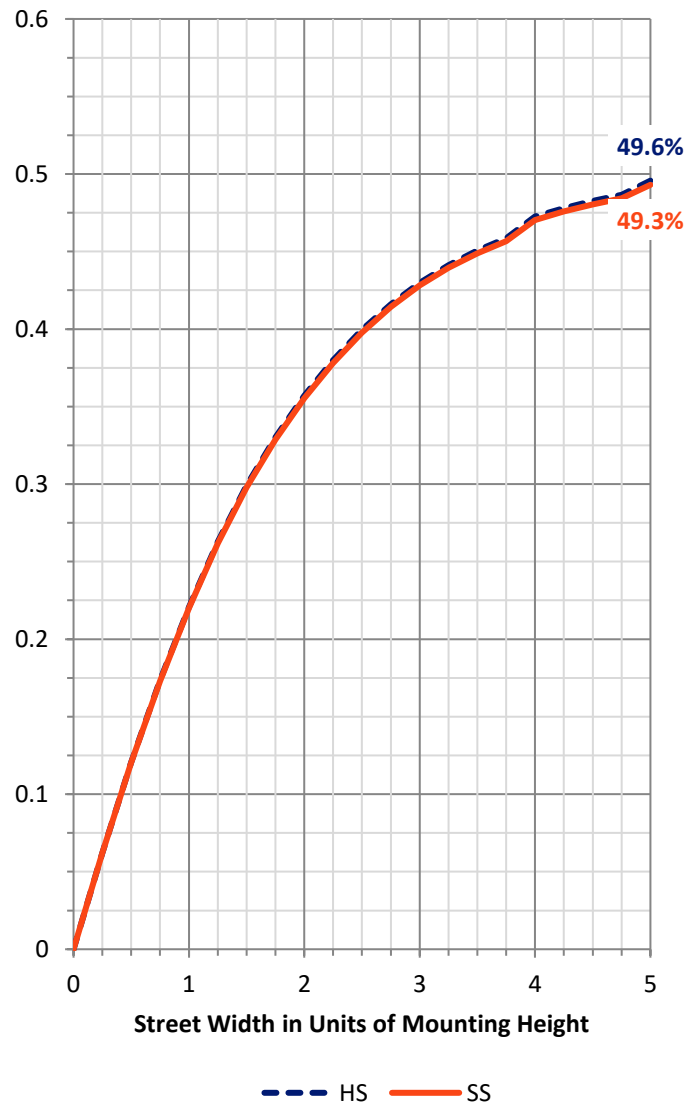
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4922.7	0.0	4922.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4922.7	0.0	4922.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	9845.3	0.0	9845.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	0.9
10°-20°	261.2	2.7
20°-30°	441.9	4.5
30°-40°	672.4	6.8
40°-50°	1064.5	10.8
50°-60°	1631.3	16.6
60°-70°	2394.9	24.3
70°-80°	2716.8	27.6
80°-90°	575.5	5.8
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°	9845.3	100.0
0°-180°	9845.3	100.0



