

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: P589137

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

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589137
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-LD4-2LO-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

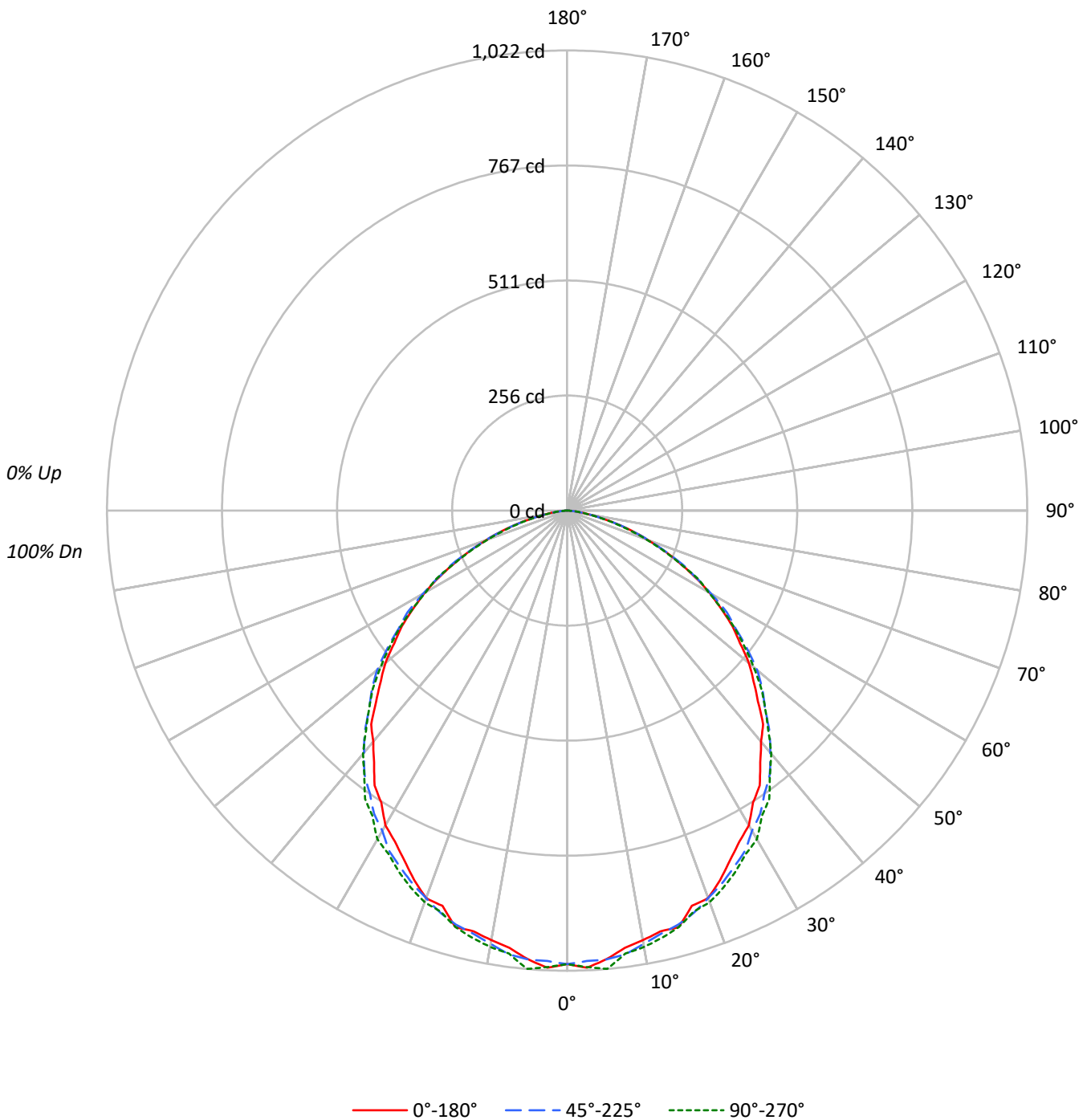
Lumens per Lamp: N/A
Luminaire Lumens: 2539.0 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	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													100															
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86													86															
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73													73															
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62													62															
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53													53															
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46													46															
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41													41															
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36													36															
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32													32															
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29													29															
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2711	2711	2711
5°	2702	2703	2760
10°	2647	2670	2689
15°	2668	2654	2669
20°	2623	2623	2651
25°	2542	2598	2627
30°	2508	2551	2619
35°	2448	2512	2569
40°	2353	2466	2478
45°	2282	2363	2367
50°	2207	2307	2263
55°	2103	2144	2129
60°	1967	1986	1950
65°	1754	1798	1741
70°	1504	1510	1467
75°	1192	1188	1143
80°	798	776	745
85°	432	429	401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	3.7
10°-20°	268.6	10.6
20°-30°	402.4	15.8
30°-40°	476.9	18.8
40°-50°	477.8	18.8
50°-60°	405.5	16.0
