

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: P545302

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-93-97-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: P545302
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-12-2-LD4-1HI-40-UNV-93-97-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

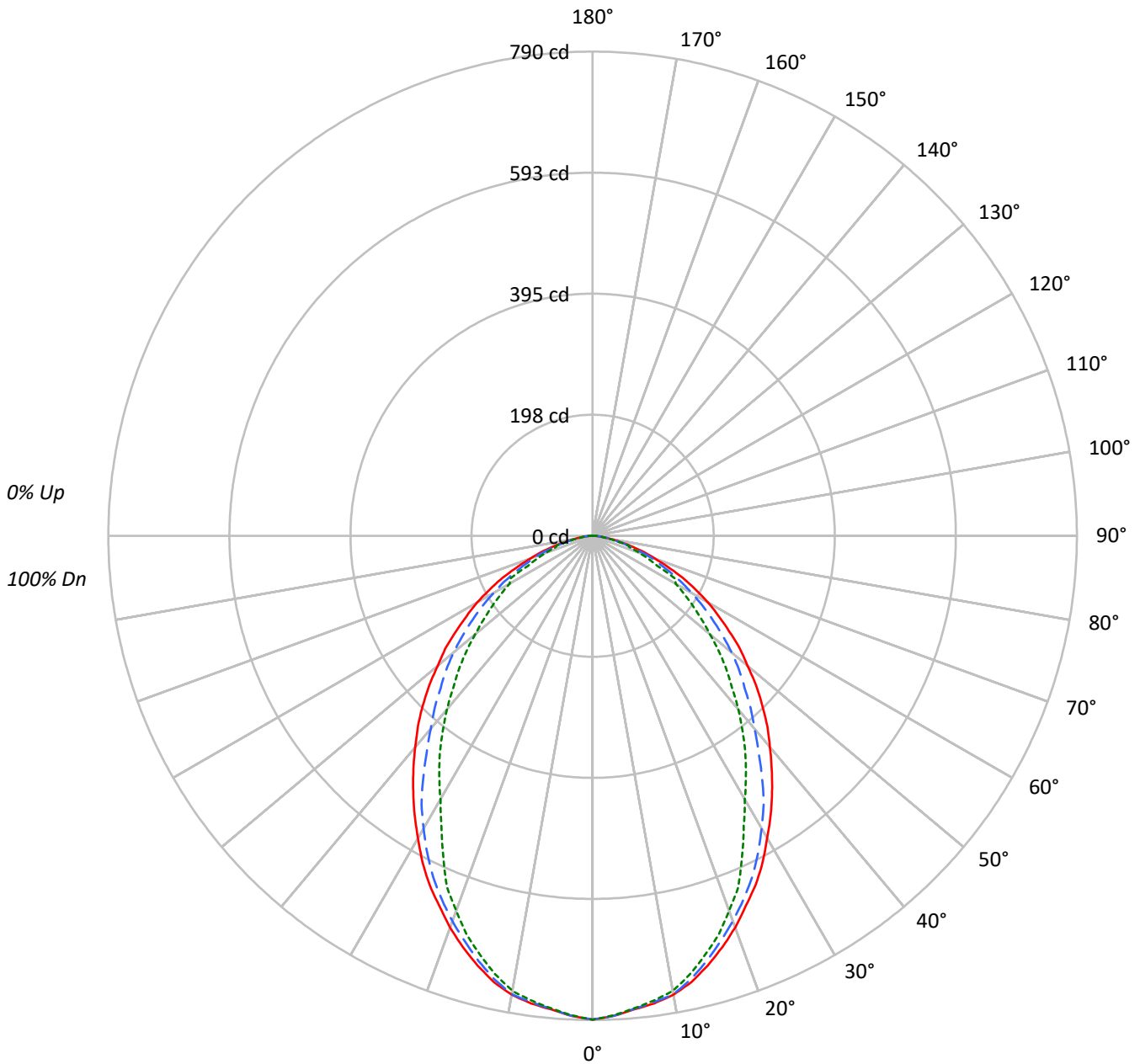
Lumens per Lamp: N/A
Luminaire Lumens: 1550.0 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	4249	4249	4249
5°	4192	4186	4182
10°	4155	4150	4121
15°	4043	4003	3947
20°	3895	3832	3727
25°	3735	3653	3426
30°	3540	3426	3086
35°	3352	3166	2855
40°	3162	2885	2597
45°	2981	2668	2348
50°	2759	2476	2094
55°	2552	2244	1876
60°	2338	2004	1680
65°	2058	1755	1487
70°	1695	1537	1264
75°	1347	1177	1233
80°	905	849	793
85°	562	679	790



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.5	4.7
10°-20°	201.7	13.0
20°-30°	279.2	18.0
30°-40°	297.8	19.2
40°-50°	271.6	17.5
50°-60°	212.8	13.7
60°-70°	138.7	8.9
70°-80°	61.4	4.0
80°-90°	13.2	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°	554.4	35.8
0°-40°	852.2	55.0
0°-60°	1336.6	86.2
0°-90°	1550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	776	775	775	774	774	74
15°	726	726	718	711	708	204
25°	629	625	615	593	577	289
35°	510	507	482	445	434	319
45°	392	383	350	321	308	302
55°	272	264	239	211	200	244
65°	162	152	138	141	117	159
75°	65	60	57	54	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	789.5	789.5	789.5	789.5	789.5
2.5°	784.1	784.1	784.1	783.2	783.2
5°	775.9	774.9	774.9	774.0	774.0
7.5°	769.5	768.6	767.6	766.7	764.9
10°	760.3	760.3	759.4	754.9	754.0
12.5°	745.7	744.8	741.2	734.8	733.0
15°	725.7	725.7	718.4	711.1	708.3
17.5°	703.7	702.8	693.7	686.4	682.8
20°	680.0	678.2	669.1	657.2	650.8
22.5°	653.5	653.5	642.6	627.1	620.7
25°	628.9	625.3	615.2	593.3	576.9
27.5°	600.6	595.1	584.2	553.1	534.0
30°	569.6	566.8	551.3	511.2	496.5
32.5°	540.4	535.8	519.4	477.4	465.5
35°	510.2	506.6	481.9	445.4	434.5
37.5°	480.1	475.6	444.5	415.3	401.6
40°	450.0	444.5	410.7	384.3	369.7
42.5°	421.7	414.4	381.5	353.2	336.8
45°	391.6	383.4	350.5	321.3	308.5
47.5°	361.5	354.2	324.0	293.9	279.3
50°	329.5	323.1	295.7	265.6	250.1
52.5°	303.0	293.0	266.5	236.4	223.6
55°	272.0	263.8	239.1	210.9	199.9
57.5°	243.7	235.5	212.7	186.2	177.1
60°	217.2	205.4	186.2	163.4	156.1
62.5°	188.0	178.9	162.5	143.3	152.4
65°	161.6	152.4	137.8	140.6	116.8
67.5°	132.4	127.8	115.0	102.2	98.6
70°	107.7	102.2	97.7	84.0	80.3
72.5°	85.8	80.3	73.9	66.6	63.9
75°	64.8	60.2	56.6	53.9	59.3
77.5°	44.7	42.9	40.2	37.4	36.5
80°	29.2	28.3	27.4	26.5	25.6
82.5°	17.3	17.3	17.3	17.3	17.3
85°	9.1	10.0	11.0	11.9	12.8
87.5°	5.5	5.5	6.4	7.3	8.2
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)