

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: P26473

Luminaire Tested: **ORM-G-24-2-LD4-4HI-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: P26473  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: ORM-G-24-2-LD4-4HI-40-UNV-ASYSYMRFI-ED  
Description: FAILSAFE 2X2 LED RECESSED OPERATING ROOM FIXTURE  
Light Source: (168) ULM2.0 4000K LEDS  
2UT217042A8404A  
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER  
OSRAM 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**

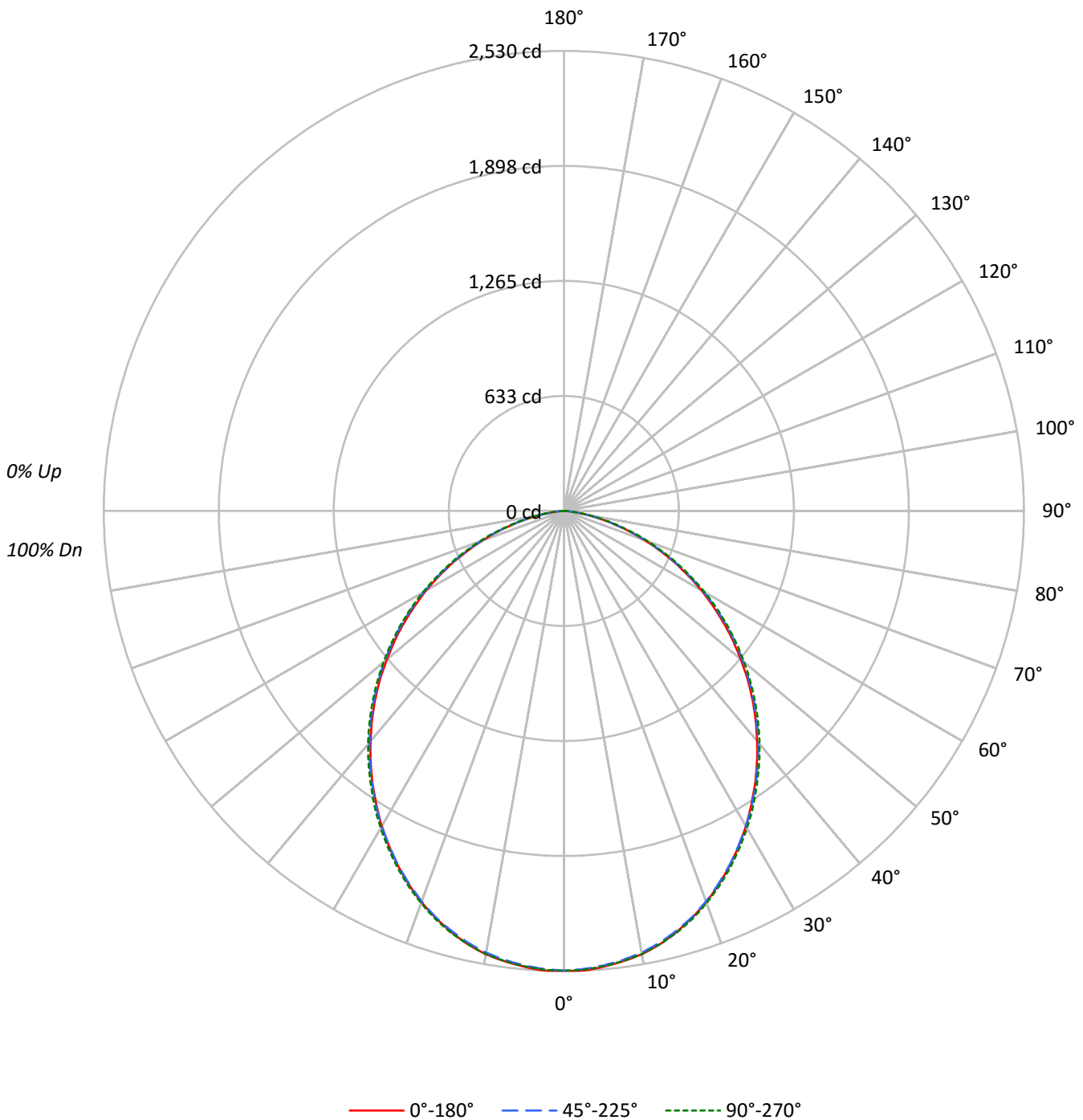
Lumens per Lamp: N/A  
Luminaire Lumens: 6224.5 lumens  
Efficiency: N/A  
Efficacy: 67.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.19 / 1.29  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 92.5  
Input Voltage (V): 120.01  
Input Current (A<sub>in</sub>): 0.77156  
Voltage Rise (V): NR  
Power Factor: 0.9991  
Total Harmonic Distortion (THDi): 2.61%  
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	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	62
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	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	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	27

