

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: P589329

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-93-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589329
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-LD4-3HI-40-UNV-93-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

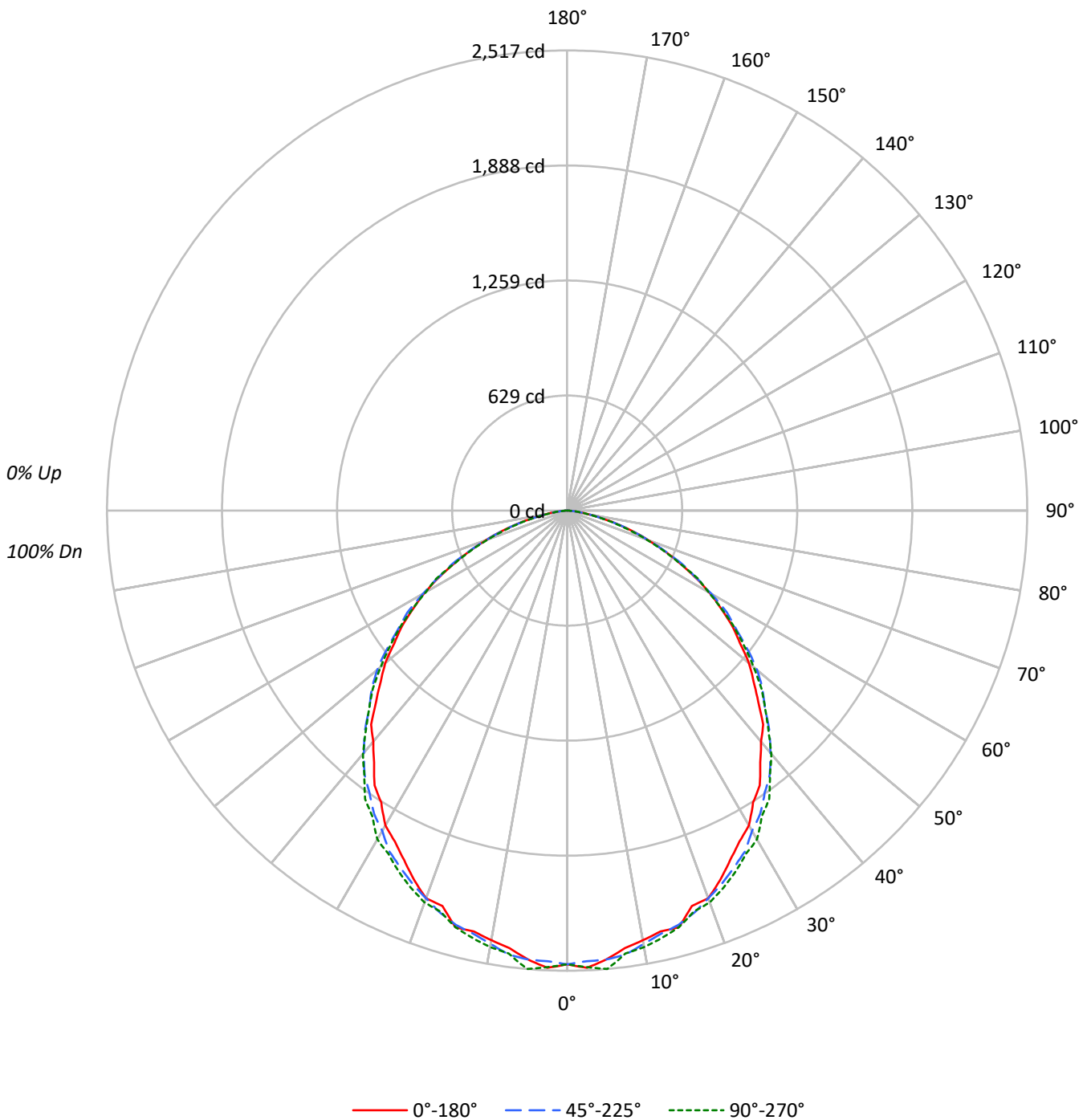
Lumens per Lamp: N/A
Luminaire Lumens: 6255.0 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 64.8
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°	6678	6678	6678
5°	6656	6659	6799
10°	6522	6578	6625
15°	6573	6537	6574
20°	6462	6462	6531
25°	6263	6400	6471
30°	6177	6286	6453
35°	6032	6190	6329
40°	5797	6076	6103
45°	5622	5822	5830
50°	5437	5683	5574
55°	5180	5281	5244
60°	4844	4893	4805
65°	4320	4430	4289
70°	3707	3719	3615
75°	2935	2929	2816
80°	1967	1912	1838
85°	1068	1059	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.5	3.7
10°-20°	661.6	10.6
20°-30°	991.3	15.8
30°-40°	1174.9	18.8
40°-50°	1177.0	18.8
50°-60°	999.1	16.0
60°-70°	673.6	10.8
70°-80°	296.0	4.7
80°-90°	48.1	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°	1886.4	30.2
0°-40°	3061.2	48.9
0°-60°	5237.3	83.7
0°-90°	6255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6255.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2482	2482	2482	2482	2482	
5°	2464	2458	2465	2458	2517	232
15°	2359	2332	2347	2359	2360	657
25°	2110	2121	2156	2184	2179	975
35°	1836	1842	1884	1928	1926	1140
45°	1477	1505	1530	1569	1532	1143
55°	1104	1097	1126	1118	1118	982
65°	678	669	696	669	674	675