REPORT NUMBER: P140615

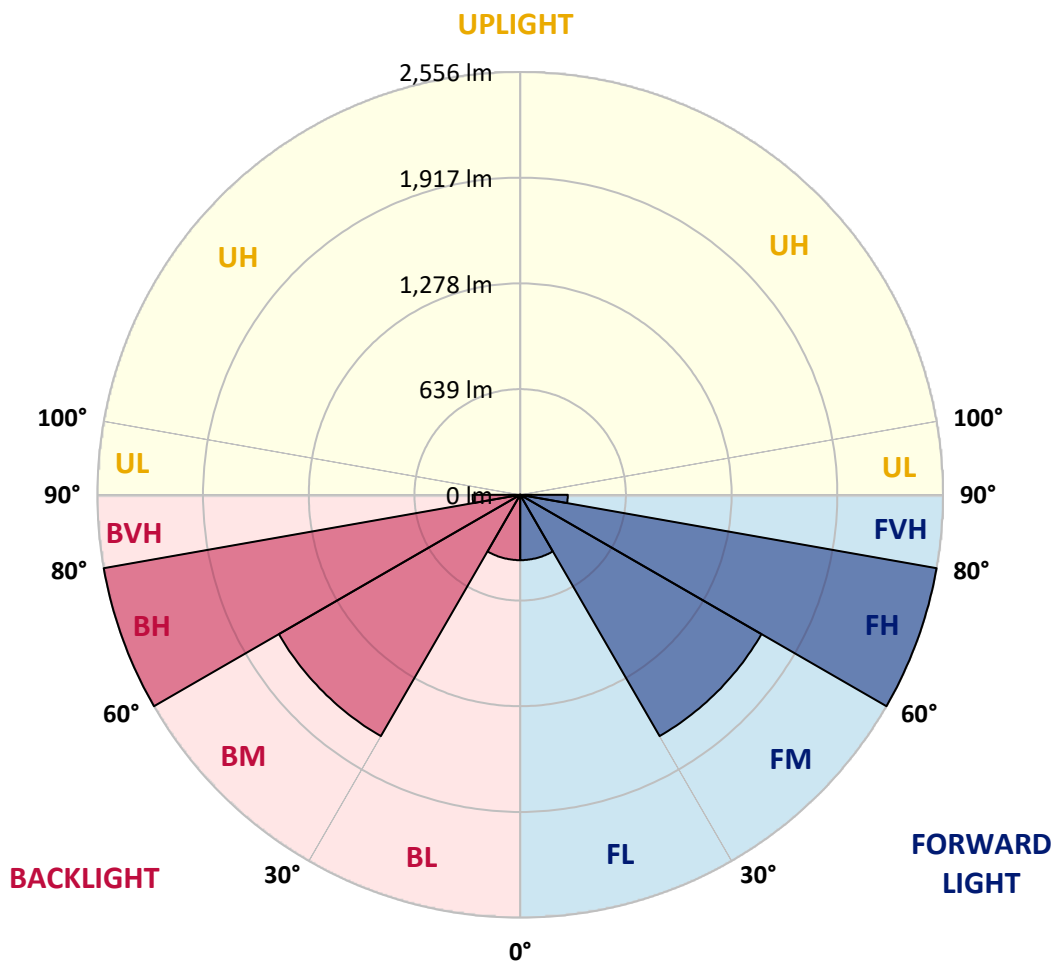
CATALOG NUMBER: ECM-F04-LED-E1-5XQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	395.0	4.0			
FM	(30°-60°)	1684.1	17.1			
FH	(60°-80°)	2555.9	26.0			G2/5000
FVH	(80°-90°)	287.8	2.9			G3/500
BL	(0°-30°)	395.0	4.0	B1/500		
BM	(30°-60°)	1684.1	17.1	B2/2500		
BH	(60°-80°)	2555.9	26.0	B4/5000		G2/5000
BVH	(80°-90°)	287.8	2.9			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G3

