

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: P26426

Luminaire Tested: **ORM-G-24-4-LD4-4LO-40-UNV-ASYSYMRFI-ED**

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: P26426
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORM-G-24-4-LD4-4LO-40-UNV-ASYSYMRFI-ED
Description: FAILSAFE RECESSED OPERATING ROOM FIXTURE
Light Source: (336) ULM2.0 4000K LEDS
2UT217042A8404A
Ballast/Driver: (2) OSRAM ELECTRONIC DRIVER
OSRAM OT50W

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

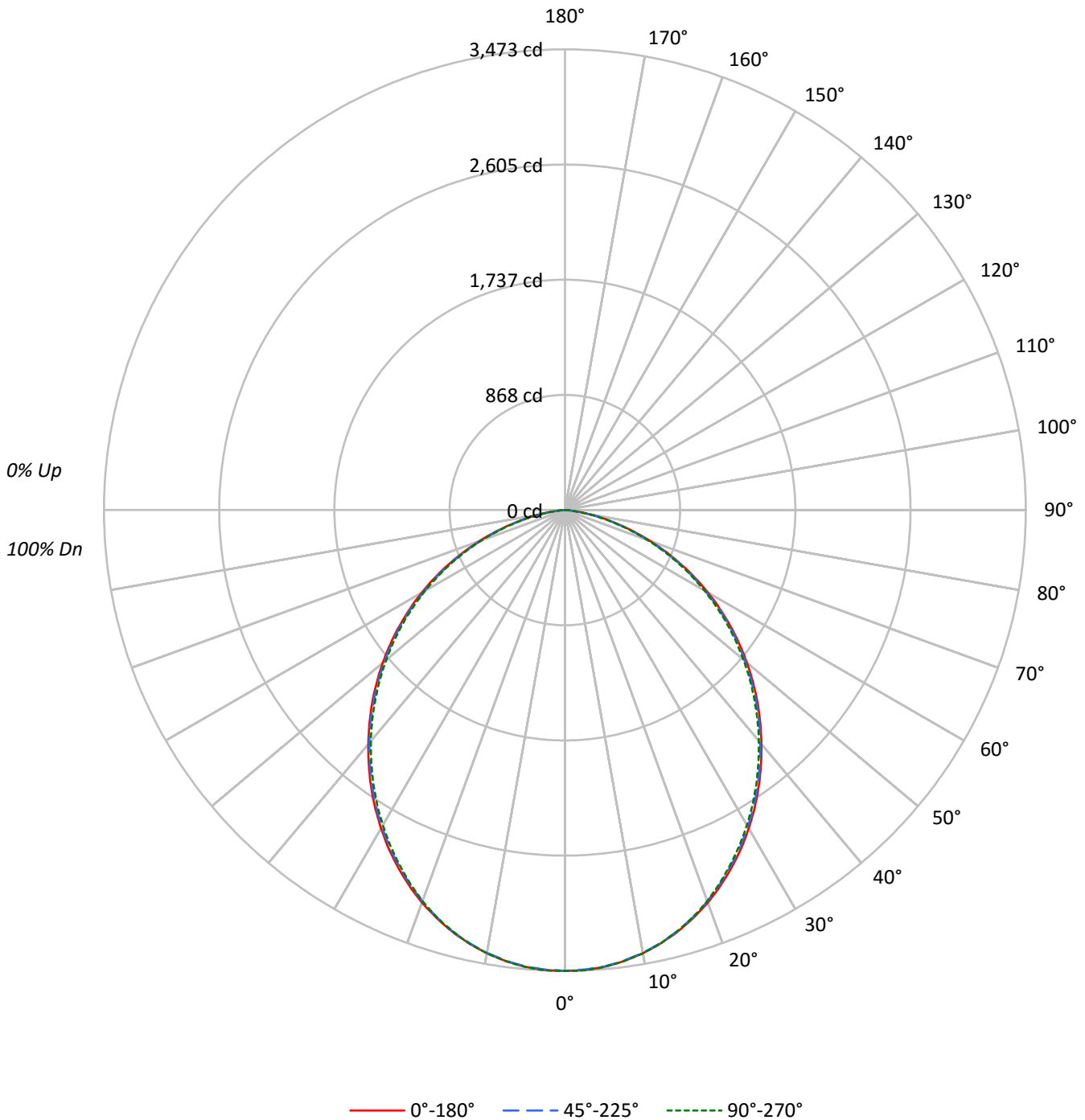
Lumens per Lamp: N/A
Luminaire Lumens: 8576.2 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.3
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 97.3
Input Voltage (V): 120.01
Input Current (Ain): 0.81595
Voltage Rise (V): NR
Power Factor: 0.9984
Total Harmonic Distortion (THDi): 9.27%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P26426