75°	282	276	282	262	271	303
85°	35	34	34	33	32	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2481.8	2481.8	2481.8	2481.8	2481.8
2.5°	2503.3	2484.4	2466.8	2487.3	2499.8
5°	2464.2	2458.4	2465.2	2457.8	2517.1
7.5°	2413.6	2435.7	2448.5	2440.5	2444.0
10°	2386.7	2379.0	2407.5	2427.4	2424.5
12.5°	2357.8	2369.4	2371.0	2392.4	2394.3
15°	2359.4	2332.2	2346.6	2358.8	2359.7
17.5°	2267.8	2297.3	2307.2	2335.1	2300.5
20°	2256.6	2235.1	2256.6	2285.1	2280.6
22.5°	2187.7	2163.6	2209.8	2235.1	2233.5
25°	2109.5	2121.0	2155.6	2183.8	2179.3
27.5°	2040.9	2054.4	2103.7	2142.5	2117.5
30°	1988.0	1981.3	2023.0	2057.6	2076.8
32.5°	1893.5	1917.8	1966.6	2000.8	1982.6
35°	1836.1	1841.6	1884.2	1927.8	1926.5
37.5°	1735.8	1761.2	1821.1	1833.3	1822.0
40°	1650.3	1675.6	1729.7	1742.9	1737.4
42.5°	1587.2	1591.6	1638.1	1653.2	1629.1
45°	1477.2	1504.8	1529.8	1569.2	1532.0
47.5°	1383.7	1396.5	1450.3	1460.9	1441.3
50°	1298.8	1303.2	1357.4	1344.3	1331.4
52.5°	1192.0	1211.0	1241.4	1238.8	1223.8
55°	1104.2	1096.9	1125.7	1118.0	1117.7
57.5°	998.8	1011.6	1035.3	1023.2	1003.6
60°	900.1	900.4	909.1	895.3	892.8
62.5°	790.2	794.1	796.0	779.0	806.6
65°	678.4	669.4	695.7	669.1	673.6
67.5°	575.5	580.0	577.4	560.8	567.2
70°	471.1	476.8	472.7	453.7	459.5
72.5°	375.6	368.5	373.0	349.3	360.2
75°	282.3	276.5	281.7	261.8	270.8
77.5°	192.3	196.8	193.5	183.0	189.1
80°	126.9	123.4	123.4	117.3	118.6
82.5°	74.0	70.5	69.5	67.6	70.5
85°	34.6	33.6	34.3	33.3	32.0
87.5°	12.5	12.8	12.8	12.2	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)