Type V Short





REPORT NUMBER: P140615

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	904.8	904.8	904.8	904.8	904.8	904.8	904.8	904.8	904.8	904.8	904.8
2.5°	908.1	909.2	908.1	907.0	907.0	905.9	905.9	905.9	907.0	904.8	904.8
5°	910.3	911.4	910.3	908.1	908.1	908.1	907.0	907.0	908.1	907.0	907.0
7.5°	913.6	914.7	913.6	911.4	911.4	910.3	909.2	909.2	911.4	909.2	909.2
10°	916.9	919.1	916.9	914.7	914.7	913.6	912.5	912.5	913.6	911.4	911.4
12.5°	922.4	922.4	921.3	920.2	920.2	919.1	918.0	916.9	915.8	914.7	913.6
15°	926.8	927.9	925.7	924.6	923.5	922.4	921.3	921.3	919.1	918.0	918.0
17.5°	932.3	933.4	931.2	929.0	929.0	926.8	925.7	925.7	923.5	922.4	921.3
20°	937.8	938.9	936.7	935.6	934.5	933.4	931.2	932.3	931.2	929.0	929.0
22.5°	944.4	944.4	943.3	942.2	942.2	941.1	940.0	942.2	940.0	940.0	938.9
25°	951.0	952.1	951.0	951.0	952.1	952.1	953.2	955.4	955.4	954.3	953.2
27.5°	965.3	965.3	965.3	965.3	968.6	968.6	969.7	973.0	974.1	974.1	974.1
30°	984.0	985.1	984.0	984.0	987.3	988.4	991.7	995.0	997.2	997.2	998.3
32.5°	1011.5	1010.4	1011.5	1013.7	1015.9	1018.1	1021.4	1027.0	1030.3	1031.4	1031.4
35°	1046.8	1047.9	1046.8	1047.9	1052.3	1055.6	1058.9	1065.5	1067.7	1069.9	1071.0
37.5°	1098.5	1101.8	1099.6	1099.6	1105.1	1107.3	1111.7	1117.2	1121.6	1123.8	1122.7
40°	1173.3	1172.2	1170.0	1171.1	1172.2	1174.4	1178.8	1189.9	1195.4	1195.4	1195.4
42.5°	1259.2	1260.3	1257.0	1255.9	1257.0	1259.2	1265.8	1274.6	1283.4	1281.2	1282.3
45°	1357.2	1349.5	1351.7	1349.5	1350.6	1358.3	1369.3	1373.7	1382.5	1382.5	1384.7
47.5°	1452.9	1449.6	1448.5	1447.4	1450.7	1458.4	1471.6	1485.9	1493.6	1498.1	1501.4
50°	1560.8	1555.3	1554.2	1555.3	1556.4	1558.6	1583.9	1598.2	1616.9	1620.2	1619.1
52.5°	1665.4	1661.0	1658.8	1658.8	1663.2	1670.9	1697.3	1720.4	1741.3	1754.5	1749.0
55°	1778.7	1778.7	1772.1	1769.9	1776.5	1784.2	1820.6	1847.0	1876.7	1886.6	1871.2
57.5°	1895.4	1894.3	1884.4	1881.1	1886.6	1906.4	1937.2	1978.0	2009.9	2018.7	2009.9
60°	2009.9	2009.9	2004.4	2002.2	2007.7	2031.9	2069.3	2114.4	2153.0	2169.5	2155.2
62.5°	2140.9	2140.9	2126.6	2133.2	2140.9	2159.6	2206.9	2265.2	2317.0	2325.8	2312.6
65°	2289.5	2296.1	2285.1	2282.9	2292.8	2328.0	2381.9	2455.7	2516.2	2539.3	2519.5
67.5°	2516.2	2506.3	2493.1	2487.6	2503.0	2536.0	2602.1	2698.9	2788.1	2810.1	2787.0
70°	2751.7	2741.8	2737.4	2755.1	2788.1	2857.4	2958.7	3094.1	3218.4	3271.3	3222.8
72°	2661.5	2648.3	2645.0	2682.4	2746.2	2859.6	3046.7	3264.7	3462.8	3536.5	3445.2
72.5°	2615.3	2604.3	2603.2	2638.4	2707.7	2822.2	3006.0	3230.6	3443.0	3523.3	3425.4
75°	2428.1	2417.1	2428.1	2467.8	2537.1	2660.4	2847.5	3057.7	3249.3	3323.0	3227.3
77.5°	2169.5	2149.7	2159.6	2214.6	2291.7	2425.9	2624.1	2872.8	3057.7	3037.9	2895.9
80°	1731.4	1687.4	1734.7	1751.2	1839.3	1929.5	2121.0	2232.2	2296.1	2299.4	2198.1
82.5°	756.2	773.8	833.2	882.8	945.5	1050.1	1127.1	1247.1	1386.9	1451.8	1373.7
85°	49.5	61.6	98.0	116.7	161.8	197.0	282.9	411.7	496.4	568.0	478.8
87.5°	8.8	12.1	22.0	26.4	28.6	31.9	31.9	44.0	46.2	37.4	41.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P140615

