

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: 168P169

Luminaire Tested: **MPWC-1/254-WHT-NRL**

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: 168P169
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MPWC-1/254-WHT-NRL
Description: Medical Patient Wall Bracket, Traditional Style.
Rectangular Shaped with upper and lower compartments.
Light Source: Three - F54T5HO/830 - 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

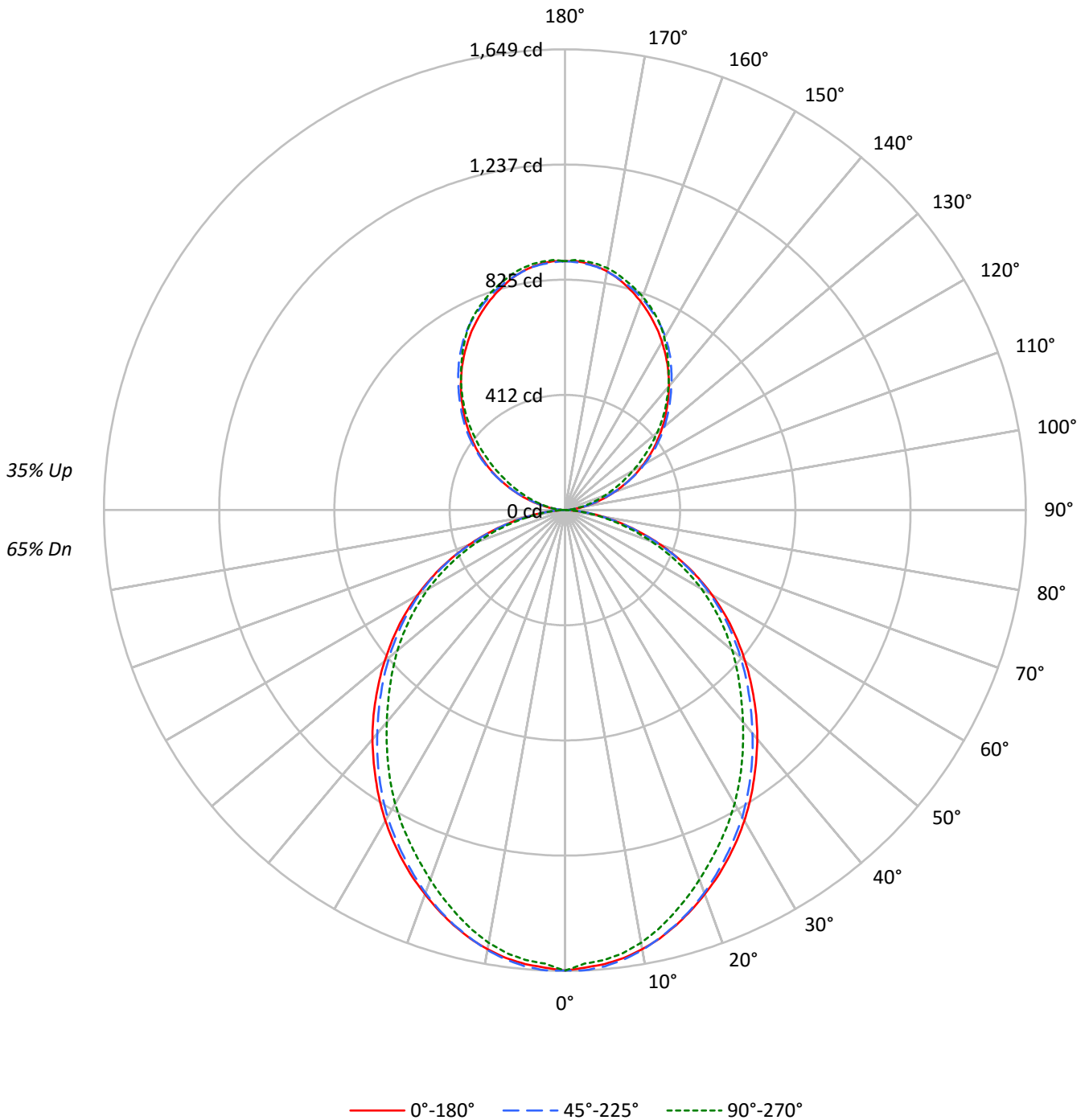
Lumens per Lamp: 4400 (3 lamps)
Luminaire Lumens: 6284.7 lumens
Efficiency: 47.6%
Efficacy: 39.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.11 / 1.27
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 160
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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Luminous Intensity Polar Plot





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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	53	53	53	53	50	50	50	50	44	44	44	38	38	38	33	33	33	31
1	48	46	44	43	45	43	42	40	38	37	36	34	33	32	29	29	28	26
2	44	40	37	35	41	38	35	33	34	32	30	30	28	27	26	25	24	22
3	40	35	32	29	38	33	30	28	30	27	25	26	24	23	23	21	20	19
4	37	31	28	25	34	30	26	24	26	24	21	23	21	19	21	19	17	16
5	34	28	24	21	32	27	23	20	24	21	19	21	19	17	19	17	15	14
6	31	25	21	18	29	24	20	18	21	18	16	19	17	15	17	15	13	12
7	29	23	19	16	27	22	18	16	19	16	14	17	15	13	15	13	12	11
8	27	21	17	14	25	20	16	14	18	15	13	16	14	12	14	12	11	10
9	25	19	15	13	23	18	15	12	16	13	12	15	12	11	13	11	10	9
10	23	17	14	12	22	17	13	11	15	12	10	14	11	10	12	10	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15971	15971	15971
5°	15867	15944	15721
10°	15706	15735	15469
15°	15431	15411	15019
20°	15088	15036	14521
25°	14746	14607	14040
30°	14368	14201	13585
35°	13948	13712	13061
40°	13549	13207	12537
45°	13116	12760	12115
50°	12695	12378	11790
55°	12283	12013	11405
60°	11804	11629	10951
65°	11190	11076	10273
70°	10371	10229	9379
75°	9286	9099	8238
80°	7813	7534	6809
85°	6004	5782	5226



