

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: P589494

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-80-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589494
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-80-85-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

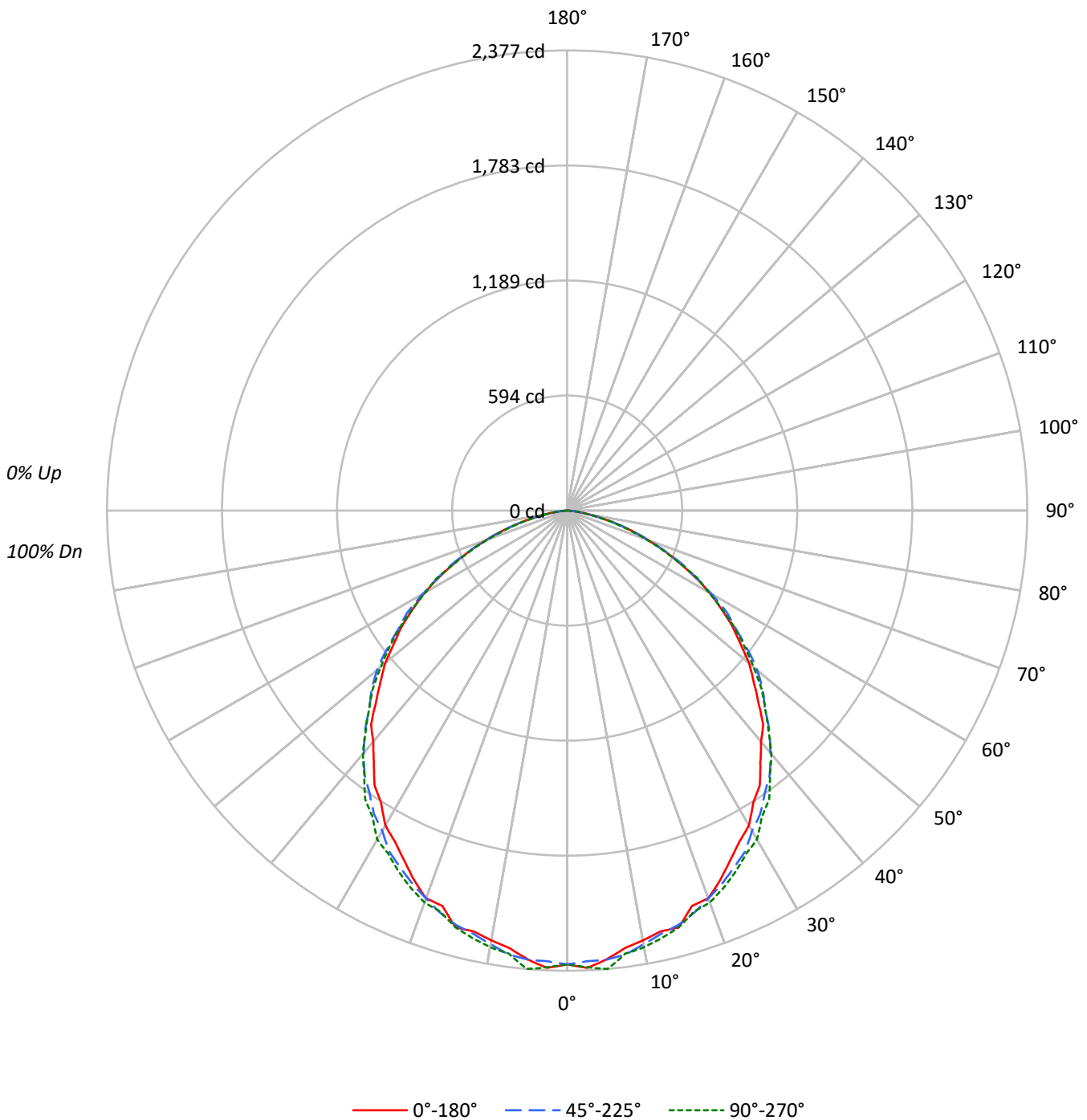
Lumens per Lamp: N/A
Luminaire Lumens: 5908.0 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6308	6308	6308
5°	6287	6290	6422
10°	6160	6213	6257
15°	6208	6175	6209
20°	6104	6104	6169
25°	5916	6045	6112
30°	5835	5937	6095
35°	5697	5846	5978
40°	5475	5739	5765
45°	5310	5499	5507
50°	5135	5367	5265
55°	4893	4989	4953
60°	4576	4621	4538
65°	4080	4184	4051
70°	3500	3512	3415
75°	2772	2766	2660
80°	1858	1805	1736
85°	1010	1000	936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.5	3.7
10°-20°	624.9	10.6
20°-30°	936.3	15.8
30°-40°	1109.7	18.8
40°-50°	1111.7	18.8
50°-60°	943.7	16.0
60°-70°	636.2	10.8
70°-80°	279.6	4.7
80°-90°	45.4	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°	1781.7	30.2
0°-40°	2891.4	48.9
0°-60°	4946.8	83.7
0°-90°	5908.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5908.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2344	2344	2344	2344	2344	
5°	2328	2322	2328	2321	2377	219
15°	2228	2203	2216	2228	2229	621
25°	1992	2003	2036	2063	2058	921
35°	1734	1739	1780	1821	1820	1077
45°	1395	1421	1445	1482	1447	1079
55°	1043	1036	1063	1056	1056	928
65°	641	632	657	632	636	637
