

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: P589616

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-93-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589616
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-93-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

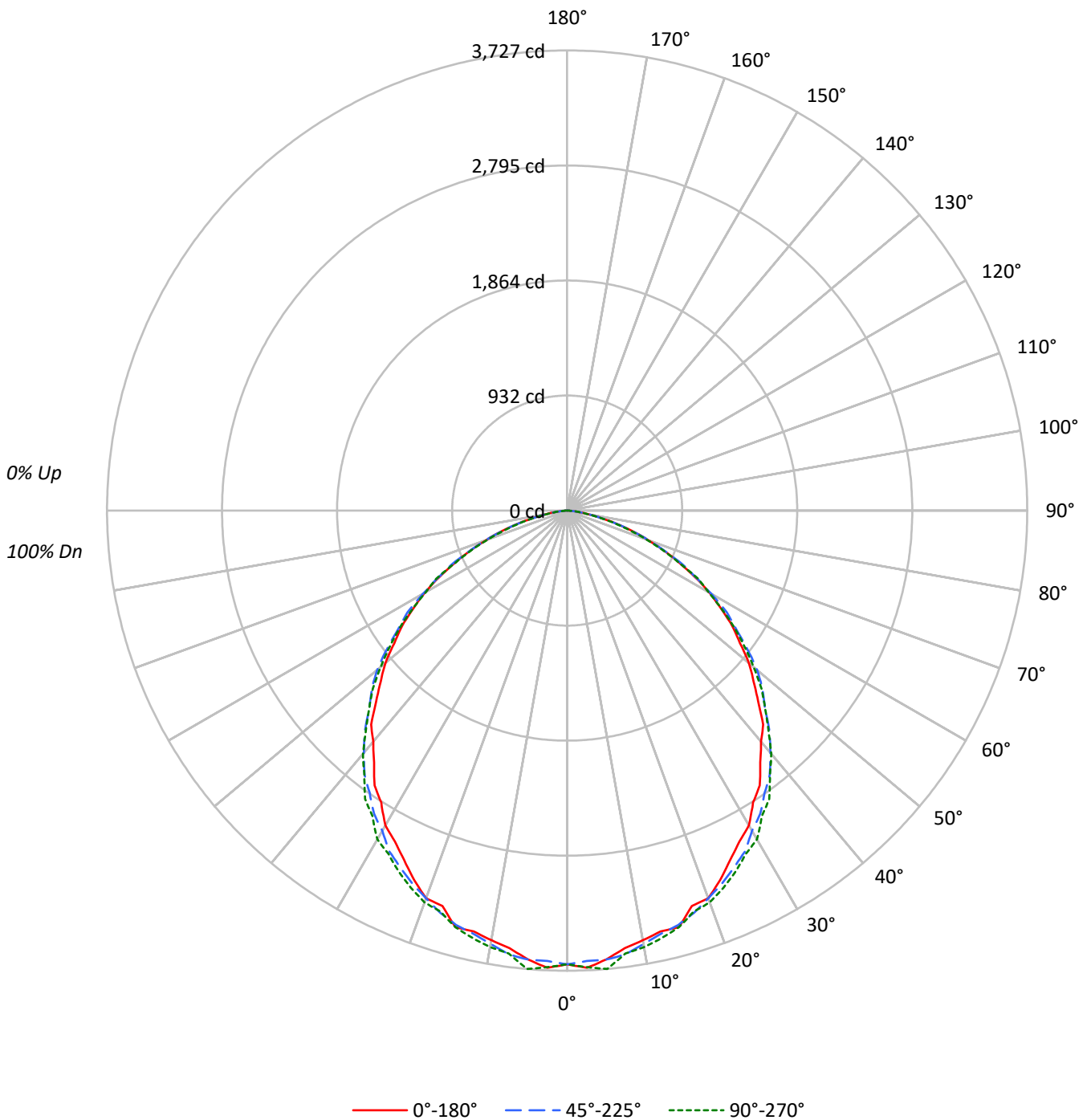
Lumens per Lamp: N/A
Luminaire Lumens: 9261.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	9888	9888	9888
5°	9855	9859	10067
10°	9656	9740	9809
15°	9732	9679	9733
20°	9568	9568	9670
25°	9273	9476	9581
30°	9146	9307	9554
35°	8930	9164	9370
40°	8583	8996	9036
45°	8324	8620	8632
50°	8050	8413	8253
55°	7670	7819	7764
60°	7173	7244	7114
65°	6395	6558	6350
70°	5487	5506	5353
75°	4346	4336	4168
80°	2912	2831	2720
85°	1581	1568	1463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.6	3.7
10°-20°	979.6	10.6
20°-30°	1467.6	15.8
30°-40°	1739.5	18.8
40°-50°	1742.7	18.8
50°-60°	1479.2	16.0
60°-70°	997.3	10.8
70°-80°	438.2	4.7
80°-90°	71.2	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°	2792.9	30.2
0°-40°	4532.3	48.9
0°-60°	7754.2	83.7
0°-90°	9261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9261.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3674	3674	3674	3674	3674	
5°	3648	3640	3650	3639	3727	344
15°	3493	3453	3474	3492	3494	973
25°	3123	3140	3192	3233	3227	1444
35°	2718	2727	2790	2854	2852	1688
45°	2187	2228	2265	2323	2268	1692
55°	1635	1624	1667	1655	1655	1454
65°	1004	991	1030	991	997	999
75°	418	409	417	388	401	448
