

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: P589504

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589504
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-40-UNV-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

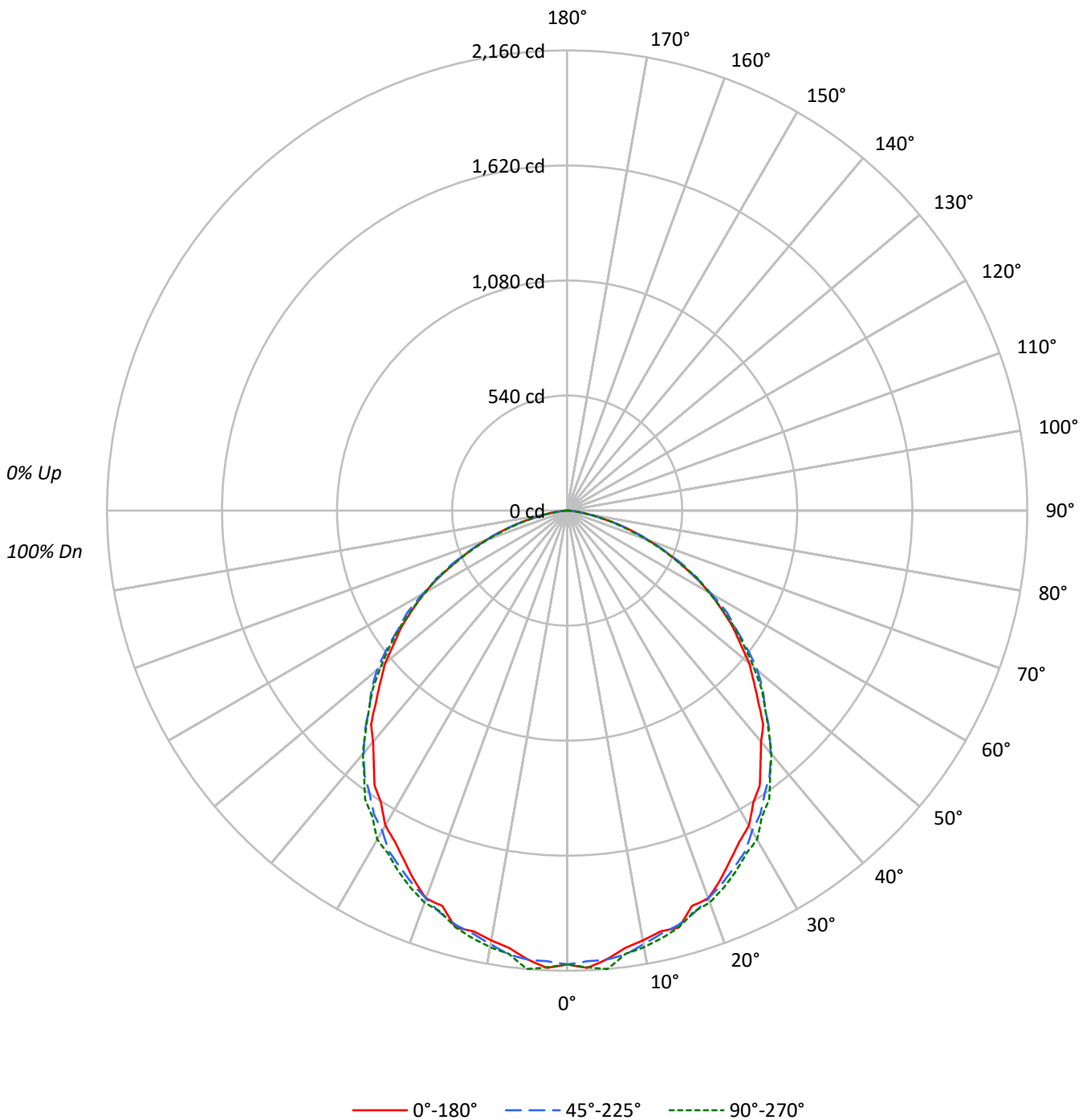
Lumens per Lamp: N/A
Luminaire Lumens: 5369.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	5733	5733	5733
5°	5714	5716	5836
10°	5598	5647	5686
15°	5642	5611	5643
20°	5547	5547	5606
25°	5376	5494	5554
30°	5302	5395	5539
35°	5178	5313	5432
40°	4976	5215	5239
45°	4826	4997	5004
50°	4667	4878	4784
55°	4447	4533	4501
60°	4158	4200	4124
65°	3708	3802	3682
70°	3181	3192	3103
75°	2519	2514	2416
80°	1688	1641	1578
85°	917	908	849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.4	3.7
10°-20°	567.9	10.6
20°-30°	850.9	15.8
30°-40°	1008.4	18.8
40°-50°	1010.3	18.8
50°-60°	857.6	16.0
60°-70°	578.2	10.8
70°-80°	254.1	4.7
80°-90°	41.3	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°	1619.2	30.2
0°-40°	2627.6	48.9
0°-60°	4495.5	83.7
0°-90°	5369.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5369.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2130	2130	2130	2130	2130	
5°	2115	2110	2116	2110	2160	199
15°	2025	2002	2014	2025	2026	564
25°	1811	1821	1850	1874	1871	837
35°	1576	1581	1617	1655	1654	979
45°	1268	1292	1313	1347	1315	981
55°	948	942	966	960	959	843
65°	582	575	597	574	578	579
75°	242	237	242	225	232	260
