

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: P589602

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-81-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589602
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-LD4-4HI-40-UNV-81-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

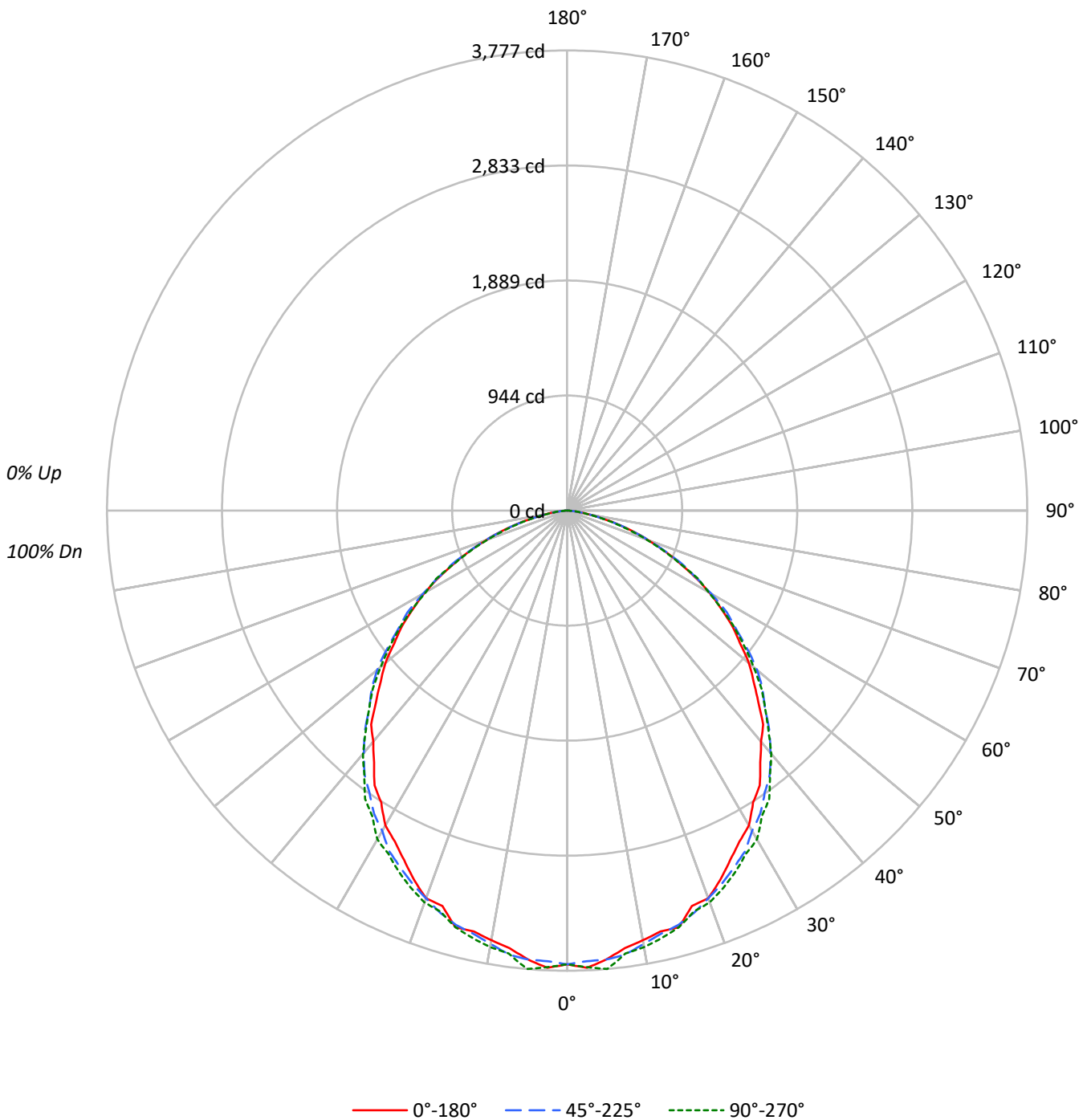
Lumens per Lamp: N/A
Luminaire Lumens: 9386.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	10021	10021	10021
5°	9988	9992	10203
10°	9786	9871	9941
15°	9863	9810	9865
20°	9697	9697	9800
25°	9399	9604	9710
30°	9269	9432	9683
35°	9051	9288	9497
40°	8699	9118	9158
45°	8436	8736	8749
50°	8159	8527	8364
55°	7774	7925	7869
60°	7269	7342	7210
65°	6481	6647	6436
70°	5561	5580	5425
75°	4404	4395	4224
80°	2951	2868	2757
85°	1602	1590	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.3	3.7
10°-20°	992.8	10.6
20°-30°	1487.5	15.8
30°-40°	1762.9	18.8
40°-50°	1766.2	18.8
50°-60°	1499.2	16.0
60°-70°	1010.8	10.8
70°-80°	444.1	4.7
80°-90°	72.2	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°	2830.6	30.2
0°-40°	4593.5	48.9
0°-60°	7858.9	83.7
0°-90°	9386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3724	3724	3724	3724	3724	
5°	3698	3689	3699	3688	3777	349
15°	3540	3500	3521	3540	3541	986
25°	3165	3183	3235	3277	3270	1463
35°	2755	2763	2827	2893	2891	1711
45°	2217	2258	2296	2355	2299	1715
55°	1657	1646	1689	1678	1677	1474
65°	1018	1004	1044	1004	1011	1012
75°	424	415	423	393	406	454
