

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: 168P168

Luminaire Tested: **MPWC-2/132-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: 168P168
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MPWC-2/132-WHT-NRL
Description: Medical Patient Wall Bracket, Traditional Style.
Rectangular Shaped with upper and lower compartments.
Light Source: Three - FO32/35K - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: One - Triad B1321120RH-A ; One - Advance REL-2P32-SC

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

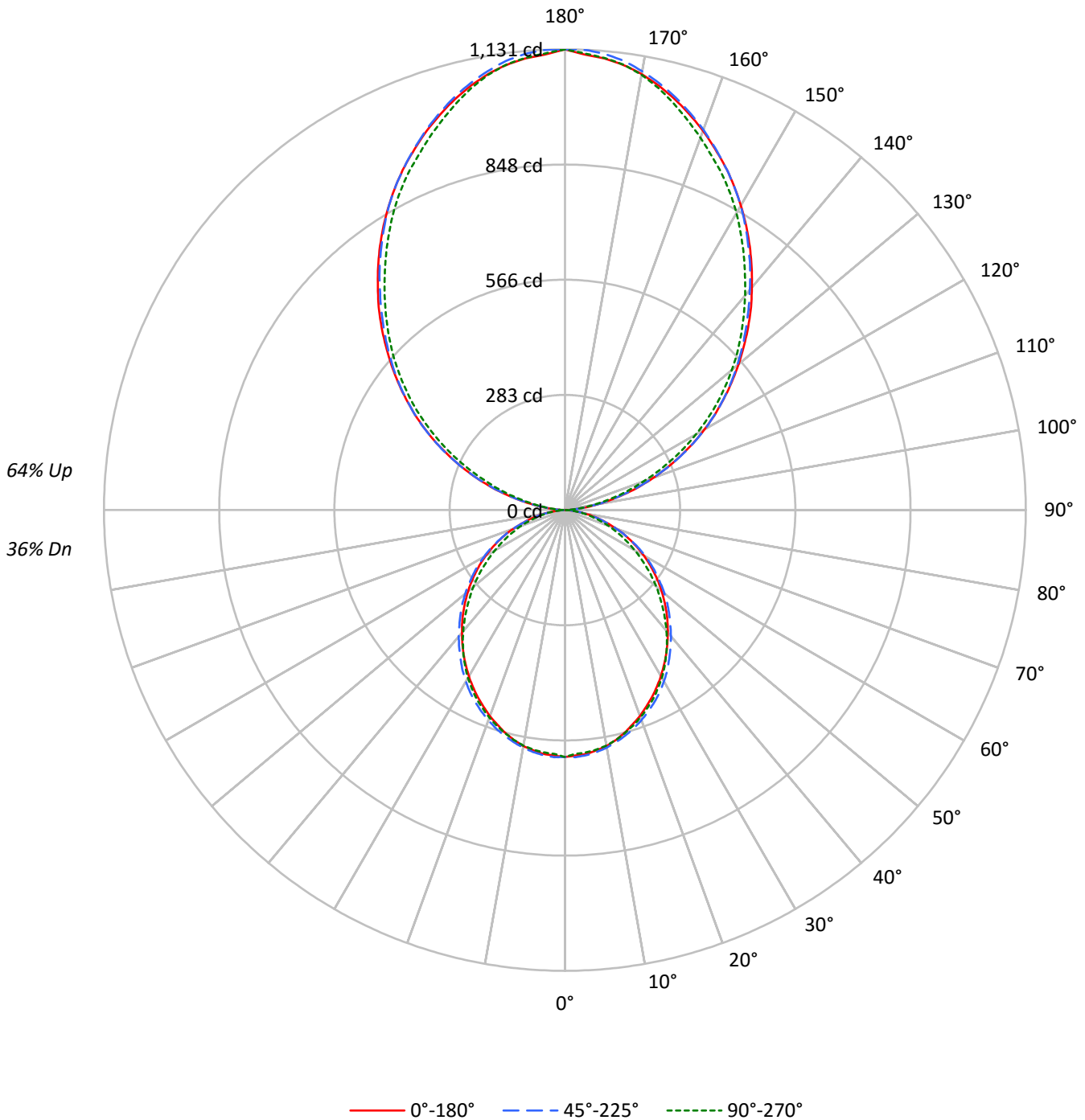
Lumens per Lamp: 2800 (3 lamps)
Luminaire Lumens: 4242.8 lumens
Efficiency: 50.5%
Efficacy: 51.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 83
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	52	52	52	52	47	47	47	47	38	38	38	30	30	30	22	22	22	18
1	48	46	44	42	43	41	40	38	33	32	31	26	25	25	19	19	19	15
2	44	40	37	34	39	36	34	32	29	28	26	23	22	21	17	16	16	13
3	40	35	31	29	36	32	29	26	26	24	22	20	19	18	15	14	13	11
4	36	31	27	24	33	28	25	22	23	21	19	18	16	15	14	12	11	9
5	33	28	24	21	30	25	22	19	21	18	16	16	14	13	12	11	10	8
6	31	25	21	18	28	23	19	17	18	16	14	15	13	11	11	10	9	7
7	28	22	18	16	26	20	17	14	17	14	12	13	11	10	10	9	8	6
8	26	20	16	14	24	18	15	13	15	13	11	12	10	9	9	8	7	6
9	24	18	15	12	22	17	14	11	14	11	10	11	9	8	9	7	6	5
10	23	17	13	11	21	15	12	10	13	10	9	10	8	7	8	7	6	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5873	5873	5873
5°	5847	5876	5808
10°	5786	5826	5776
15°	5679	5749	5689
20°	5548	5662	5590
25°	5411	5560	5475
30°	5271	5438	5327
35°	5123	5276	5135
40°	4972	5124	4909
45°	4824	4961	4660
50°	4674	4809	4417
55°	4511	4629	4140
60°	4342	4439	3857
65°	4128	4173	3554
70°	3825	3825	3259
75°	3445	3370	2883
80°	2902	2790	2511
85°	2224	2224	2113