85°	30	29	29	29	28	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2130.3	2130.3	2130.3	2130.3	2130.3
2.5°	2148.7	2132.5	2117.4	2135.0	2145.7
5°	2115.2	2110.2	2116.0	2109.7	2160.5
7.5°	2071.7	2090.7	2101.7	2094.8	2097.8
10°	2048.6	2042.0	2066.5	2083.5	2081.0
12.5°	2023.8	2033.7	2035.1	2053.5	2055.2
15°	2025.2	2001.8	2014.2	2024.7	2025.5
17.5°	1946.5	1971.9	1980.4	2004.3	1974.6
20°	1936.9	1918.5	1936.9	1961.4	1957.6
22.5°	1877.8	1857.2	1896.8	1918.5	1917.1
25°	1810.7	1820.6	1850.3	1874.5	1870.6
27.5°	1751.8	1763.4	1805.7	1839.0	1817.5
30°	1706.4	1700.7	1736.4	1766.1	1782.6
32.5°	1625.3	1646.2	1688.0	1717.4	1701.8
35°	1576.1	1580.7	1617.3	1654.7	1653.6
37.5°	1490.0	1511.7	1563.1	1573.6	1563.9
40°	1416.5	1438.3	1484.7	1496.0	1491.3
42.5°	1362.3	1366.2	1406.1	1419.0	1398.4
45°	1268.0	1291.6	1313.1	1346.9	1315.0
47.5°	1187.7	1198.7	1244.9	1254.0	1237.2
50°	1114.8	1118.6	1165.1	1153.8	1142.8
52.5°	1023.2	1039.4	1065.6	1063.4	1050.4
55°	947.8	941.5	966.3	959.7	959.4
57.5°	857.3	868.3	888.7	878.2	861.5
60°	772.6	772.9	780.3	768.5	766.3
62.5°	678.3	681.6	683.2	668.7	692.3
65°	582.3	574.6	597.1	574.3	578.2
67.5°	494.0	497.8	495.6	481.3	486.8
70°	404.3	409.3	405.7	389.5	394.4
72.5°	322.4	316.3	320.2	299.8	309.2
75°	242.3	237.4	241.8	224.7	232.4
77.5°	165.0	168.9	166.1	157.1	162.3
80°	108.9	105.9	105.9	100.7	101.8
82.5°	63.5	60.5	59.7	58.0	60.5
85°	29.7	28.9	29.4	28.6	27.5
87.5°	10.7	11.0	11.0	10.5	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)