

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: P589539

Luminaire Tested: **FMR-24-2-LD4-3STD-50-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589539
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-3STD-50-UNV-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

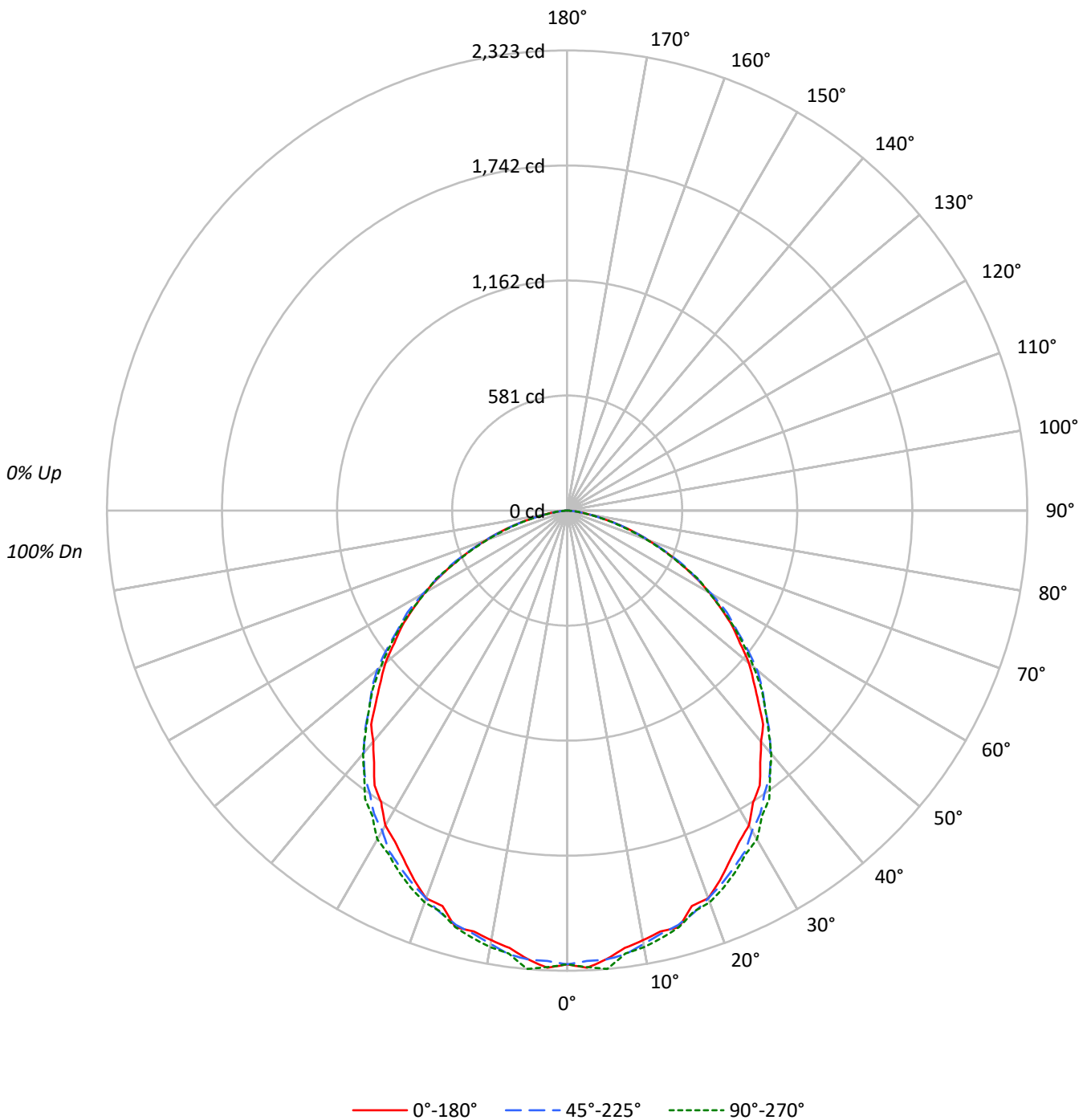
Lumens per Lamp: N/A
Luminaire Lumens: 5772.0 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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	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	100	96	99	96	93		95	93	90		91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66		75	69	65		72	68	64	62
4	84	73	64	58	82	71	64	58	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	43		54	48	43		53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34		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	41	34	29	53	41	33	28	40	33	28		39	33	28		38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6163	6163	6163
5°	6142	6145	6274
10°	6018	6071	6113
15°	6065	6033	6066
20°	5963	5963	6027
25°	5780	5906	5971
30°	5700	5800	5955
35°	5566	5712	5840
40°	5349	5607	5632
45°	5188	5372	5380
50°	5017	5244	5143
55°	4781	4874	4839
60°	4470	4515	4434
65°	3986	4088	3958
70°	3420	3432	3336
75°	2708	2702	2598
80°	1815	1764	1695
85°	985	976	914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.4	3.7
10°-20°	610.5	10.6
20°-30°	914.7	15.8
30°-40°	1084.1	18.8
40°-50°	1086.1	18.8
50°-60°	922.0	16.0
60°-70°	621.6	10.8
70°-80°	273.1	4.7
80°-90°	44.4	0.8
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°	1740.7	30.2
0°-40°	2824.8	48.9
0°-60°	4832.9	83.7
0°-90°	5772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5772.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2290	2290	2290	2290	2290	
