

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: P546749

Luminaire Tested: **FMR-24-4-LD4-2HI-50-UNV-80-96-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: P546749
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-50-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

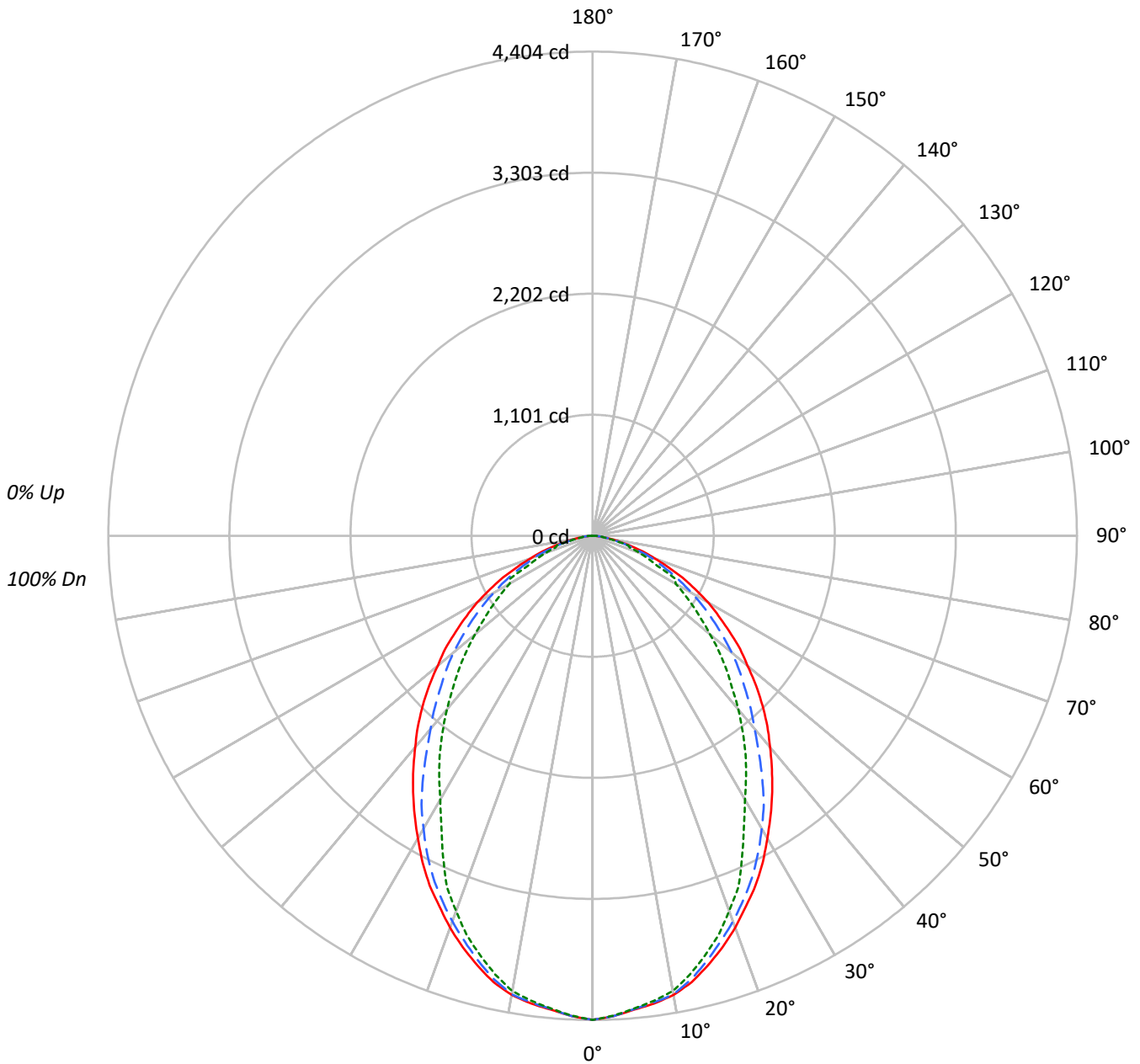
Lumens per Lamp: N/A
Luminaire Lumens: 8645.0 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	5925	5925	5925
5°	5845	5838	5831
10°	5794	5787	5745
15°	5638	5581	5503
20°	5431	5343	5197
25°	5207	5094	4777
30°	4935	4777	4303
35°	4674	4415	3980
40°	4408	4024	3621
45°	4156	3720	3274
50°	3847	3453	2920
55°	3559	3129	2615
60°	3260	2795	2342
65°	2869	2447	2074
70°	2363	2143	1762
75°	1879	1641	1720
80°	1262	1183	1104
85°	786	943	1101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	409.9	4.7
10°-20°	1125.0	13.0
20°-30°	1557.5	18.0
30°-40°	1660.7	19.2
40°-50°	1515.1	17.5
50°-60°	1186.9	13.7
60°-70°	773.6	8.9
70°-80°	342.7	4.0
80°-90°	73.6	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°	3092.4	35.8
0°-40°	4753.1	55.0
0°-60°	7455.1	86.2
0°-90°	8645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4404	4404	4404	4404	4404	
5°	4327	4322	4322	4317	4317	411
15°	4047	4047	4007	3966	3951	1138
25°	3508	3487	3431	3309	3218	1610
35°	2846	2826	2688	2484	2423	1779
45°	2184	2138	1955	1792	1721	1682
55°	1517	1471	1334	1176	1115	1361
65°	901	850	769	784	652	888
75°	362	336	316	300	331	387