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	57.1	1.3	0.7	0°	606	606	606	606	606	
10°-20°	160.8	3.8	1.9	5°	601	602	604	605	597	57
20°-30°	237.3	5.6	2.8	15°	566	568	573	575	567	159
30°-40°	275.6	6.5	3.3	25°	506	514	520	520	512	233
40°-50°	273.7	6.5	3.3	35°	433	441	446	442	434	271
50°-60°	237.1	5.6	2.8	45°	352	360	362	351	340	272
60°-70°	173.2	4.1	2.1	55°	267	274	274	256	245	239
70°-80°	93.5	2.2	1.1	65°	180	186	182	164	155	178
80°-90°	24.1	0.6	0.3	75°	92	96	90	81	77	97
90°-100°	32.8	0.8	0.4	85°	20	22	20	19	19	23
100°-110°	155.5	3.7	1.9	90°	0	2	2	2	2	2
110°-120°	303.1	7.1	3.6	95°	26	29	25	23	23	33
120°-130°	419.6	9.9	5.0	105°	152	154	149	138	132	162
130°-140°	483.3	11.4	5.8	115°	312	315	313	297	287	309
140°-150°	488.9	11.5	5.8	125°	476	478	475	460	455	426
150°-160°	426.7	10.1	5.1	135°	636	640	628	613	612	491
160°-170°	294.4	6.9	3.5	145°	791	796	786	766	765	495
170°-180°	106.1	2.5	1.3	155°	931	938	931	917	911	428
0°-30°	455.3	10.7	5.4	165°	1044	1051	1049	1044	1033	294
0°-40°	730.9	17.2	8.7	175°	1113	1122	1124	1127	1114	105
0°-60°	1241.7	29.3	14.8	180°	1131	1131	1131	1131	1131	
0°-90°	1532.4	36.1	18.2							
90°-120°	491.4	11.6	5.9							
90°-150°	1883.2	44.4	22.4							
90°-180°	2710.0	63.9	32.3							
0°-180°	4242.8	100.0	50.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	606	606	606	606	606
2.5°	603	605	607	607	599
5°	601	602	604	605	597
7.5°	595	597	599	601	593
10°	588	589	592	594	587
12.5°	578	580	583	585	578
15°	566	568	573	575	567
17.5°	552	556	562	563	555
20°	538	543	549	550	542
22.5°	522	528	535	536	527
25°	506	514	520	520	512
27.5°	489	497	504	502	494
30°	471	480	486	484	476
32.5°	452	461	467	463	455
35°	433	441	446	442	434
37.5°	413	421	426	420	411
40°	393	400	405	398	388
42.5°	373	380	383	375	364
45°	352	360	362	351	340
47.5°	331	339	341	327	316
50°	310	317	319	304	293
52.5°	289	296	296	280	269
55°	267	274	274	256	245
57.5°	246	253	252	232	221
60°	224	231	229	209	199
62.5°	202	209	206	186	176
65°	180	186	182	164	155
67.5°	158	163	159	142	134
70°	135	140	135	121	115
72.5°	113	118	112	100	95
75°	92	96	90	81	77
77.5°	71	75	69	63	60
80°	52	55	50	46	45
82.5°	35	37	33	31	31
85°	20	22	20	19	19
87.5°	8	10	9	9	9
90°	0	2	2	2	2
92.5°	7	9	7	7	6
95°	26	29	25	23	23
97.5°	52	54	49	44	43
100°	81	83	79	71	68
102.5°	115	117	112	103	98
105°	152	154	149	138	132
107.5°	191	193	189	176	168
110°	231	233	230	215	205



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	271	274	272	256	245
115°	312	315	313	297	287
117.5°	354	356	355	339	329
120°	395	397	396	380	371
122.5°	436	437	436	420	413
125°	476	478	475	460	455
127.5°	516	519	514	499	495
130°	556	559	552	537	535
132.5°	596	600	590	575	574
135°	636	640	628	613	612
137.5°	676	679	667	650	650
140°	714	718	706	689	688
142.5°	753	757	747	727	726
145°	791	796	786	766	765
147.5°	828	834	825	805	804
150°	864	872	863	845	842
152.5°	898	906	898	883	878
155°	931	938	931	917	911
157.5°	961	969	963	950	941
160°	991	998	994	983	973
162.5°	1018	1026	1022	1014	1003
165°	1044	1051	1049	1044	1033
167.5°	1067	1075	1073	1071	1061
170°	1087	1095	1094	1095	1085
172.5°	1102	1111	1112	1113	1103
175°	1113	1122	1124	1127	1114
177.5°	1119	1128	1131	1134	1122
180°	1131	1131	1131	1131	1131

(END OF REPORT)