

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: P589603

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589603
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-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

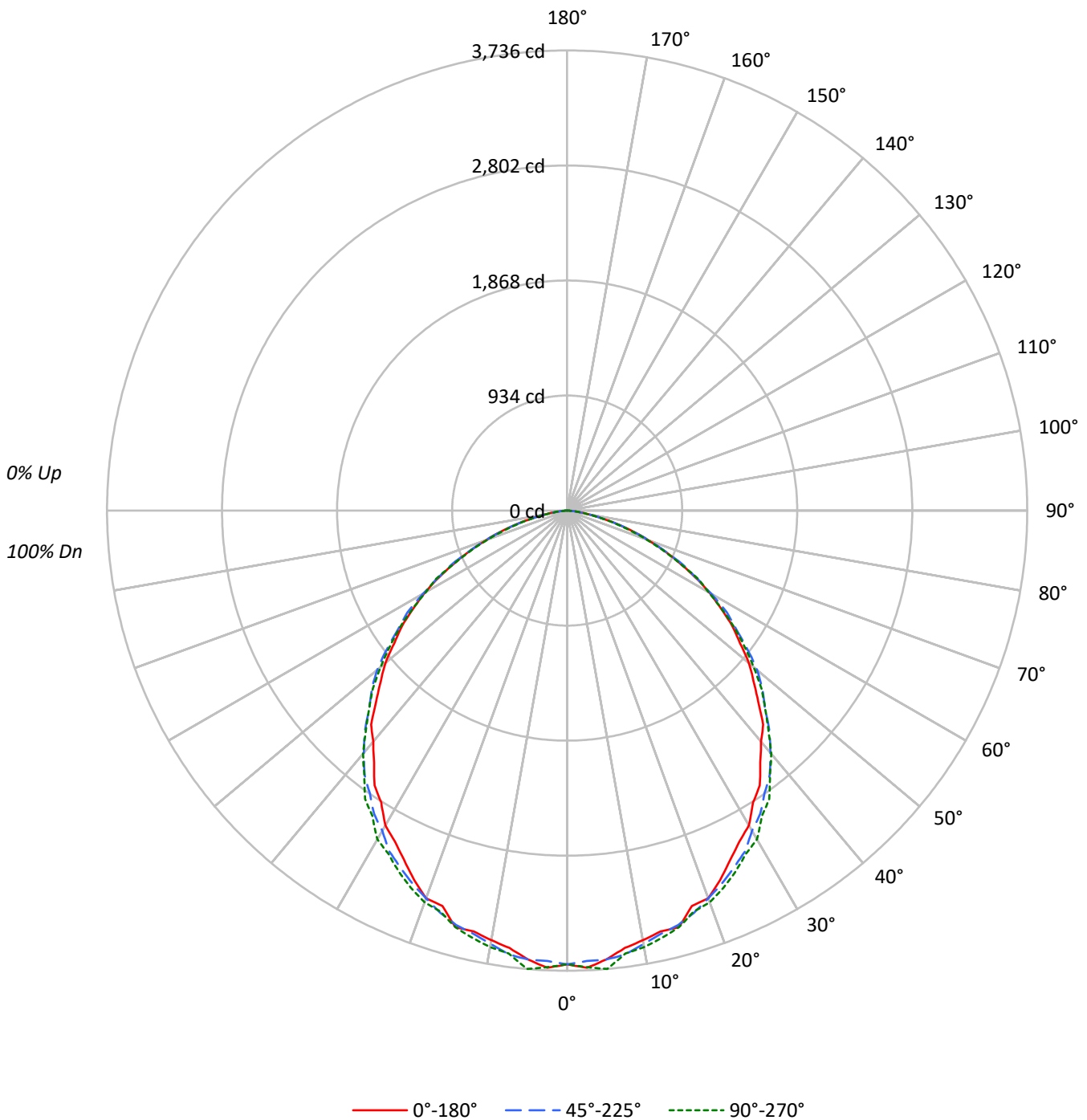
Lumens per Lamp: N/A
Luminaire Lumens: 9283.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	9912	9912	9912
5°	9879	9883	10091
10°	9678	9763	9832
15°	9755	9702	9757
20°	9590	9590	9692
25°	9296	9499	9603
30°	9168	9329	9577
35°	8952	9186	9392
40°	8604	9018	9058
45°	8343	8640	8653
50°	8069	8434	8272
55°	7689	7838	7782
60°	7190	7261	7131
65°	6411	6574	6365
70°	5500	5519	5366
75°	4356	4346	4179
80°	2918	2837	2727
85°	1587	1572	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.5	3.7
10°-20°	981.9	10.6
20°-30°	1471.1	15.8
30°-40°	1743.6	18.8
40°-50°	1746.8	18.8
50°-60°	1482.8	16.0
60°-70°	999.7	10.8
70°-80°	439.3	4.7
80°-90°	71.4	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°	2799.5	30.2
0°-40°	4543.1	48.9
0°-60°	7772.7	83.7
0°-90°	9283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9283.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3683	3683	3683	3683	3683	
5°	3657	3648	3658	3648	3736	345
15°	3502	3461	3483	3501	3502	976
25°	3131	3148	3199	3241	3234	1447
35°	2725	2733	2796	2861	2859	1692
45°	2192	2233	2270	2329	2274	1696
55°	1639	1628	1671	1659	1659	1458
65°	1007	994	1032	993	1000	1001
75°	419	410	418	388	402	449
