

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: P589798

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-82-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589798
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-LD4-4STD-40-UNV-82-85-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

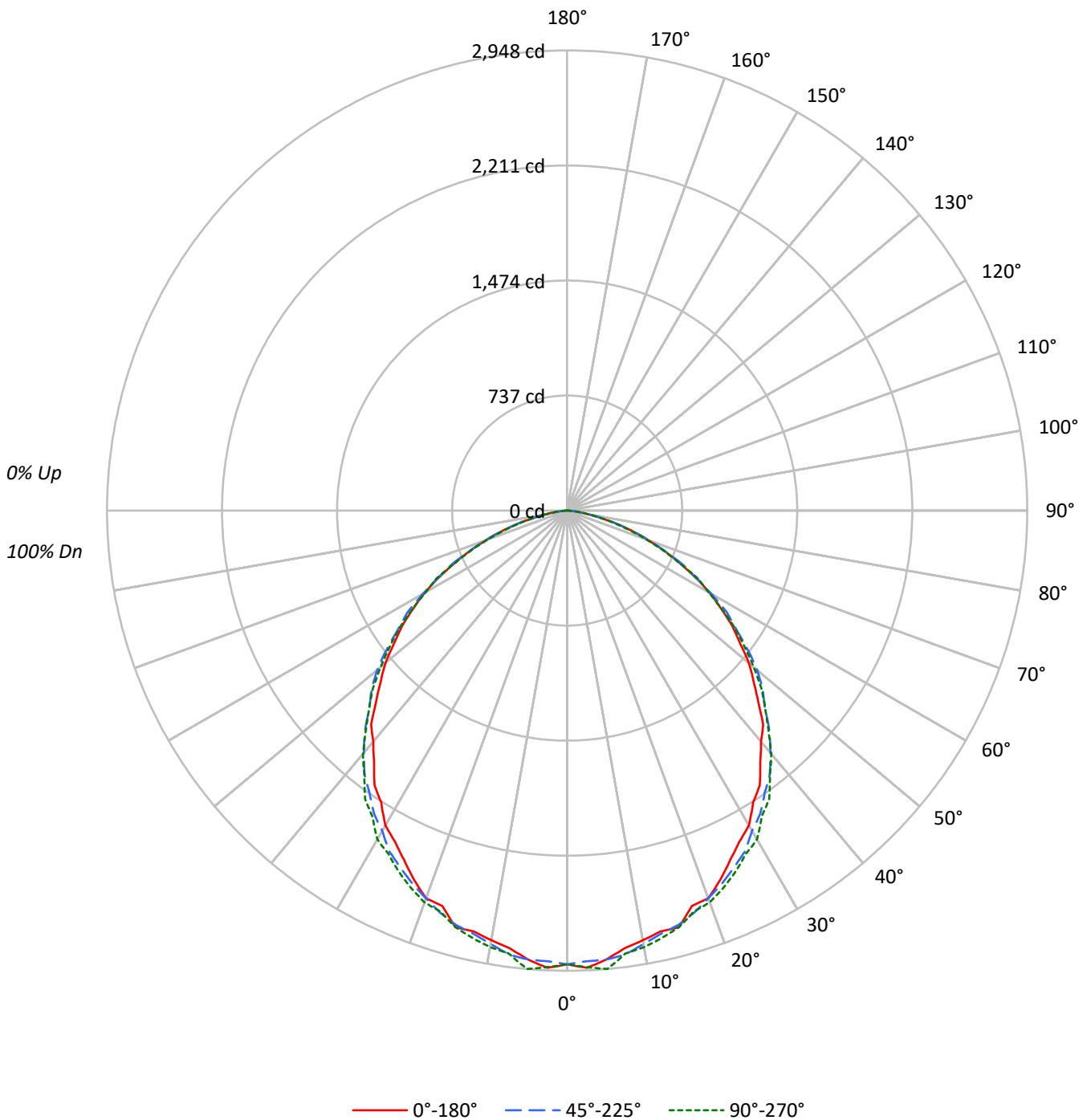
Lumens per Lamp: N/A
Luminaire Lumens: 7326.0 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	7822	7822	7822
5°	7796	7799	7964
10°	7638	7705	7759
15°	7699	7657	7700
20°	7568	7568	7649
25°	7336	7496	7579
30°	7235	7362	7558
35°	7065	7250	7412
40°	6790	7117	7148
45°	6584	6819	6829
50°	6368	6656	6528
55°	6068	6186	6142
60°	5674	5731	5627
65°	5059	5188	5023
70°	4341	4356	4235
75°	3437	3430	3297
80°	2303	2239	2152
85°	1250	1241	1158