85°	52	50	52	50	48	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3724.1	3724.1	3724.1	3724.1	3724.1
2.5°	3756.3	3728.0	3701.5	3732.3	3751.1
5°	3697.7	3689.0	3699.1	3688.1	3777.0
7.5°	3621.7	3654.9	3674.1	3662.1	3667.4
10°	3581.3	3569.8	3612.6	3642.4	3638.1
12.5°	3538.0	3555.4	3557.8	3590.0	3592.9
15°	3540.4	3499.6	3521.2	3539.5	3540.9
17.5°	3402.9	3447.2	3462.1	3503.9	3452.0
20°	3386.1	3353.9	3386.1	3428.9	3422.2
22.5°	3282.7	3246.7	3315.9	3353.9	3351.5
25°	3165.4	3182.7	3234.6	3276.9	3270.2
27.5°	3062.5	3082.7	3156.7	3214.9	3177.4
30°	2983.1	2973.1	3035.6	3087.5	3116.3
32.5°	2841.3	2877.8	2950.9	3002.4	2975.0
35°	2755.2	2763.4	2827.4	2892.8	2890.8
37.5°	2604.7	2642.7	2732.6	2750.9	2734.1
40°	2476.3	2514.3	2595.6	2615.3	2607.1
42.5°	2381.6	2388.3	2458.1	2480.7	2444.6
45°	2216.7	2258.0	2295.5	2354.7	2298.9
47.5°	2076.3	2095.5	2176.3	2192.2	2162.8
50°	1948.9	1955.6	2036.9	2017.1	1997.9
52.5°	1788.7	1817.1	1862.8	1858.9	1836.3
55°	1657.0	1645.9	1689.2	1677.7	1677.2
57.5°	1498.8	1518.0	1553.6	1535.3	1506.0
60°	1350.7	1351.2	1364.2	1343.5	1339.6
62.5°	1185.8	1191.5	1194.4	1168.9	1210.3
65°	1017.9	1004.5	1043.9	1004.0	1010.7
67.5°	863.6	870.3	866.5	841.5	851.1
70°	706.8	715.5	709.2	680.9	689.5
72.5°	563.5	553.0	559.7	524.1	540.5
75°	423.6	415.0	422.7	392.8	406.3
77.5°	288.5	295.2	290.4	274.6	283.7
80°	190.4	185.1	185.1	176.0	177.9
82.5°	111.1	105.8	104.3	101.5	105.8
85°	51.9	50.5	51.5	50.0	48.1
87.5°	18.8	19.2	19.2	18.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)