75°	267	261	266	247	256	286
85°	33	32	32	32	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2344.1	2344.1	2344.1	2344.1	2344.1
2.5°	2364.4	2346.6	2329.9	2349.3	2361.1
5°	2327.5	2322.1	2328.4	2321.4	2377.4
7.5°	2279.7	2300.6	2312.7	2305.1	2308.4
10°	2254.3	2247.0	2273.9	2292.7	2290.0
12.5°	2227.0	2237.9	2239.4	2259.7	2261.5
15°	2228.5	2202.8	2216.4	2227.9	2228.8
17.5°	2142.0	2169.8	2179.2	2205.5	2172.8
20°	2131.4	2111.1	2131.4	2158.3	2154.1
22.5°	2066.3	2043.6	2087.2	2111.1	2109.6
25°	1992.4	2003.3	2036.0	2062.7	2058.4
27.5°	1927.7	1940.4	1987.0	2023.6	2000.0
30°	1877.7	1871.4	1910.7	1943.4	1961.6
32.5°	1788.5	1811.5	1857.5	1889.8	1872.6
35°	1734.3	1739.4	1779.7	1820.8	1819.6
37.5°	1639.5	1663.5	1720.0	1731.5	1721.0
40°	1558.7	1582.6	1633.8	1646.2	1641.1
42.5°	1499.1	1503.3	1547.2	1561.5	1538.8
45°	1395.3	1421.3	1444.9	1482.2	1447.0
47.5°	1306.9	1319.0	1369.9	1379.9	1361.4
50°	1226.7	1230.9	1282.1	1269.7	1257.6
52.5°	1125.9	1143.8	1172.5	1170.1	1155.9
55°	1043.0	1036.0	1063.3	1056.0	1055.7
57.5°	943.4	955.5	977.9	966.4	947.9
60°	850.2	850.5	858.7	845.6	843.2
62.5°	746.4	750.0	751.8	735.8	761.8
65°	640.7	632.3	657.1	632.0	636.2
67.5°	543.6	547.8	545.4	529.7	535.7
70°	444.9	450.4	446.4	428.6	434.0
72.5°	354.7	348.1	352.3	329.9	340.2
75°	266.6	261.2	266.0	247.3	255.8
77.5°	181.6	185.8	182.8	172.8	178.6
80°	119.9	116.5	116.5	110.8	112.0
82.5°	69.9	66.6	65.7	63.9	66.6
85°	32.7	31.8	32.4	31.5	30.3
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)