60°-70°	273.4	10.8
70°-80°	120.2	4.7
80°-90°	19.5	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°	765.7	30.2
0°-40°	1242.6	48.9
0°-60°	2125.9	83.7
0°-90°	2539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1007	1007	1007	1007	1007	
5°	1000	998	1001	998	1022	94
15°	958	947	952	958	958	267
25°	856	861	875	886	885	396
35°	745	748	765	782	782	463
45°	600	611	621	637	622	464
55°	448	445	457	454	454	399
65°	275	272	282	272	273	274
75°	115	112	114	106	110	123
85°	14	14	14	14	13	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1007.4	1007.4	1007.4	1007.4	1007.4
2.5°	1016.1	1008.5	1001.3	1009.6	1014.7
5°	1000.3	997.9	1000.6	997.7	1021.7
7.5°	979.7	988.7	993.9	990.6	992.1
10°	968.8	965.7	977.2	985.3	984.1
12.5°	957.1	961.8	962.4	971.1	971.9
15°	957.7	946.7	952.5	957.5	957.9
17.5°	920.5	932.5	936.5	947.8	933.8
20°	916.0	907.3	916.0	927.5	925.7
22.5°	888.0	878.2	897.0	907.3	906.6
25°	856.3	860.9	875.0	886.4	884.6
27.5°	828.4	833.9	853.9	869.7	859.5
30°	807.0	804.2	821.1	835.2	843.0
32.5°	768.6	778.5	798.3	812.2	804.8
35°	745.3	747.5	764.8	782.5	782.0
37.5°	704.6	714.9	739.2	744.1	739.6
40°	669.9	680.1	702.1	707.5	705.3
42.5°	644.2	646.1	664.9	671.0	661.3
45°	599.6	610.8	621.0	637.0	621.9
47.5°	561.7	566.9	588.7	593.0	585.1
50°	527.2	529.0	551.0	545.7	540.5
52.5°	483.9	491.5	503.9	502.9	496.7
55°	448.2	445.2	456.9	453.8	453.7
57.5°	405.4	410.6	420.3	415.3	407.4
60°	365.4	365.5	369.0	363.4	362.4
62.5°	320.8	322.3	323.1	316.2	327.4
65°	275.4	271.7	282.4	271.6	273.4
67.5°	233.6	235.4	234.4	227.6	230.2
70°	191.2	193.5	191.9	184.2	186.5
72.5°	152.4	149.6	151.4	141.8	146.2
75°	114.6	112.3	114.3	106.3	109.9
77.5°	78.0	79.9	78.6	74.3	76.7
80°	51.5	50.1	50.1	47.6	48.1
82.5°	30.0	28.6	28.2	27.4	28.6
85°	14.0	13.7	13.9	13.5	13.0
87.5°	5.1	5.2	5.2	4.9	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)