

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: P547447

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-80-84-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: P547447
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-LD4-4STD-35-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

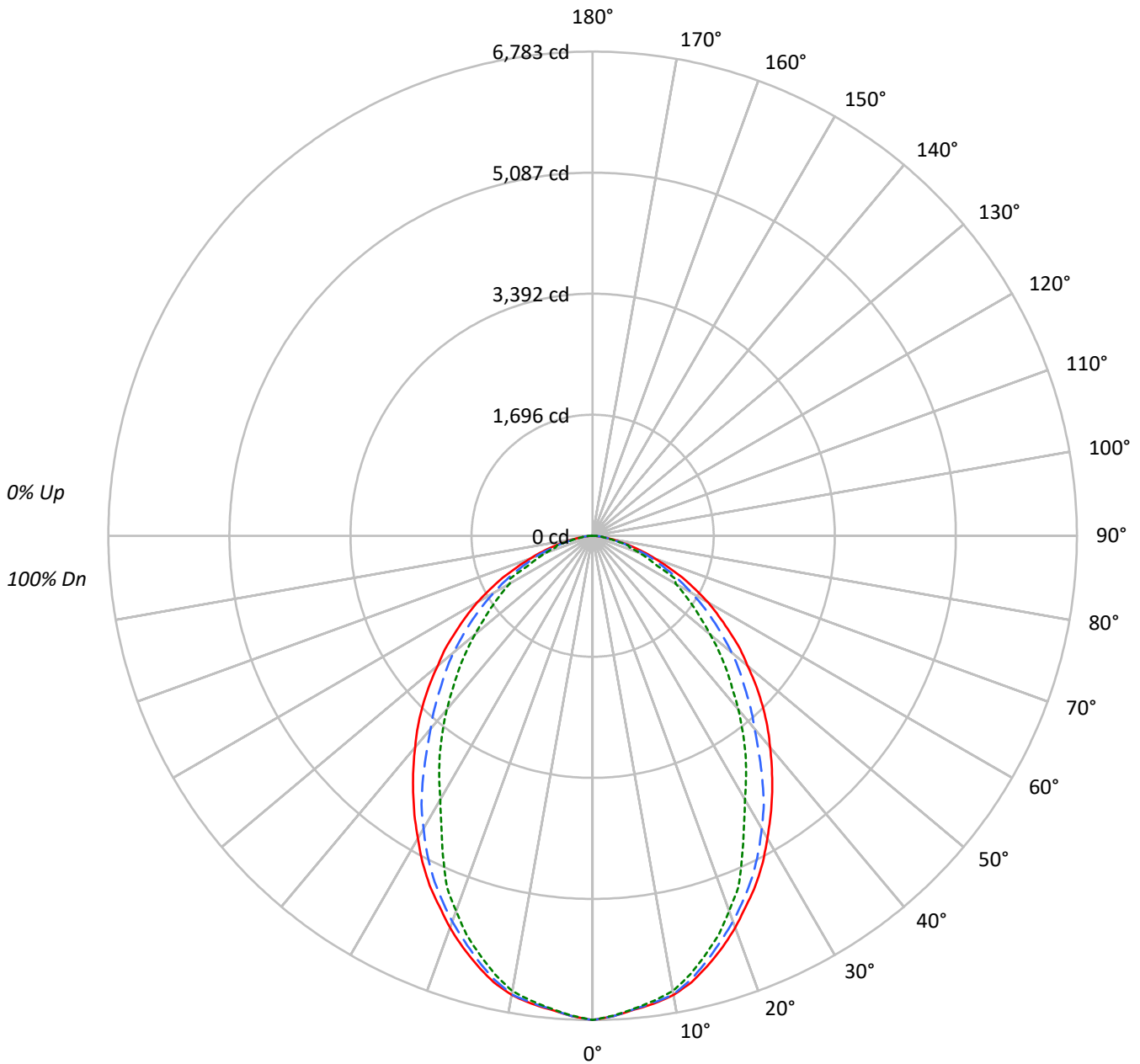
Lumens per Lamp: N/A
Luminaire Lumens: 13316.0 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	9126	9126	9126
5°	9002	8992	8981
10°	8924	8914	8849
15°	8684	8596	8476
20°	8365	8230	8006
25°	8021	7846	7357
30°	7602	7358	6628
35°	7200	6801	6131
40°	6790	6198	5578
45°	6401	5730	5043
50°	5925	5318	4497
55°	5482	4819	4028
60°	5022	4305	3608
65°	4419	3770	3195
70°	3640	3301	2715
75°	2895	2528	2650
80°	1944	1822	1702
85°	1210	1453	1695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	631.4	4.7
10°-20°	1732.8	13.0
20°-30°	2399.0	18.0
30°-40°	2558.0	19.2
40°-50°	2333.7	17.5
50°-60°	1828.2	13.7
60°-70°	1191.6	8.9
70°-80°	527.9	4.0
80°-90°	113.3	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°	4763.2	35.8
0°-40°	7321.3	55.0
0°-60°	11483.2	86.2
0°-90°	13316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6783	6783	6783	6783	6783	
5°	6665	6658	6658	6650	6650	633
15°	6234	6234	6171	6109	6085	1753
25°	5403	5372	5285	5097	4956	2480
35°	4384	4352	4140	3827	3733	2740
45°	3364	3294	3011	2760	2650	2591
55°	2337	2266	2054	1811	1717	2096
65°	1388	1310	1184	1208	1004	1368
75°	557	518	486	463	510	597