5°	2274	2269	2275	2268	2323	214
15°	2177	2152	2165	2177	2178	607
25°	1947	1957	1989	2015	2011	900
35°	1694	1699	1739	1779	1778	1052
45°	1363	1389	1412	1448	1414	1054
55°	1019	1012	1039	1032	1031	906
65°	626	618	642	617	622	623
75°	260	255	260	242	250	279
85°	32	31	32	31	30	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2290.2	2290.2	2290.2	2290.2	2290.2
2.5°	2310.0	2292.5	2276.3	2295.2	2306.7
5°	2273.9	2268.6	2274.8	2268.0	2322.7
7.5°	2227.2	2247.6	2259.4	2252.0	2255.3
10°	2202.4	2195.3	2221.6	2239.9	2237.3
12.5°	2175.7	2186.4	2187.9	2207.7	2209.5
15°	2177.2	2152.1	2165.4	2176.6	2177.5
17.5°	2092.7	2119.9	2129.0	2154.8	2122.8
20°	2082.3	2062.5	2082.3	2108.6	2104.5
22.5°	2018.7	1996.6	2039.1	2062.5	2061.0
25°	1946.6	1957.2	1989.2	2015.2	2011.0
27.5°	1883.3	1895.7	1941.3	1977.0	1954.0
30°	1834.5	1828.3	1866.7	1898.7	1916.4
32.5°	1747.3	1769.8	1814.7	1846.3	1829.5
35°	1694.4	1699.4	1738.7	1778.9	1777.7
37.5°	1601.8	1625.2	1680.5	1691.7	1681.3
40°	1522.8	1546.2	1596.2	1608.3	1603.3
42.5°	1464.6	1468.7	1511.6	1525.5	1503.3
45°	1363.2	1388.6	1411.7	1448.0	1413.7
47.5°	1276.8	1288.7	1338.3	1348.1	1330.1
50°	1198.5	1202.6	1252.6	1240.5	1228.6
52.5°	1100.0	1117.4	1145.5	1143.2	1129.3
55°	1019.0	1012.2	1038.8	1031.7	1031.4
57.5°	921.7	933.5	955.4	944.2	926.1
60°	830.6	830.9	838.9	826.2	823.8
62.5°	729.2	732.7	734.5	718.8	744.3
65°	626.0	617.7	642.0	617.4	621.6
67.5°	531.1	535.2	532.8	517.5	523.4
70°	434.7	440.0	436.2	418.7	424.0
72.5°	346.6	340.1	344.2	322.3	332.4
75°	260.5	255.2	259.9	241.6	249.9
77.5°	177.4	181.6	178.6	168.8	174.5
80°	117.1	113.8	113.8	108.2	109.4
82.5°	68.3	65.1	64.2	62.4	65.1
85°	31.9	31.0	31.6	30.8	29.6
87.5°	11.5	11.8	11.8	11.2	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)