

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: FAIL-SAFE

Report Number: P551316

Luminaire Tested: **FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D**

Issue Date: 7/9/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P551316  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K,  
AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

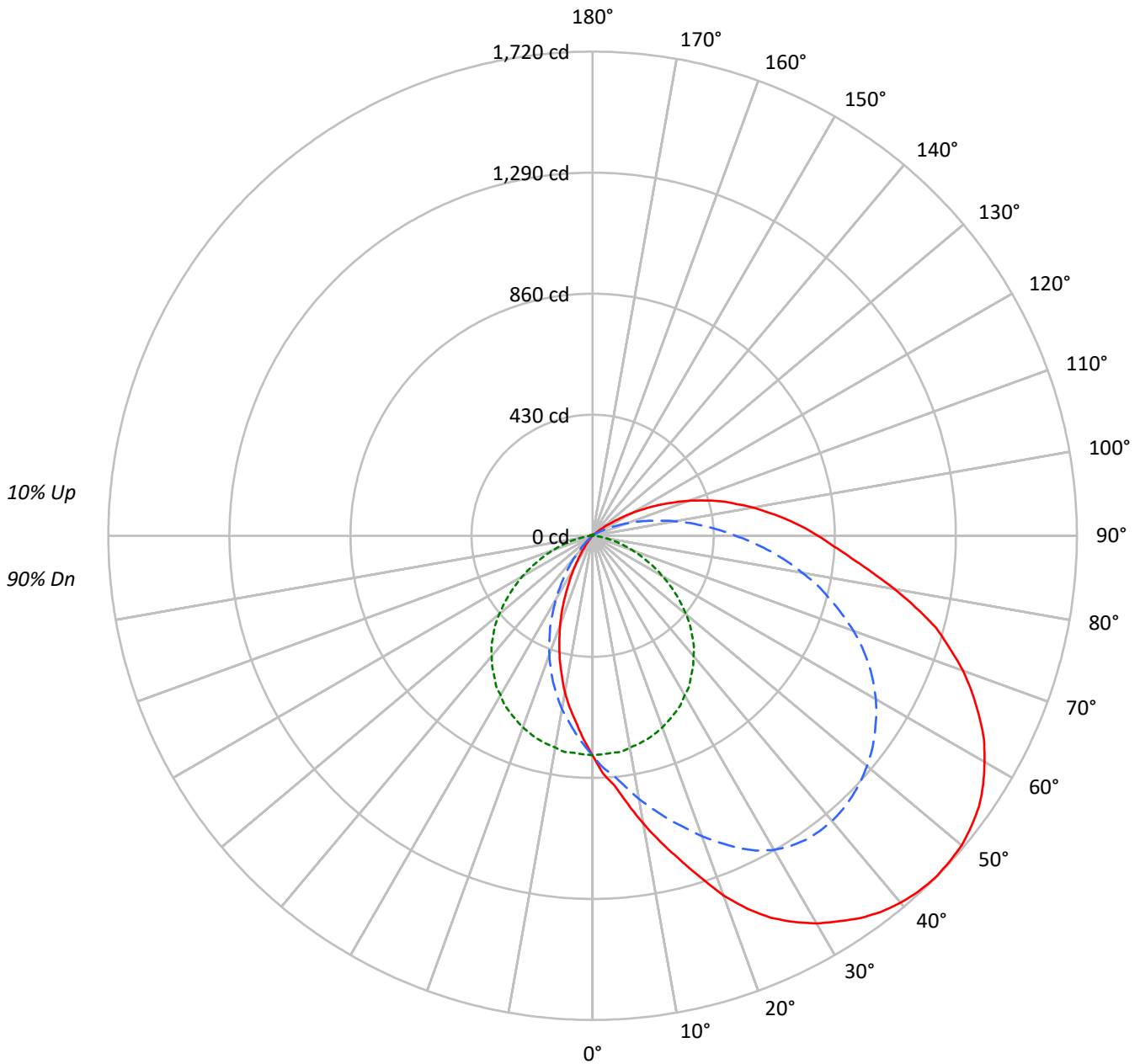
Lumens per Lamp: N/A  
Luminaire Lumens: 3855.1 lumens  
Efficiency: N/A  
Efficacy: 89.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	70	70	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	56	56	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	46	46	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	38	38	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	33	33	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	28	28	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	25	25	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	22	22	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	20	20	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	18	18	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	8394	8394	8394
5°	9213	8270	6900
10°	10426	8169	5687
15°	11684	8065	4432
20°	13179	7933	3263
25°	14418	7782	2143
30°	15338	7577	1208
35°	16136	7357	531
40°	16843	7087	128
45°	17450	6748	0
50°	17959	6298	0
55°	18347	5726	0
60°	18542	5063	0
65°	18618	4310	0
70°	18556	3514	0
75°	18320	2592	15
80°	17578	1585	81
85°	16990	758	110



TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.7	1.9
10°-20°	223.6	5.8
20°-30°	362.2	9.4
30°-40°	465.2	12.1
40°-50°	526.6	13.7
50°-60°	545.6	14.2
60°-70°	514.6	13.3
70°-80°	431.2	11.2
80°-90°	312.6	8.1
90°-100°	205.4	5.3
100°-110°	118.7	3.1
110°-120°	52.4	1.4
120°-130°	14.2	0.4
130°-140°	3.3	0.1
140°-150°	2.1	0.1
150°-160°	1.5	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	660.5	17.1
0°-40°	1125.7	29.2
0°-60°	2198.0	57.0
0°-90°	3456.4	89.7
90°-120°	376.5	9.8
90°-150°	396.1	10.3
90°-180°	399.0	10.3
0°-180°	3855.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	780	780	780	780	780	
5°	890	855	774	702	666	90
15°	1189	1042	748	540	451	343
25°	1497	1223	693	356	222	692
35°	1658	1319	609	173	55	1040
45°	1720	1306	499	40	0	1327
55°	1676	1223	360	0	0	1496
65°	1515	1083	215	0	0	1499
75°	1262	874	91	1	1	1324
85°	924	633	15	4	6	789
90°	801	508	4	6	7	439
95°	687	397	2	7	9	539
105°	473	205	2	5	8	499
115°	257	68	3	3	5	258
125°	76	9	4	3	4	76
135°	4	3	5	4	3	7
145°	1	4	4	3	3	1
155°	2	4	4	3	1	1
165°	2	3	4	3	0	1
175°	2	4	5	3	1	0
180°	3	3	3	3	3	



TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8	779.8
2.5°	845.3	844.3	841.4	836.4	829.4	817.5	807.6	798.6	786.7	776.8	757.9
5°	890.0	885.1	881.1	876.1	860.2	849.3	831.4	811.6	792.7	773.8	736.1
7.5°	961.6	953.6	947.6	933.7	911.9	887.1	859.2	840.4	827.5	774.8	710.2
10°	1038.0	1031.1	1019.2	994.3	967.5	931.8	892.0	847.3	807.6	763.9	687.4
12.5°	1113.5	1103.6	1086.7	1054.9	1017.2	972.5	917.8	865.2	808.6	756.9	660.6
15°	1189.0	1178.1	1160.2	1121.5	1071.8	1013.2	946.7	880.1	813.5	748.0	632.8
17.5°	1271.5	1256.6	1229.8	1186.1	1123.5	1051.0	972.5	892.0	811.6	737.1	603.0
20°	1359.9	1339.0	1310.2	1251.6	1178.1	1092.7	998.3	903.9	810.6	724.1	569.2
22.5°	1433.4	1412.5	1380.7	1320.2	1231.7	1127.4	1020.2	911.9	806.6	709.2	537.4
25°	1497.0	1480.1	1445.3	1375.8	1282.4	1164.2	1041.0	917.8	800.6	693.4	503.6
27.5°	1546.6	1530.7	1492.0	1420.5	1325.1	1197.0	1056.9	920.8	792.7	677.5	468.9
30°	1590.3	1574.4	1527.8	1454.3	1353.9	1222.8	1072.8	921.8	782.8	653.6	431.1
32.5°	1624.1	1609.2	1561.5	1483.1	1373.8	1240.7	1081.8	920.8	769.8	636.7	390.4
35°	1657.9	1643.0	1587.4	1503.9	1388.7	1248.6	1088.7	915.9	753.9	608.9	351.6
37.5°	1683.7	1666.8	1610.2	1517.8	1395.6	1250.6	1087.7	908.9	737.1	586.1	312.9
40°	1701.6	1683.7	1623.1	1525.8	1397.6	1247.6	1079.8	897.0	717.2	557.3	272.2
42.5°	1713.5	1693.6	1629.1	1537.7	1393.7	1239.7	1067.8	882.1	695.3	532.4	233.4
45°	1719.5	1698.6	1630.1	1527.8	1386.7	1224.8	1050.0	863.2	671.5	498.7	194.7
47.5°	1716.5	1693.6	1625.1	1516.8	1373.8	1208.9	1030.1	840.4	642.7	468.9	157.9
50°	1711.5	1687.7	1614.2	1502.9	1355.9	1189.0	1008.2	812.6	612.9	432.1	125.2
52.5°	1695.6	1671.8	1602.3	1483.1	1335.1	1166.2	978.4	783.7	581.1	396.3	95.4
55°	1675.8	1653.9	1581.4	1465.2	1308.2	1138.4	950.6	753.0	550.3	359.6	68.5
57.5°	1645.0	1625.1	1555.6	1436.4	1281.4	1107.6	919.8	719.2	511.6	322.8	47.7
60°	1607.2	1587.4	1519.8	1403.6	1250.6	1072.8	886.1	684.4	476.8	286.1	29.8
62.5°	1567.5	1548.6	1478.1	1362.9	1211.9	1036.1	849.3	649.6	440.1	252.3	17.9
65°	1514.8	1497.0	1433.4	1314.2	1169.2	996.3	808.6	607.9	402.3	214.6	9.9
67.5°	1459.2	1443.3	1378.8	1269.5	1119.5	952.6	766.9	567.2	362.6	181.8	5.0
70°	1399.6	1379.8	1320.2	1208.9	1068.8	902.9	721.2	525.5	324.8	150.0	0.0
72.5°	1330.1	1315.2	1257.6	1152.3	1010.2	850.3	674.5	479.8	283.1	119.2	1.0
75°	1262.5	1243.7	1191.0	1091.7	952.6	794.7	622.8	437.1	242.4	91.4	1.0
77.5°	1175.1	1169.2	1119.5	1023.1	898.0	741.0	566.2	385.4	203.6	65.6	1.0
80°	1087.7	1081.8	1043.0	954.6	834.4	677.5	513.6	336.7	165.9	43.7	1.0
82.5°	1001.3	993.3	956.6	883.1	769.8	623.8	458.9	288.1	131.1	26.8	1.0
85°	923.8	913.9	874.1	806.6	703.3	563.2	402.3	240.4	97.3	14.9	2.0
87.5°	857.3	850.3	806.6	737.1	635.7	506.6	352.6	194.7	68.5	7.0	3.0
90°	800.6	785.7	747.0	673.5	572.2	444.0	300.0	156.0	45.7	4.0	4.0
92.5°	745.0	732.1	689.4	613.9	515.5	390.4	249.3	119.2	28.8	2.0	5.0
95°	687.4	673.5	631.8	562.2	457.9	335.7	204.6	87.4	15.9	2.0	5.0
97.5°	630.8	617.9	574.2	504.6	406.3	288.1	161.9	61.6	7.9	2.0	4.0
100°	578.1	563.2	523.5	454.0	354.6	240.4	125.2	39.7	5.0	2.0	4.0
102.5°	522.5	510.6	469.9	402.3	301.0	195.7	93.4	24.8	2.0	2.0	3.0
105°	472.8	457.9	418.2	348.7	256.3	154.0	65.6	14.9	2.0	2.0	3.0



TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	307.9	296.0	261.2	202.6	130.1	60.6	17.9	3.0	3.0	3.0	3.0
115°	257.3	239.4	208.6	156.9	96.4	39.7	8.9	3.0	3.0	3.0	3.0
117.5°	205.6	190.7	168.9	119.2	63.6	25.8	5.0	3.0	3.0	3.0	3.0
120°	160.9	147.0	122.2	82.4	42.7	14.9	2.0	3.0	3.0	3.0	3.0
122.5°	115.2	104.3	82.4	53.6	25.8	7.0	3.0	3.0	4.0	4.0	3.0
125°	76.5	70.5	54.6	32.8	15.9	3.0	3.0	3.0	4.0	4.0	3.0
127.5°	49.7	44.7	31.8	18.9	7.0	3.0	3.0	4.0	4.0	4.0	3.0
130°	27.8	24.8	18.9	10.9	3.0	3.0	3.0	4.0	4.0	4.0	3.0
132.5°	15.9	14.9	9.9	2.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
135°	4.0	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	4.0
137.5°	1.0	1.0	2.0	2.0	3.0	3.0	4.0	5.0	5.0	5.0	4.0
140°	1.0	1.0	2.0	3.0	3.0	3.0	4.0	5.0	5.0	5.0	4.0
142.5°	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	4.0	4.0
145°	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	4.0	4.0	4.0
147.5°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	4.0	4.0
150°	1.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
152.5°	1.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
155°	2.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	5.0
157.5°	2.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	5.0
160°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
162.5°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
165°	2.0	2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0
167.5°	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0
170°	2.0	2.0	2.0	3.0	3.0	3.0	4.0	5.0	5.0	5.0	5.0
172.5°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	5.0
175°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	5.0
177.5°	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	4.0
180°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0



TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	779.8	779.8	779.8
2.5°	742.0	728.1	724.1
5°	702.3	679.4	666.5
7.5°	662.6	631.8	616.9
10°	625.8	582.1	566.2
12.5°	582.1	531.4	506.6
15°	540.4	474.8	451.0
17.5°	493.7	420.2	392.4
20°	450.0	365.6	336.7
22.5°	400.3	311.9	280.1
25°	355.6	258.3	222.5
27.5°	305.9	203.6	172.8
30°	259.3	156.0	125.2
32.5°	214.6	114.2	86.4
35°	172.8	77.5	54.6
37.5°	133.1	47.7	27.8
40°	96.4	24.8	12.9
42.5°	64.6	11.9	7.0
45°	39.7	6.0	0.0
47.5°	22.8	0.0	0.0
50°	11.9	0.0	0.0
52.5°	5.0	0.0	0.0
55°	0.0	0.0	0.0
57.5°	0.0	0.0	0.0
60°	0.0	0.0	0.0
62.5°	0.0	0.0	0.0
65°	0.0	0.0	0.0
67.5°	0.0	0.0	0.0
70°	0.0	0.0	0.0
72.5°	0.0	0.0	0.0
75°	1.0	1.0	1.0
77.5°	1.0	2.0	3.0
80°	2.0	4.0	5.0
82.5°	4.0	5.0	5.0
85°	4.0	5.0	6.0
87.5°	5.0	6.0	7.0
90°	6.0	7.0	7.0
92.5°	6.0	7.9	7.9
95°	7.0	7.9	8.9
97.5°	7.9	8.9	8.9
100°	7.0	8.9	9.9
102.5°	6.0	8.9	8.9
105°	5.0	7.0	7.9





TEST NUMBER: P551316

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	4.0	5.0	5.0
115°	3.0	4.0	5.0
117.5°	3.0	4.0	4.0
120°	3.0	3.0	4.0
122.5°	3.0	3.0	4.0
125°	3.0	3.0	4.0
127.5°	4.0	3.0	3.0
130°	3.0	3.0	3.0
132.5°	4.0	3.0	3.0
135°	4.0	3.0	3.0
137.5°	4.0	3.0	3.0
140°	4.0	3.0	3.0
142.5°	4.0	3.0	3.0
145°	3.0	3.0	3.0
147.5°	3.0	3.0	3.0
150°	3.0	3.0	2.0
152.5°	3.0	2.0	2.0
155°	3.0	2.0	1.0
157.5°	4.0	2.0	1.0
160°	3.0	2.0	1.0
162.5°	3.0	2.0	1.0
165°	3.0	2.0	0.0
167.5°	3.0	2.0	1.0
170°	3.0	2.0	1.0
172.5°	3.0	2.0	1.0
175°	3.0	1.0	1.0
177.5°	3.0	1.0	1.0
180°	3.0	3.0	3.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	417.2	405.3	365.6	300.0	209.6	117.2	43.7	7.9	2.0	3.0	3.0
110°	363.6	353.6	312.9	249.3	168.9	87.4	28.8	5.0	3.0	3.0	3.0







107.5°	4.0	6.0	7.0
110°	4.0	5.0	6.0



(END OF REPORT)