

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: P26480

Luminaire Tested: **ORM-G-12-4-LD4-2STD-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: P26480
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORM-G-12-4-LD4-2STD-40-UNV-ASYSMRFI-ED
Description: FAILSAFE RECESSED OPERATING ROOM FIXTURE
Light Source: (168) ULM2.0 4000K LEDS
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OTI85W

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

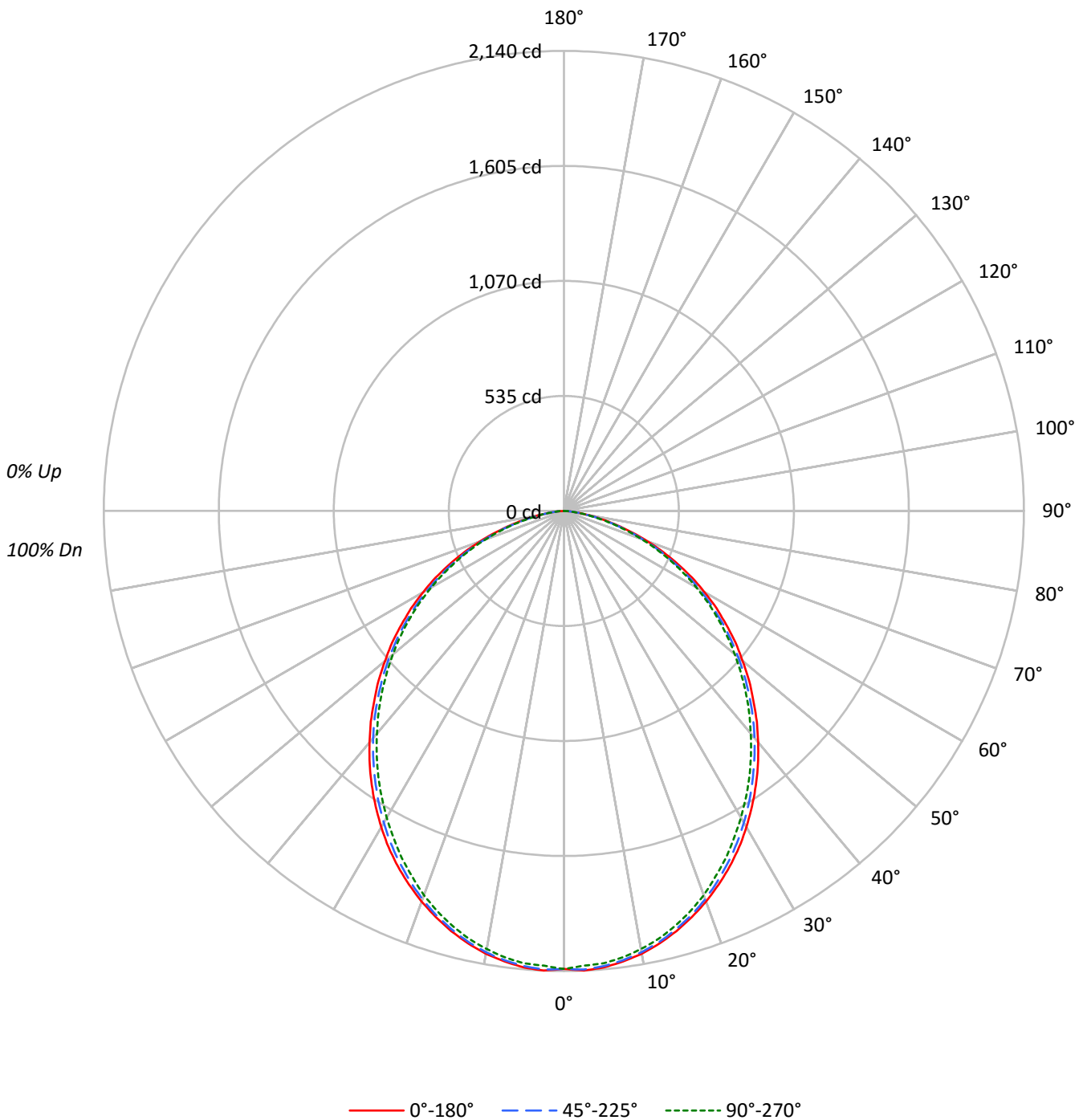
Lumens per Lamp: N/A
Luminaire Lumens: 5168.5 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.16 / 1.28
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 71.1
Input Voltage (V): 120.06
Input Current (A_{in}): 0.59341
Voltage Rise (V): NR
Power Factor: 0.9986
Total Harmonic Distortion (THDi): 3.80%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
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	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	86
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	68	64	62
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	32
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5732	5732	5732
5°	5756	5740	5705
10°	5714	5695	5654
15°	5636	5614	5569
20°	5538	5504	5447
25°	5419	5362	5291
30°	5276	5205	5118
35°	5115	5026	4944
40°	4939	4848	4753
45°	4742	4647	4559
50°	4542	4438	4346
55°	4321	4199	4110
60°	4058	3918	3832
65°	3731	3566	3489
70°	3281	3116	3053
75°	2672	2558	2485
80°	1922	1860	1798
85°	1081	1142	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.9	3.9
10°-20°	565.8	10.9
20°-30°	828.5	16.0
30°-40°	954.9	18.5
40°-50°	941.6	18.2
50°-60°	801.9	15.5
60°-70°	558.6	10.8
70°-80°	265.8	5.1
80°-90°	50.5	1.0
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°	1595.2	30.9
0°-40°	2550.1	49.3
0°-60°	4293.6	83.1
0°-90°	5168.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5168.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2130	2130	2130	2130	2130	
5°	2131	2110	2125	2117	2112	202
15°	2023	2005	2015	2006	1999	570
25°	1825	1805	1806	1785	1782	840
35°	1557	1539	1530	1507	1505	974
45°	1246	1238	1221	1201	1198	963
55°	921	914	895	881	876	825
65°	586	577	560	552	548	580
75°	257	254	246	242	239	276
85°	35	38	37	37	36	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2130	2130	2130	2130	2130
2.5°	2140	2119	2135	2128	2117
5°	2131	2110	2125	2117	2112
7.5°	2114	2094	2108	2100	2095
10°	2091	2070	2084	2073	2069
12.5°	2060	2041	2053	2042	2038
15°	2023	2005	2015	2006	1999
17.5°	1981	1963	1972	1960	1953
20°	1934	1915	1922	1906	1902
22.5°	1881	1862	1866	1847	1842
25°	1825	1805	1806	1785	1782
27.5°	1765	1744	1743	1721	1715
30°	1698	1679	1675	1652	1647
32.5°	1629	1611	1604	1581	1577
35°	1557	1539	1530	1507	1505
37.5°	1484	1467	1456	1433	1430
40°	1406	1393	1380	1356	1353
42.5°	1329	1316	1302	1279	1276
45°	1246	1238	1221	1201	1198
47.5°	1170	1159	1141	1122	1118
50°	1085	1078	1060	1041	1038
52.5°	1007	997	978	962	958
55°	921	914	895	881	876
57.5°	842	831	812	800	795
60°	754	747	728	716	712
62.5°	673	662	644	635	630
65°	586	577	560	552	548
67.5°	501	493	479	471	468
70°	417	410	396	392	388
72.5°	335	330	319	315	312
75°	257	254	246	242	239
77.5°	186	185	179	175	173
80°	124	124	120	117	116
82.5°	72	75	72	70	70
85°	35	38	37	37	36
87.5°	12	15	17	19	19
90°	0	0	0	0	0

(END OF REPORT)