

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: P545247

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-81-84-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: P545247
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-35-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC 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

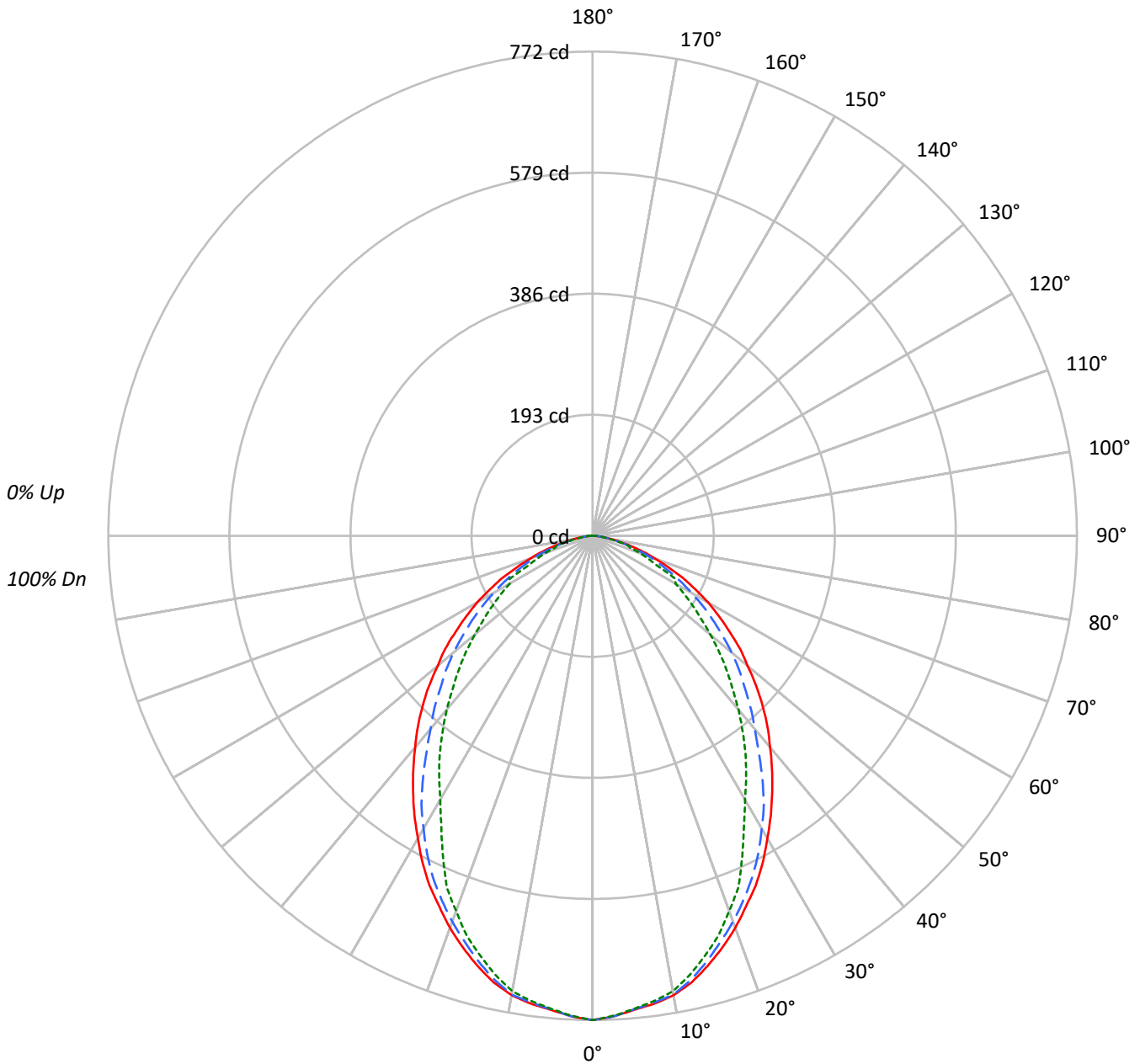
Lumens per Lamp: N/A
Luminaire Lumens: 1516.0 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P545247

CATALOG NUMBER: FMR-12-2-LD4-1HI-35-UNV-81-84-EDD

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°	4156	4156	4156
5°	4099	4095	4090
10°	4064	4059	4030
15°	3954	3915	3860
20°	3809	3748	3645
25°	3653	3573	3350
30°	3462	3351	3018
35°	3279	3097	2792
40°	3092	2822	2540
45°	2915	2609	2297
50°	2699	2422	2048
55°	2496	2195	1834
60°	2287	1960	1644
65°	2012	1717	1456
70°	1657	1503	1237
75°	1318	1152	1206
80°	886	831	775
85°	550	661	772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.9	4.7
10°-20°	197.3	13.0
20°-30°	273.1	18.0
30°-40°	291.2	19.2
40°-50°	265.7	17.5
50°-60°	208.1	13.7
60°-70°	135.7	8.9
70°-80°	60.1	4.0
80°-90°	12.9	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°	542.3	35.8
0°-40°	833.5	55.0
0°-60°	1307.3	86.2
0°-90°	1516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	759	758	758	757	757	72
15°	710	710	703	696	693	200
25°	615	612	602	580	564	282
35°	499	496	471	436	425	312
45°	383	375	343	314	302	295
55°	266	258	234	206	196	239
65°	158	149	135	138	114	156
75°	63	59	55	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	772.2	772.2	772.2	772.2	772.2
2.5°	766.9	766.9	766.9	766.0	766.0
5°	758.8	757.9	757.9	757.1	757.1
7.5°	752.6	751.7	750.8	749.9	748.1
10°	743.7	743.7	742.8	738.3	737.4
12.5°	729.4	728.5	724.9	718.7	716.9
15°	709.7	709.7	702.6	695.5	692.8
17.5°	688.3	687.4	678.5	671.3	667.8
20°	665.1	663.3	654.4	642.8	636.5
22.5°	639.2	639.2	628.5	613.3	607.1
25°	615.1	611.5	601.7	580.3	564.2
27.5°	587.4	582.1	571.4	541.0	522.3
30°	557.1	554.4	539.2	499.9	485.7
32.5°	528.5	524.0	508.0	466.9	455.3
35°	499.0	495.5	471.4	435.7	424.9
37.5°	469.6	465.1	434.8	406.2	392.8
40°	440.1	434.8	401.7	375.8	361.6
42.5°	412.5	405.3	373.2	345.5	329.4
45°	383.0	375.0	342.8	314.2	301.8
47.5°	353.5	346.4	316.9	287.5	273.2
50°	322.3	316.0	289.3	259.8	244.6
52.5°	296.4	286.6	260.7	231.2	218.7
55°	266.0	258.0	233.9	206.2	195.5
57.5°	238.4	230.3	208.0	182.1	173.2
60°	212.5	200.9	182.1	159.8	152.7
62.5°	183.9	175.0	158.9	140.2	149.1
65°	158.0	149.1	134.8	137.5	114.3
67.5°	129.4	125.0	112.5	100.0	96.4
70°	105.3	100.0	95.5	82.1	78.6
72.5°	83.9	78.6	72.3	65.2	62.5
75°	63.4	58.9	55.4	52.7	58.0
77.5°	43.7	42.0	39.3	36.6	35.7
80°	28.6	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	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)