85°	51	50	51	49	47	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3674.5	3674.5	3674.5	3674.5	3674.5
2.5°	3706.3	3678.3	3652.2	3682.6	3701.1
5°	3648.4	3639.9	3649.9	3638.9	3726.7
7.5°	3573.5	3606.2	3625.2	3613.3	3618.5
10°	3533.6	3522.2	3564.5	3593.9	3589.6
12.5°	3490.9	3508.0	3510.4	3542.2	3545.0
15°	3493.3	3453.0	3474.3	3492.3	3493.8
17.5°	3357.6	3401.3	3416.0	3457.2	3406.0
20°	3341.0	3309.2	3341.0	3383.2	3376.6
22.5°	3239.0	3203.4	3271.7	3309.2	3306.8
25°	3123.2	3140.3	3191.6	3233.3	3226.7
27.5°	3021.7	3041.6	3114.7	3172.1	3135.1
30°	2943.4	2933.5	2995.1	3046.4	3074.8
32.5°	2803.5	2839.5	2911.6	2962.4	2935.4
35°	2718.5	2726.6	2789.7	2854.2	2852.3
37.5°	2570.0	2607.5	2696.2	2714.3	2697.7
40°	2443.4	2480.8	2561.0	2580.5	2572.4
42.5°	2349.9	2356.5	2425.3	2447.6	2412.0
45°	2187.2	2228.0	2265.0	2323.3	2268.3
47.5°	2048.6	2067.6	2147.3	2163.0	2134.0
50°	1922.9	1929.5	2009.7	1990.3	1971.3
52.5°	1764.9	1792.9	1838.0	1834.2	1811.9
55°	1634.9	1624.0	1666.7	1655.3	1654.8
57.5°	1478.8	1497.8	1532.9	1514.9	1485.9
60°	1332.7	1333.2	1346.0	1325.6	1321.8
62.5°	1170.0	1175.7	1178.5	1153.4	1194.2
65°	1004.4	991.1	1030.0	990.6	997.3
67.5°	852.1	858.7	854.9	830.3	839.8
70°	697.4	706.0	699.8	671.8	680.3
72.5°	556.0	545.6	552.2	517.1	533.3
75°	418.0	409.4	417.0	387.6	400.9
77.5°	284.7	291.3	286.6	270.9	279.9
80°	187.9	182.7	182.7	173.6	175.5
82.5°	109.6	104.4	103.0	100.1	104.4
85°	51.2	49.8	50.8	49.3	47.4
87.5°	18.5	19.0	19.0	18.0	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)