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.4	3.7
10°-20°	774.9	10.6
20°-30°	1161.0	15.8
30°-40°	1376.0	18.8
40°-50°	1378.6	18.8
50°-60°	1170.2	16.0
60°-70°	788.9	10.8
70°-80°	346.7	4.7
80°-90°	56.3	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°	2209.3	30.2
0°-40°	3585.3	48.9
0°-60°	6134.1	83.7
0°-90°	7326.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7326.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2907	2907	2907	2907	2907	
5°	2886	2879	2887	2879	2948	272
15°	2763	2732	2748	2763	2764	770
25°	2471	2484	2525	2558	2552	1142
35°	2150	2157	2207	2258	2256	1335
45°	1730	1762	1792	1838	1794	1338
55°	1293	1285	1318	1310	1309	1150
65°	794	784	815	784	789	790
75°	331	324	330	307	317	354
85°	40	39	40	39	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2906.8	2906.8	2906.8	2906.8	2906.8
2.5°	2931.9	2909.8	2889.1	2913.2	2927.8
5°	2886.1	2879.4	2887.3	2878.6	2948.1
7.5°	2826.8	2852.7	2867.7	2858.4	2862.5
10°	2795.3	2786.3	2819.7	2843.0	2839.6
12.5°	2761.5	2775.0	2776.9	2802.1	2804.3
15°	2763.4	2731.5	2748.4	2762.7	2763.8
17.5°	2656.1	2690.6	2702.2	2734.9	2694.3
20°	2642.9	2617.8	2642.9	2676.3	2671.1
22.5°	2562.2	2534.1	2588.1	2617.8	2615.9
25°	2470.7	2484.2	2524.7	2557.7	2552.5
27.5°	2390.3	2406.1	2463.9	2509.3	2480.0
30°	2328.4	2320.5	2369.3	2409.9	2432.4
32.5°	2217.7	2246.2	2303.3	2343.4	2322.0
35°	2150.5	2156.9	2206.8	2257.9	2256.4
37.5°	2033.1	2062.7	2132.9	2147.1	2134.0
40°	1932.8	1962.5	2025.9	2041.3	2034.9
42.5°	1858.9	1864.2	1918.6	1936.2	1908.1
45°	1730.2	1762.5	1791.7	1837.9	1794.4
47.5°	1620.6	1635.6	1698.7	1711.0	1688.1
50°	1521.1	1526.4	1589.8	1574.4	1559.4
52.5°	1396.2	1418.3	1453.9	1450.9	1433.3
55°	1293.3	1284.7	1318.5	1309.5	1309.1
57.5°	1169.8	1184.9	1212.6	1198.4	1175.5
60°	1054.2	1054.6	1064.8	1048.6	1045.6
62.5°	925.5	930.0	932.3	912.4	944.7
65°	794.5	784.0	814.8	783.6	788.9
67.5°	674.1	679.3	676.3	656.8	664.3
70°	551.7	558.5	553.6	531.4	538.2
72.5°	439.9	431.6	436.9	409.1	421.8
75°	330.6	323.9	329.9	306.6	317.1
77.5°	225.2	230.4	226.7	214.3	221.4
80°	148.6	144.5	144.5	137.4	138.9
82.5°	86.7	82.6	81.4	79.2	82.6
85°	40.5	39.4	40.2	39.0	37.5
87.5°	14.6	15.0	15.0	14.3	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)