85°	51	50	51	50	48	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3683.3	3683.3	3683.3	3683.3	3683.3
2.5°	3715.1	3687.1	3660.9	3691.3	3709.9
5°	3657.1	3648.5	3658.5	3647.6	3735.6
7.5°	3582.0	3614.8	3633.8	3621.9	3627.1
10°	3542.0	3530.6	3572.9	3602.4	3598.1
12.5°	3499.2	3516.3	3518.7	3550.6	3553.4
15°	3501.6	3461.2	3482.6	3500.6	3502.1
17.5°	3365.6	3409.3	3424.1	3465.5	3414.1
20°	3348.9	3317.1	3348.9	3391.3	3384.6
22.5°	3246.7	3211.0	3279.5	3317.1	3314.7
25°	3130.7	3147.8	3199.1	3241.0	3234.3
27.5°	3028.9	3048.9	3122.1	3179.6	3142.5
30°	2950.4	2940.4	3002.2	3053.6	3082.1
32.5°	2810.1	2846.3	2918.5	2969.4	2942.3
35°	2725.0	2733.1	2796.3	2861.0	2859.1
37.5°	2576.1	2613.7	2702.6	2720.7	2704.1
40°	2449.2	2486.7	2567.1	2586.6	2578.5
42.5°	2355.5	2362.1	2431.1	2453.4	2417.8
45°	2192.4	2233.3	2270.4	2328.8	2273.7
47.5°	2053.5	2072.5	2152.4	2168.1	2139.1
50°	1927.5	1934.1	2014.5	1995.0	1976.0
52.5°	1769.1	1797.2	1842.3	1838.5	1816.2
55°	1638.8	1627.9	1670.7	1659.3	1658.8
57.5°	1482.3	1501.4	1536.6	1518.5	1489.5
60°	1335.9	1336.3	1349.2	1328.7	1324.9
62.5°	1172.7	1178.5	1181.3	1156.1	1197.0
65°	1006.8	993.5	1032.5	993.0	999.6
67.5°	854.1	860.8	857.0	832.2	841.8
70°	699.1	707.6	701.5	673.4	682.0
72.5°	557.4	546.9	553.6	518.4	534.5
75°	419.0	410.4	418.0	388.5	401.9
77.5°	285.3	292.0	287.2	271.5	280.6
80°	188.3	183.1	183.1	174.1	176.0
82.5°	109.9	104.6	103.2	100.3	104.6
85°	51.4	49.9	50.9	49.5	47.6
87.5°	18.5	19.0	19.0	18.1	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)