

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: 168P190

Luminaire Tested: **MPWA-0/254-EXL-WHT**

Issue Date: 3/3/2020

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: 168P190  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MPWA-0/254-EXL-WHT  
Description: Medical Patient Wall Bracket, Architectural style  
angled and rounded front, upper and lower compartments  
different in size with reflector insert.  
Light Source: Two - F54T5/841 HO - 4400 Lumens ea. - 54 Watts ea.  
Ballast/Driver: Two - Advance ICN-2S54

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
	AS-5443-2	Good	REFLECTOR
	AS-5443-3	Good	DRIVER
	AS-5443-4	Good	UPPER MODULE
	AS-5443-5	Good	LENS
	AS-5443-6	Good	DRIVER 2
	AS-5443-7	Good	TRIM RING

**Summary**

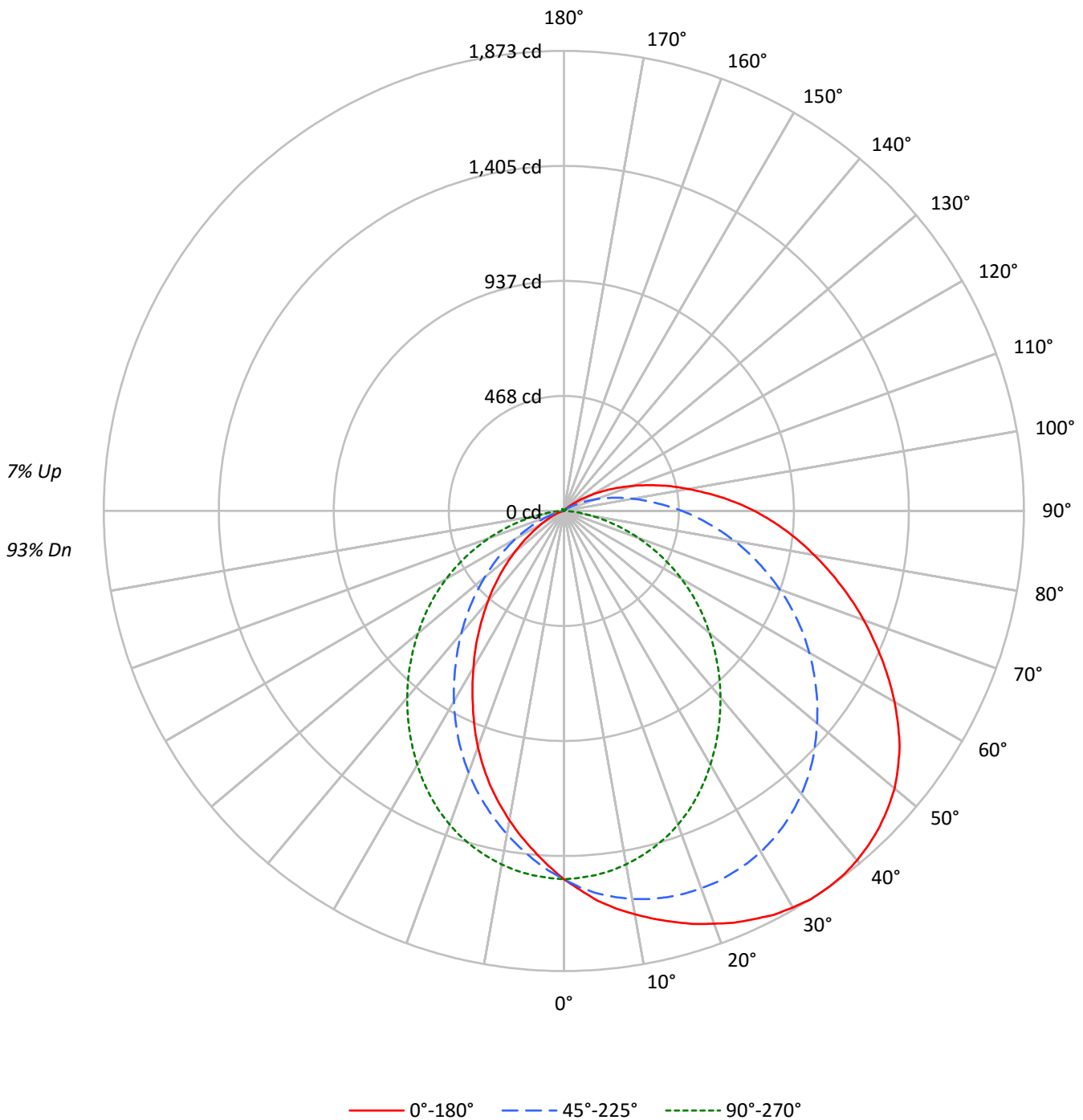
Lumens per Lamp: 4400 (2 lamps)  
Luminaire Lumens: 5054.5 lumens  
Efficiency: 57.4%  
Efficacy: 47.2 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.19 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 3.83' x L: 0.43' x H: 0.25')  
CIE Type: Direct