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

	0°	45°	90°
0°	6803	6803	6803
5°	6796	6777	6788
10°	6763	6738	6760
15°	6678	6658	6689
20°	6555	6544	6572
25°	6399	6390	6425
30°	6221	6218	6258
35°	6022	6035	6071
40°	5810	5842	5880
45°	5583	5621	5659
50°	5317	5380	5426
55°	5029	5100	5147
60°	4698	4768	4817
65°	4279	4349	4413
70°	3753	3816	3926
75°	3067	3119	3223
80°	2247	2263	2325
85°	1359	1328	1235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	238.5	3.8
10°-20°	674.8	10.8
20°-30°	992.6	15.9
30°-40°	1150.2	18.5
40°-50°	1138.9	18.3
50°-60°	970.2	15.6
60°-70°	676.3	10.9
70°-80°	323.1	5.2
80°-90°	60.0	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°	1905.9	30.6
0°-40°	3056.0	49.1
0°-60°	5165.1	83.0
0°-90°	6224.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6224.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2528	2528	2528	2528	2528	
5°	2516	2515	2509	2511	2513	239
15°	2397	2395	2390	2396	2401	675
25°	2155	2152	2152	2162	2164	992
35°	1833	1834	1837	1847	1848	1146
45°	1467	1469	1477	1486	1487	1131
55°	1072	1078	1087	1093	1097	958
65°	672	676	683	690	693	666
75°	295	297	300	305	310	317
85°	44	44	43	42	40	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2528	2528	2528	2528	2528
2.5°	2530	2528	2521	2521	2525
5°	2516	2515	2509	2511	2513
7.5°	2498	2497	2490	2493	2496
10°	2475	2472	2466	2469	2474
12.5°	2441	2439	2432	2437	2440
15°	2397	2395	2390	2396	2401
17.5°	2346	2346	2343	2350	2352
20°	2289	2287	2285	2294	2295
22.5°	2225	2221	2220	2231	2233
25°	2155	2152	2152	2162	2164
27.5°	2080	2078	2078	2087	2091
30°	2002	2000	2001	2010	2014
32.5°	1918	1918	1923	1931	1934
35°	1833	1834	1837	1847	1848
37.5°	1745	1744	1752	1760	1763
40°	1654	1653	1663	1671	1674
42.5°	1561	1564	1571	1580	1582
45°	1467	1469	1477	1486	1487
47.5°	1371	1371	1382	1389	1393
50°	1270	1274	1285	1292	1296
52.5°	1172	1178	1186	1193	1196
55°	1072	1078	1087	1093	1097
57.5°	972	978	987	993	996
60°	873	878	886	893	895
62.5°	772	777	782	791	793
65°	672	676	683	690	693
67.5°	574	577	583	592	593
70°	477	480	485	490	499
72.5°	383	386	390	396	401
75°	295	297	300	305	310
77.5°	213	216	218	221	225
80°	145	145	146	147	150
82.5°	87	87	87	87	88
85°	44	44	43	42	40
87.5°	19	19	18	17	14
90°	0	0	0	0	0

(END OF REPORT)