CATALOG NUMBER: ECM-F04-LED-E1-5XQ

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	904.8	904.8	904.8	904.8	904.8	904.8	904.8	904.8
2.5°	904.8	904.8	905.9	904.8	904.8	904.8	903.7	903.7
5°	905.9	905.9	907.0	907.0	905.9	905.9	905.9	905.9
7.5°	909.2	908.1	909.2	909.2	908.1	908.1	907.0	908.1
10°	910.3	910.3	911.4	911.4	910.3	910.3	910.3	910.3
12.5°	913.6	913.6	913.6	914.7	913.6	913.6	914.7	913.6
15°	916.9	915.8	915.8	915.8	915.8	916.9	916.9	918.0
17.5°	920.2	920.2	919.1	920.2	920.2	921.3	921.3	921.3
20°	926.8	925.7	923.5	925.7	925.7	925.7	925.7	926.8
22.5°	936.7	934.5	932.3	932.3	931.2	932.3	931.2	931.2
25°	951.0	947.7	944.4	943.3	942.2	941.1	940.0	941.1
27.5°	971.9	967.5	963.1	960.9	959.8	957.6	956.5	956.5
30°	995.0	991.7	985.1	982.9	979.6	976.3	976.3	975.2
32.5°	1030.3	1025.9	1018.1	1014.8	1009.3	1006.0	1004.9	1004.9
35°	1066.6	1061.1	1057.8	1053.4	1046.8	1043.5	1042.4	1042.4
37.5°	1121.6	1115.0	1110.6	1105.1	1104.0	1099.6	1099.6	1099.6
40°	1193.2	1187.7	1182.2	1177.7	1174.4	1171.1	1166.7	1166.7
42.5°	1281.2	1272.4	1269.1	1263.6	1259.2	1255.9	1253.7	1253.7
45°	1378.1	1370.4	1366.0	1358.3	1357.2	1355.0	1350.6	1350.6
47.5°	1487.0	1476.0	1467.2	1465.0	1459.5	1454.0	1451.8	1452.9
50°	1605.9	1587.2	1575.1	1575.1	1568.5	1560.8	1561.9	1560.8
52.5°	1728.1	1707.2	1691.8	1680.8	1673.1	1672.0	1673.1	1672.0
55°	1851.4	1829.4	1810.7	1798.5	1790.8	1783.1	1782.0	1782.0
57.5°	1979.1	1951.5	1921.8	1910.8	1903.1	1898.7	1898.7	1899.8
60°	2123.3	2078.1	2040.7	2026.4	2020.9	2023.1	2022.0	2023.1
62.5°	2269.6	2217.9	2173.9	2157.4	2149.7	2148.6	2157.4	2160.7
65°	2454.6	2390.7	2341.2	2310.4	2310.4	2307.1	2317.0	2312.6
67.5°	2695.6	2605.4	2544.8	2495.3	2496.4	2499.7	2514.0	2512.9
70°	3106.2	2946.6	2834.3	2749.5	2716.5	2694.5	2690.1	2690.1
72°	3232.8	2995.0	2810.1	2676.9	2608.7	2566.8	2554.7	2541.5
72.5°	3199.7	2955.4	2768.3	2629.6	2559.1	2517.3	2498.6	2482.1
75°	2991.7	2718.7	2515.1	2369.8	2291.7	2241.0	2231.1	2223.4
77.5°	2639.5	2397.3	2187.1	2036.3	1958.1	1893.2	1866.8	1864.6
80°	2035.2	1817.3	1655.5	1537.7	1467.2	1418.8	1421.0	1405.6
82.5°	1200.9	1017.0	878.4	721.0	617.5	558.1	520.6	516.2
85°	353.3	240.0	153.0	110.1	79.3	59.4	44.0	39.6
87.5°	31.9	25.3	20.9	17.6	16.5	14.3	8.8	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)