Input Watts (W): 107  
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: 168P190  
CATALOG NUMBER: MPWA-0/254-EXL-WHT

### Luminous Intensity Polar Plot





TEST NUMBER: 168P190

CATALOG NUMBER: MPWA-0/254-EXL-WHT

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

RF	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	0
RCR																		
0	67	67	67	67	65	65	65	65	61	61	61	58	58	58	55	55	55	53
1	60	57	54	52	58	55	53	50	52	50	48	49	47	46	46	45	44	42
2	54	49	45	41	53	48	44	40	45	42	39	42	40	37	40	38	36	34
3	49	43	38	34	48	42	37	33	39	35	32	37	34	31	35	32	30	29
4	45	38	33	29	44	37	32	28	35	31	27	33	29	26	31	28	26	24
5	42	34	28	24	40	33	28	24	31	27	23	30	26	23	28	25	22	21
6	38	30	25	21	37	30	25	21	28	24	20	27	23	20	25	22	19	18
7	35	28	22	19	34	27	22	19	26	21	18	24	21	18	23	20	17	16
8	33	25	20	17	32	24	20	16	23	19	16	22	19	16	21	18	15	14
9	31	23	18	15	30	22	18	15	22	17	15	21	17	14	20	16	14	13
10	29	21	17	14	28	21	16	13	20	16	13	19	15	13	18	15	13	12

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

	0°	90°	180°
0°	9797	9797	9797
5°	9946	9707	8678
10°	10035	9586	7693
15°	10140	9430	6774
20°	10264	9233	5873
25°	10399	8979	4970
30°	10532	8677	4159
35°	10621	8355	3431
40°	10649	8024	2758
45°	10626	7679	2151
50°	10559	7311	1574
55°	10391	6942	1071
60°	10128	6494	677
65°	9836	5956	399
70°	9564	5250	191
75°	9297	4386	56
80°	9065	3241	0
85°	8896	1890	0



TEST NUMBER: 168P190

CATALOG NUMBER: MPWA-0/254-EXL-WHT

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	141.6	2.8	1.6	0°	1499	1499	1499	1499	1499	
10°-20°	404.1	8.0	4.6	5°	1593	1563	1488	1424	1390	154
20°-30°	608.2	12.0	6.9	15°	1732	1628	1418	1239	1157	492
30°-40°	728.9	14.4	8.3	25°	1833	1626	1283	1018	876	849
40°-50°	759.7	15.0	8.6	35°	1873	1562	1095	769	605	1174
50°-60°	705.5	14.0	8.0	45°	1818	1433	885	532	368	1404
60°-70°	587.5	11.6	6.7	55°	1669	1253	666	319	172	1491
70°-80°	440.9	8.7	5.0	65°	1429	1049	439	146	58	1416
80°-90°	303.6	6.0	3.5	75°	1167	821	216	36	7	1234
90°-100°	192.8	3.8	2.2	85°	907	591	44	4	0	767
100°-110°	108.0	2.1	1.2	90°	776	482	7	4	0	425
110°-120°	49.1	1.0	0.6	95°	643	375	7	4	0	499
120°-130°	16.5	0.3	0.2	105°	401	207	7	4	0	428
130°-140°	5.6	0.1	0.1	115°	208	83	7	4	0	210
140°-150°	2.6	0.1	0.0	125°	74	14	8	5	2	71
150°-160°	0.0	0.0	0.0	135°	11	5	9	7	3	11
160°-170°	0.0	0.0	0.0	145°	2	6	10	7	4	1
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1153.8	22.8	13.1	165°	0	0	0	0	0	0
0°-40°	1882.7	37.2	21.4	175°	0	0	0	0	0	0
0°-60°	3347.9	66.2	38.0	180°	0	0	0	0	0	0
0°-90°	4679.9	92.6	53.2							
90°-120°	349.9	6.9	4.0							
90°-150°	374.6	7.4	4.3							
90°-180°	375.0	7.4	4.3							
0°-180°	5054.5	100.0	57.4							



