

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: P545280

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-81-85-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: P545280
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-81-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

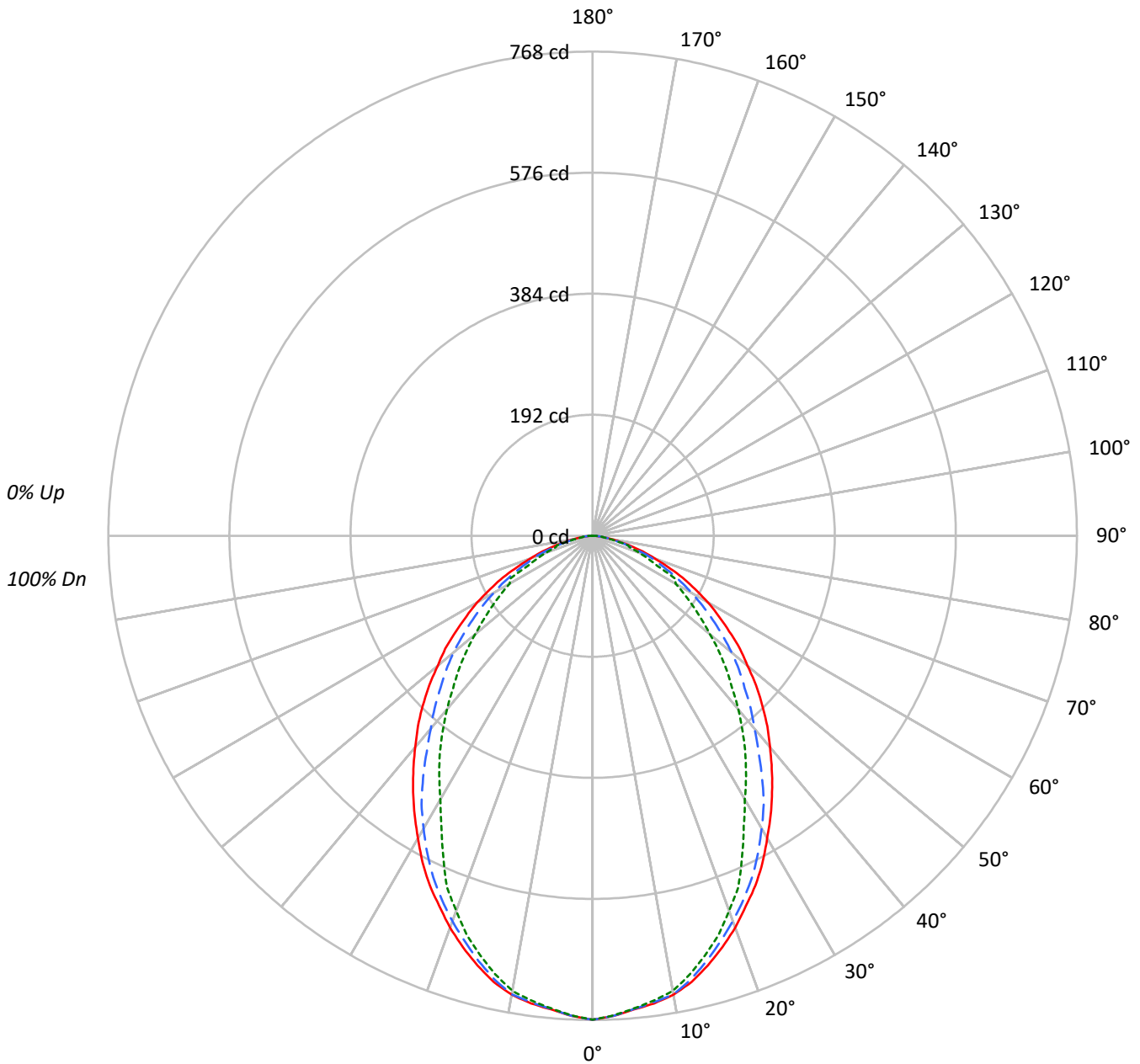
Lumens per Lamp: N/A
Luminaire Lumens: 1507.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545280

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545280

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-85-EDD

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°	4131	4131	4131
5°	4075	4070	4066
10°	4040	4035	4006
15°	3931	3891	3837
20°	3787	3726	3624
25°	3631	3552	3331
30°	3442	3331	3000
35°	3259	3079	2775
40°	3074	2806	2525
45°	2898	2594	2283
50°	2683	2407	2036
55°	2482	2182	1824
60°	2273	1948	1634
65°	2001	1706	1447
70°	1648	1495	1229
75°	1310	1144	1200
80°	880	824	769
85°	550	655	766



TEST NUMBER: P545280

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	4.7
10°-20°	196.1	13.0
20°-30°	271.5	18.0
30°-40°	289.5	19.2
40°-50°	264.1	17.5
50°-60°	206.9	13.7
60°-70°	134.8	8.9
70°-80°	59.7	4.0
80°-90°	12.8	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°	539.1	35.8
0°-40°	828.6	55.0
0°-60°	1299.6	86.2
0°-90°	1507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1507.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	754	753	753	753	753	72
15°	706	706	698	691	689	198
25°	612	608	598	577	561	281
35°	496	492	469	433	422	310
45°	381	373	341	312	300	293
55°	264	256	232	205	194	237
65°	157	148	134	137	114	155
75°	63	59	55	52	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



TEST NUMBER: P545280

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	767.6	767.6	767.6	767.6	767.6
2.5°	762.3	762.3	762.3	761.4	761.4
5°	754.3	753.4	753.4	752.6	752.6
7.5°	748.1	747.2	746.3	745.5	743.7
10°	739.2	739.2	738.4	733.9	733.0
12.5°	725.0	724.2	720.6	714.4	712.6
15°	705.5	705.5	698.4	691.3	688.7
17.5°	684.2	683.3	674.5	667.4	663.8
20°	661.2	659.4	650.5	639.0	632.8
22.5°	635.4	635.4	624.8	609.7	603.5
25°	611.5	607.9	598.1	576.8	560.9
27.5°	583.9	578.6	568.0	537.8	519.2
30°	553.8	551.1	536.0	497.0	482.8
32.5°	525.4	520.9	505.0	464.1	452.6
35°	496.1	492.5	468.6	433.1	422.4
37.5°	466.8	462.4	432.2	403.8	390.5
40°	437.5	432.2	399.4	373.6	359.4
42.5°	410.0	402.9	371.0	343.4	327.5
45°	380.7	372.7	340.8	312.4	300.0
47.5°	351.4	344.3	315.0	285.8	271.6
50°	320.4	314.2	287.5	258.2	243.2
52.5°	294.6	284.9	259.1	229.8	217.4
55°	264.5	256.5	232.5	205.0	194.4
57.5°	236.9	229.0	206.8	181.0	172.2
60°	211.2	199.7	181.0	158.9	151.8
62.5°	182.8	173.9	158.0	139.3	148.2
65°	157.1	148.2	134.0	136.7	113.6
67.5°	128.7	124.2	111.8	99.4	95.8
70°	104.7	99.4	95.0	81.6	78.1
72.5°	83.4	78.1	71.9	64.8	62.1
75°	63.0	58.6	55.0	52.4	57.7
77.5°	43.5	41.7	39.0	36.4	35.5
80°	28.4	27.5	26.6	25.7	24.8
82.5°	16.9	16.9	16.9	16.9	16.9
85°	8.9	9.8	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
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)