

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: P546680

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-80-85-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P546680
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-2HI-35-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

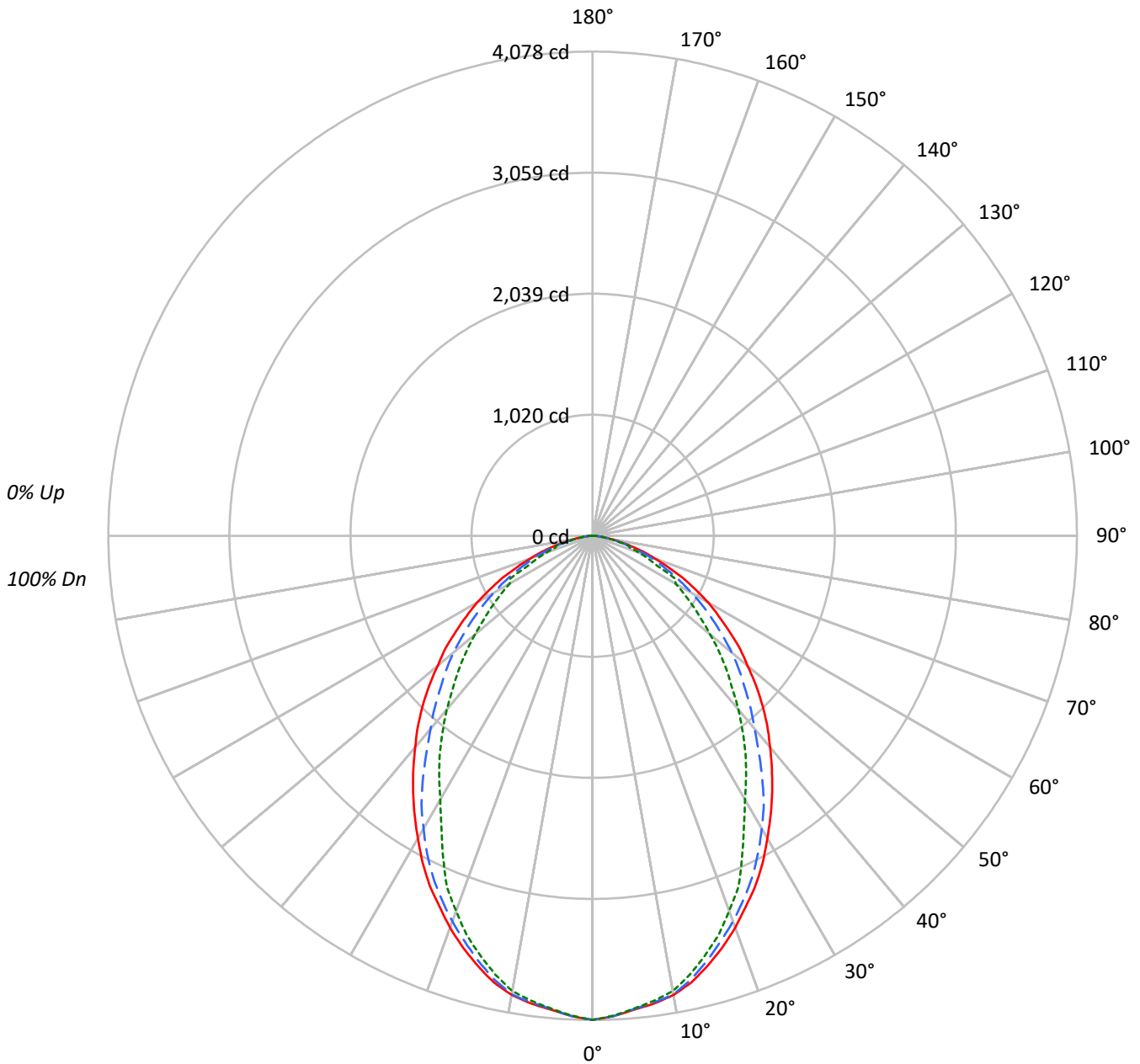
Lumens per Lamp: N/A
Luminaire Lumens: 8005.0 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5486	5486	5486
5°	5412	5405	5399
10°	5365	5359	5320
15°	5220	5168	5096
20°	5029	4948	4813
25°	4822	4717	4423
30°	4570	4424	3984
35°	4328	4088	3686
40°	4082	3726	3353
45°	3848	3444	3032
50°	3562	3197	2704
55°	3295	2897	2422
60°	3019	2588	2169
65°	2656	2266	1921
70°	2188	1984	1632
75°	1740	1520	1593
80°	1168	1096	1023
85°	727	874	1019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	379.6	4.7
10°-20°	1041.7	13.0
20°-30°	1442.2	18.0
30°-40°	1537.8	19.2
40°-50°	1402.9	17.5
50°-60°	1099.1	13.7
60°-70°	716.3	8.9
70°-80°	317.4	4.0
80°-90°	68.1	0.9
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°	2863.5	35.8
0°-40°	4401.2	55.0
0°-60°	6903.2	86.2
0°-90°	8005.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8005.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4078	4078	4078	4078	4078	
5°	4007	4002	4002	3998	3998	380
15°	3748	3748	3710	3672	3658	1054
25°	3248	3229	3177	3064	2979	1491
35°	2635	2616	2489	2300	2244	1647
45°	2022	1980	1810	1659	1593	1558
55°	1405	1362	1235	1089	1032	1260
65°	834	787	712	726	603	822