85°	51	56	61	66	71	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4403.6	4403.6	4403.6	4403.6	4403.6
2.5°	4373.1	4373.1	4373.1	4368.0	4368.0
5°	4327.3	4322.2	4322.2	4317.1	4317.1
7.5°	4291.6	4286.6	4281.5	4276.4	4266.2
10°	4240.7	4240.7	4235.6	4210.2	4205.1
12.5°	4159.3	4154.2	4133.8	4098.2	4088.0
15°	4047.3	4047.3	4006.6	3965.8	3950.6
17.5°	3925.1	3920.0	3869.1	3828.4	3808.0
20°	3792.7	3782.6	3731.6	3665.5	3629.8
22.5°	3645.1	3645.1	3584.0	3497.5	3461.8
25°	3507.6	3487.3	3431.3	3309.1	3217.5
27.5°	3349.8	3319.3	3258.2	3085.1	2978.2
30°	3176.7	3161.5	3074.9	2850.9	2769.5
32.5°	3013.8	2988.4	2896.7	2662.6	2596.4
35°	2845.8	2825.5	2688.0	2484.4	2423.3
37.5°	2677.8	2652.4	2479.3	2316.4	2240.0
40°	2509.8	2479.3	2290.9	2143.3	2061.8
42.5°	2352.0	2311.3	2128.0	1970.2	1878.6
45°	2184.0	2138.2	1954.9	1792.0	1720.7
47.5°	2016.0	1975.3	1807.3	1639.3	1557.8
50°	1837.8	1802.2	1649.5	1481.5	1394.9
52.5°	1690.2	1634.2	1486.5	1318.5	1247.3
55°	1517.1	1471.3	1333.8	1176.0	1114.9
57.5°	1359.3	1313.5	1186.2	1038.5	987.6
60°	1211.6	1145.5	1038.5	911.3	870.5
62.5°	1048.7	997.8	906.2	799.3	850.2
65°	901.1	850.2	768.7	784.0	651.6
67.5°	738.2	712.7	641.5	570.2	549.8
70°	600.7	570.2	544.7	468.4	448.0
72.5°	478.5	448.0	412.4	371.6	356.4
75°	361.5	336.0	315.6	300.4	330.9
77.5°	249.5	239.3	224.0	208.7	203.6
80°	162.9	157.8	152.7	147.6	142.5
82.5°	96.7	96.7	96.7	96.7	96.7
85°	50.9	56.0	61.1	66.2	71.3
87.5°	30.5	30.5	35.6	40.7	45.8
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)