

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: P26474

Luminaire Tested: **ORM-G-24-2-LD4-4STD-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: P26474
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-LD4-4STD-40-UNV-ASYSMRFI-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

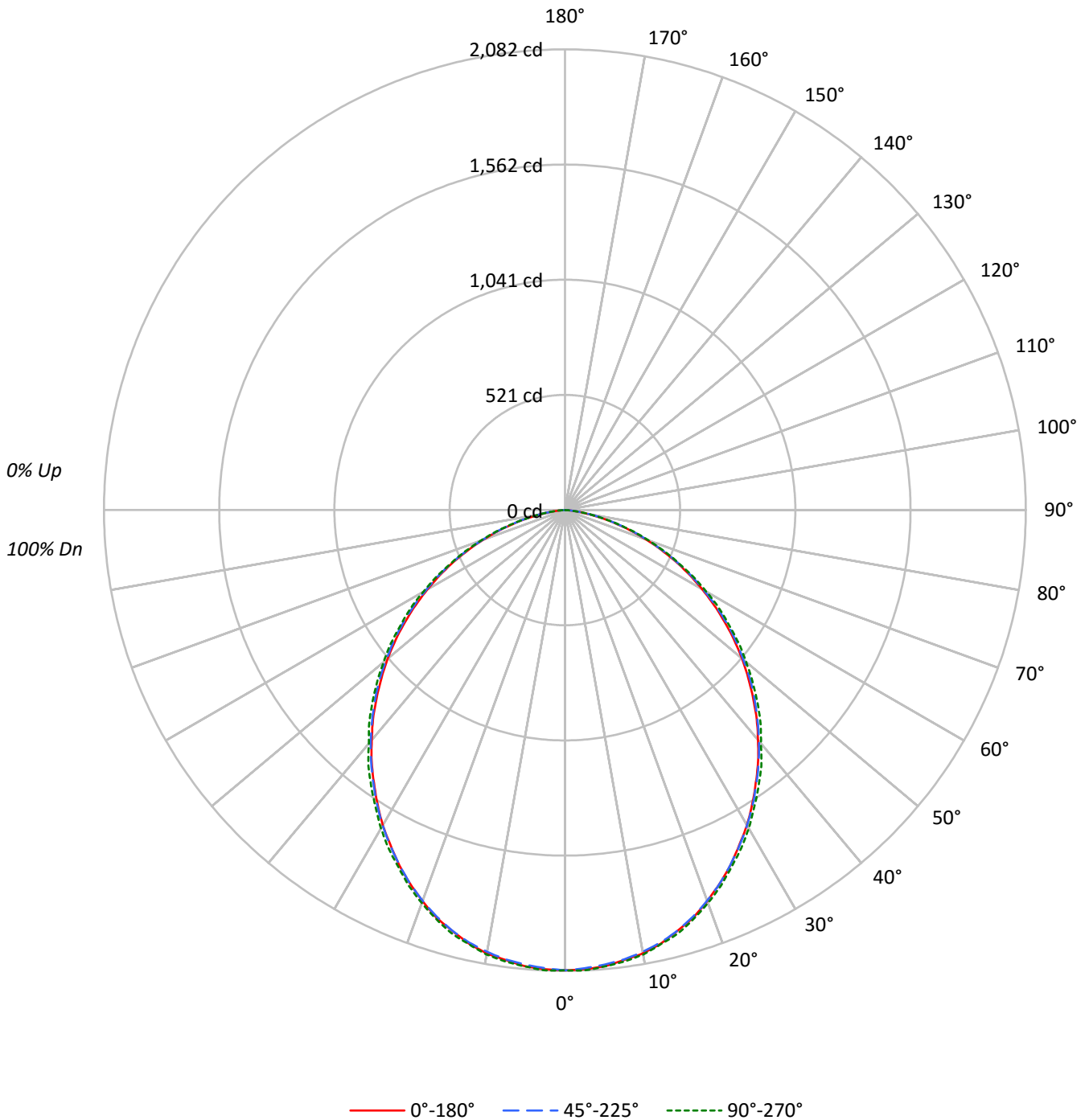
Lumens per Lamp: N/A
Luminaire Lumens: 5120.4 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.19 / 1.29
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 71.2
Input Voltage (V): 120.06
Input Current (Ain): 0.59456
Voltage Rise (V): NR
Power Factor: 0.9985
Total Harmonic Distortion (THDi): 3.50%
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°	5597	5597	5597
5°	5589	5570	5592
10°	5558	5539	5572
15°	5483	5480	5516
20°	5384	5381	5412
25°	5255	5252	5285
30°	5111	5115	5161
35°	4941	4954	5010
40°	4767	4791	4841
45°	4578	4612	4681
50°	4375	4408	4475
55°	4133	4190	4246
60°	3853	3907	3972
65°	3521	3572	3610
70°	3092	3139	3179
75°	2527	2589	2630
80°	1813	1875	1906
85°	1081	1112	1019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.3	3.8
10°-20°	555.3	10.8
20°-30°	816.7	16.0
30°-40°	946.2	18.5
40°-50°	936.8	18.3
50°-60°	798.3	15.6
60°-70°	555.9	10.9
70°-80°	265.9	5.2
80°-90°	49.0	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°	1568.3	30.6
0°-40°	2514.5	49.1
0°-60°	4249.6	83.0
0°-90°	5120.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5120.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2080	2080	2080	2080	2080	
5°	2069	2070	2062	2067	2070	196
15°	1968	1971	1967	1974	1980	555
25°	1770	1772	1769	1779	1780	814
35°	1504	1508	1508	1520	1525	941
45°	1203	1207	1212	1223	1230	928
55°	881	886	893	900	905	787
65°	553	556	561	567	567	548
75°	243	245	249	250	253	260
85°	35	36	36	35	33	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2080	2080	2080	2080	2080
2.5°	2077	2080	2072	2077	2082
5°	2069	2070	2062	2067	2070
7.5°	2051	2055	2048	2054	2058
10°	2034	2034	2027	2034	2039
12.5°	2006	2007	2001	2008	2009
15°	1968	1971	1967	1974	1980
17.5°	1930	1931	1926	1933	1937
20°	1880	1883	1879	1888	1890
22.5°	1827	1829	1827	1835	1839
25°	1770	1772	1769	1779	1780
27.5°	1706	1710	1709	1720	1724
30°	1645	1647	1646	1655	1661
32.5°	1575	1578	1579	1590	1592
35°	1504	1508	1508	1520	1525
37.5°	1434	1437	1438	1449	1458
40°	1357	1362	1364	1377	1378
42.5°	1283	1287	1289	1300	1309
45°	1203	1207	1212	1223	1230
47.5°	1124	1129	1136	1144	1151
50°	1045	1048	1053	1064	1069
52.5°	963	968	975	984	991
55°	881	886	893	900	905
57.5°	799	803	811	818	827
60°	716	721	726	735	738
62.5°	636	638	644	650	656
65°	553	556	561	567	567
67.5°	472	476	480	485	486
70°	393	395	399	403	404
72.5°	315	318	323	325	328
75°	243	245	249	250	253
77.5°	176	177	181	182	183
80°	117	119	121	122	123
82.5°	70	71	72	71	70
85°	35	36	36	35	33
87.5°	15	15	14	13	11
90°	0	0	0	0	0

(END OF REPORT)