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	154.8	2.5	1.2	0°	1648	1648	1648	1648	1648	
10°-20°	430.8	6.9	3.3	5°	1631	1637	1639	1640	1616	155
20°-30°	626.1	10.0	4.7	15°	1538	1540	1536	1526	1497	433
30°-40°	720.9	11.5	5.5	25°	1379	1382	1366	1344	1313	635
40°-50°	717.0	11.4	5.4	35°	1179	1179	1159	1131	1104	738
50°-60°	632.1	10.1	4.8	45°	957	958	931	905	884	739
60°-70°	470.5	7.5	3.6	55°	727	726	711	691	675	649
70°-80°	254.2	4.0	1.9	65°	488	488	483	465	448	483
80°-90°	62.8	1.0	0.5	75°	248	248	243	231	220	263
90°-100°	26.8	0.4	0.2	85°	54	55	52	49	47	62
100°-110°	123.7	2.0	0.9	90°	1	3	2	2	2	4
110°-120°	243.0	3.9	1.8	95°	23	24	21	20	19	28
120°-130°	343.5	5.5	2.6	105°	125	129	119	104	98	133
130°-140°	401.4	6.4	3.0	115°	256	261	258	227	213	253
140°-150°	406.0	6.5	3.1	125°	389	395	398	372	355	347
150°-160°	350.4	5.6	2.7	135°	516	524	529	518	506	398
160°-170°	236.7	3.8	1.8	145°	639	644	659	652	645	399
170°-180°	84.0	1.3	0.6	155°	747	751	766	770	769	344
0°-30°	1211.7	19.3	9.2	165°	835	832	840	844	849	235
0°-40°	1932.7	30.8	14.6	175°	887	882	884	886	893	84
0°-60°	3281.8	52.2	24.9	180°	891	891	891	891	891	
0°-90°	4069.3	64.7	30.8							
90°-120°	393.5	6.3	3.0							
90°-150°	1544.4	24.6	11.7							
90°-180°	2215.0	35.2	16.8							
0°-180°	6284.7	100.0	47.6							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1648	1648	1648	1648	1648
2.5°	1639	1646	1649	1650	1625
5°	1631	1637	1639	1640	1616
7.5°	1617	1622	1622	1623	1599
10°	1596	1600	1599	1596	1572
12.5°	1570	1573	1568	1564	1538
15°	1538	1540	1536	1526	1497
17.5°	1502	1505	1499	1485	1454
20°	1463	1466	1458	1440	1408
22.5°	1423	1425	1413	1393	1360
25°	1379	1382	1366	1344	1313
27.5°	1333	1336	1318	1295	1265
30°	1284	1286	1269	1243	1214
32.5°	1233	1234	1215	1187	1160
35°	1179	1179	1159	1131	1104
37.5°	1125	1124	1102	1073	1047
40°	1071	1069	1044	1016	991
42.5°	1015	1014	987	959	936
45°	957	958	931	905	884
47.5°	900	900	876	851	833
50°	842	842	821	799	782
52.5°	784	784	766	745	729
55°	727	726	711	691	675
57.5°	668	667	656	636	620
60°	609	608	600	580	565
62.5°	549	548	543	523	507
65°	488	488	483	465	448
67.5°	427	427	423	405	390
70°	366	367	361	346	331
72.5°	306	307	301	287	275
75°	248	248	243	231	220
77.5°	192	193	187	177	168
80°	140	141	135	128	122
82.5°	93	95	90	84	81
85°	54	55	52	49	47
87.5°	22	24	23	21	21
90°	1	3	2	2	2
92.5°	7	7	6	5	4
95°	23	24	21	20	19
97.5°	43	45	38	36	35
100°	67	70	61	55	53
102.5°	95	98	89	78	75
105°	125	129	119	104	98
107.5°	156	161	151	133	124
110°	189	194	186	162	152



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	222	228	222	194	181
115°	256	261	258	227	213
117.5°	290	295	294	262	246
120°	323	329	329	298	281
122.5°	356	362	364	335	317
125°	389	395	398	372	355
127.5°	421	428	432	410	393
130°	453	460	465	447	431
132.5°	485	493	496	483	469
135°	516	524	529	518	506
137.5°	548	555	561	552	541
140°	579	584	593	586	576
142.5°	609	614	626	619	611
145°	639	644	659	652	645
147.5°	667	675	689	685	679
150°	695	703	718	718	712
152.5°	722	728	743	746	743
155°	747	751	766	770	769
157.5°	771	773	786	791	792
160°	794	794	806	811	813
162.5°	815	814	824	829	832
165°	835	832	840	844	849
167.5°	853	849	854	860	866
170°	868	863	867	871	879
172.5°	879	874	878	880	888
175°	887	882	884	886	893
177.5°	892	886	888	889	896
180°	891	891	891	891	891

(END OF REPORT)