TEST NUMBER: 168P190

CATALOG NUMBER: MPWA-0/254-EXL-WHT

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1499	1499	1499	1499	1499	1499	1499	1499	1499
2.5°	1545	1544	1534	1514	1495	1477	1464	1452	1445
5°	1593	1583	1563	1526	1488	1452	1424	1402	1390
7.5°	1633	1618	1585	1534	1477	1423	1381	1350	1336
10°	1667	1648	1604	1536	1461	1391	1336	1296	1278
12.5°	1701	1676	1618	1532	1441	1356	1288	1241	1218
15°	1732	1700	1628	1525	1418	1319	1239	1184	1157
17.5°	1763	1724	1634	1514	1391	1277	1188	1123	1091
20°	1788	1742	1635	1496	1359	1233	1134	1059	1023
22.5°	1814	1756	1634	1474	1323	1186	1077	993	950
25°	1833	1769	1626	1447	1283	1137	1018	923	876
27.5°	1853	1778	1617	1416	1240	1085	957	853	805
30°	1864	1780	1603	1380	1193	1031	895	785	736
32.5°	1873	1779	1585	1344	1145	976	832	720	671
35°	1873	1772	1562	1304	1095	920	769	657	605
37.5°	1869	1760	1536	1263	1044	863	708	595	541
40°	1857	1743	1505	1221	992	805	648	532	481
42.5°	1840	1721	1471	1177	939	747	589	474	423
45°	1818	1694	1433	1133	885	689	532	418	368
47.5°	1790	1662	1390	1087	830	630	475	365	313
50°	1758	1626	1346	1039	775	571	421	312	262
52.5°	1715	1584	1301	990	721	513	369	262	215
55°	1669	1536	1253	941	666	455	319	216	172
57.5°	1613	1485	1204	890	610	399	271	174	135
60°	1555	1431	1154	837	553	343	227	137	104
62.5°	1493	1375	1103	784	496	287	185	105	78
65°	1429	1316	1049	730	439	234	146	79	58
67.5°	1364	1257	993	675	381	187	112	57	40
70°	1300	1196	936	618	324	144	82	39	26
72.5°	1234	1135	879	562	269	105	56	25	15
75°	1167	1071	821	507	216	72	36	14	7
77.5°	1101	1007	764	453	165	46	20	6	2
80°	1035	943	706	399	118	27	10	2	0
82.5°	971	880	648	346	78	15	5	1	0
85°	907	817	591	293	44	8	4	2	0
87.5°	841	756	536	243	19	7	4	2	0
90°	776	695	482	196	7	6	4	2	0
92.5°	710	633	428	152	7	6	4	2	1
95°	643	571	375	115	7	7	4	1	0
97.5°	576	511	329	86	7	6	4	2	0
100°	515	456	286	63	7	6	4	2	0
102.5°	458	403	245	45	7	7	4	1	0
105°	401	349	207	31	7	6	4	2	0
107.5°	348	299	172	20	7	6	4	2	0
110°	298	252	139	13	7	7	4	1	0



TEST NUMBER: 168P190

CATALOG NUMBER: MPWA-0/254-EXL-WHT

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	251	210	110	8	7	6	4	2	0
115°	208	171	83	7	7	7	4	2	0
117.5°	169	135	61	7	8	7	5	2	1
120°	133	104	41	7	8	7	5	2	1
122.5°	101	76	26	7	8	7	5	3	1
125°	74	54	14	7	8	8	5	3	2
127.5°	53	36	7	7	8	8	6	3	2
130°	35	22	5	7	8	8	6	3	2
132.5°	21	12	5	8	8	8	6	4	3
135°	11	5	5	8	9	8	7	4	3
137.5°	4	3	6	8	9	9	7	4	3
140°	1	3	6	8	9	9	7	4	3
142.5°	1	3	6	9	10	9	7	5	4
145°	2	3	6	9	10	9	7	5	4
147.5°	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)