75°	335	311	292	278	306	359
85°	47	52	57	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4077.6	4077.6	4077.6	4077.6	4077.6
2.5°	4049.4	4049.4	4049.4	4044.6	4044.6
5°	4006.9	4002.2	4002.2	3997.5	3997.5
7.5°	3973.9	3969.2	3964.5	3959.8	3950.4
10°	3926.8	3926.8	3922.1	3898.5	3893.8
12.5°	3851.4	3846.7	3827.8	3794.8	3785.4
15°	3747.7	3747.7	3709.9	3672.2	3658.1
17.5°	3634.5	3629.8	3582.7	3545.0	3526.1
20°	3512.0	3502.5	3455.4	3394.1	3361.1
22.5°	3375.2	3375.2	3318.7	3238.5	3205.5
25°	3248.0	3229.1	3177.3	3064.1	2979.3
27.5°	3101.8	3073.6	3017.0	2856.7	2757.7
30°	2941.6	2927.4	2847.3	2639.9	2564.4
32.5°	2790.7	2767.1	2682.3	2465.4	2404.2
35°	2635.1	2616.3	2489.0	2300.4	2243.9
37.5°	2479.6	2456.0	2295.7	2144.9	2074.2
40°	2324.0	2295.7	2121.3	1984.6	1909.2
42.5°	2177.9	2140.2	1970.5	1824.3	1739.5
45°	2022.3	1979.9	1810.2	1659.3	1593.3
47.5°	1866.8	1829.0	1673.5	1517.9	1442.5
50°	1701.8	1668.8	1527.3	1371.8	1291.6
52.5°	1565.1	1513.2	1376.5	1220.9	1154.9
55°	1404.8	1362.4	1235.1	1088.9	1032.4
57.5°	1258.6	1216.2	1098.4	961.7	914.5
60°	1121.9	1060.7	961.7	843.8	806.1
62.5°	971.1	924.0	839.1	740.1	787.2
65°	834.4	787.2	711.8	726.0	603.4
67.5°	683.5	660.0	594.0	528.0	509.1
70°	556.3	528.0	504.4	433.7	414.8
72.5°	443.1	414.8	381.8	344.1	330.0
75°	334.7	311.1	292.3	278.1	306.4
77.5°	231.0	221.6	207.4	193.3	188.6
80°	150.8	146.1	141.4	136.7	132.0
82.5°	89.6	89.6	89.6	89.6	89.6
85°	47.1	51.9	56.6	61.3	66.0
87.5°	28.3	28.3	33.0	37.7	42.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)