85°	78	86	94	102	110	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6783.0	6783.0	6783.0	6783.0	6783.0
2.5°	6735.9	6735.9	6735.9	6728.1	6728.1
5°	6665.4	6657.5	6657.5	6649.7	6649.7
7.5°	6610.5	6602.6	6594.8	6587.0	6571.3
10°	6532.1	6532.1	6524.2	6485.0	6477.2
12.5°	6406.6	6398.8	6367.4	6312.5	6296.8
15°	6234.1	6234.1	6171.3	6108.6	6085.1
17.5°	6045.9	6038.0	5959.6	5896.9	5865.5
20°	5842.0	5826.3	5747.9	5646.0	5591.1
22.5°	5614.6	5614.6	5520.5	5387.2	5332.3
25°	5402.9	5371.5	5285.2	5097.0	4955.9
27.5°	5159.8	5112.7	5018.6	4752.0	4587.3
30°	4893.2	4869.6	4736.3	4391.3	4265.8
32.5°	4642.2	4603.0	4461.9	4101.2	3999.2
35°	4383.5	4352.1	4140.4	3826.7	3732.6
37.5°	4124.7	4085.5	3818.9	3567.9	3450.3
40°	3865.9	3818.9	3528.7	3301.3	3175.9
42.5°	3622.8	3560.1	3277.8	3034.7	2893.6
45°	3364.1	3293.5	3011.2	2760.2	2650.5
47.5°	3105.3	3042.5	2783.8	2525.0	2399.5
50°	2830.8	2775.9	2540.7	2281.9	2148.6
52.5°	2603.4	2517.2	2289.8	2031.0	1921.2
55°	2336.8	2266.2	2054.5	1811.4	1717.3
57.5°	2093.7	2023.1	1827.1	1599.7	1521.3
60°	1866.3	1764.4	1599.7	1403.6	1340.9
62.5°	1615.4	1537.0	1395.8	1231.1	1309.5
65°	1388.0	1309.5	1184.1	1207.6	1003.7
67.5°	1137.0	1097.8	988.0	878.3	846.9
70°	925.3	878.3	839.1	721.4	690.1
72.5°	737.1	690.1	635.2	572.4	548.9
75°	556.8	517.5	486.2	462.7	509.7
77.5°	384.2	368.6	345.0	321.5	313.7
80°	250.9	243.1	235.2	227.4	219.6
82.5°	149.0	149.0	149.0	149.0	149.0
85°	78.4	86.3	94.1	101.9	109.8
87.5°	47.0	47.0	54.9	62.7	70.6
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)