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	38	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4673	4673	4673
5°	4666	4662	4668
10°	4634	4629	4634
15°	4581	4574	4574
20°	4507	4495	4490
25°	4414	4393	4380
30°	4304	4283	4262
35°	4182	4161	4133
40°	4049	4026	3994
45°	3906	3874	3842
50°	3749	3711	3678
55°	3570	3533	3493
60°	3353	3296	3267
65°	3072	3021	2986
70°	2707	2632	2616
75°	2199	2147	2126
80°	1557	1526	1488
85°	834	834	803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.7	3.8
10°-20°	925.6	10.8
20°-30°	1363.2	15.9
30°-40°	1583.1	18.5
40°-50°	1570.4	18.3
50°-60°	1344.4	15.7
60°-70°	939.5	11.0
70°-80°	445.1	5.2
80°-90°	77.2	0.9
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°-30°	2616.4	30.5
0°-40°	4199.5	49.0
0°-60°	7114.3	83.0
0°-90°	8576.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8576.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3473	3473	3473	3473	3473	
5°	3455	3450	3452	3458	3456	328
15°	3289	3282	3284	3289	3284	927
25°	2973	2965	2959	2955	2950	1369
35°	2546	2544	2533	2521	2516	1592
45°	2053	2049	2036	2022	2019	1583
55°	1522	1518	1506	1490	1489	1359
65°	965	958	949	941	938	955
75°	423	419	413	412	409	454
85°	54	55	54	52	52	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3473	3473	3473	3473	3473
2.5°	3471	3465	3466	3474	3473
5°	3455	3450	3452	3458	3456
7.5°	3429	3424	3425	3432	3429
10°	3392	3386	3388	3395	3392
12.5°	3345	3339	3341	3347	3344
15°	3289	3282	3284	3289	3284
17.5°	3222	3215	3216	3221	3217
20°	3148	3140	3139	3141	3136
22.5°	3065	3056	3052	3053	3047
25°	2973	2965	2959	2955	2950
27.5°	2876	2868	2863	2857	2850
30°	2770	2763	2757	2749	2743
32.5°	2661	2659	2649	2637	2632
35°	2546	2544	2533	2521	2516
37.5°	2427	2426	2414	2400	2396
40°	2305	2304	2292	2277	2274
42.5°	2180	2180	2167	2151	2148
45°	2053	2049	2036	2022	2019
47.5°	1923	1920	1906	1892	1890
50°	1791	1788	1773	1759	1757
52.5°	1657	1653	1642	1628	1624
55°	1522	1518	1506	1490	1489
57.5°	1384	1380	1368	1357	1352
60°	1246	1240	1225	1218	1214
62.5°	1106	1099	1088	1079	1077
65°	965	958	949	941	938
67.5°	825	821	809	800	800
70°	688	679	669	665	665
72.5°	554	546	538	538	533
75°	423	419	413	412	409
77.5°	304	301	299	297	293
80°	201	201	197	195	192
82.5°	117	117	115	113	114
85°	54	55	54	52	52
87.5°	17	18	17	16	16
90°	0	0	0	0	0

(END OF REPORT)