

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: P544967

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-82-84-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: P544967  
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-12-1-LD4-2HI-35-UNV-82-84-EDD  
Description: 1X1 FMR TROFFER WITH .187 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**

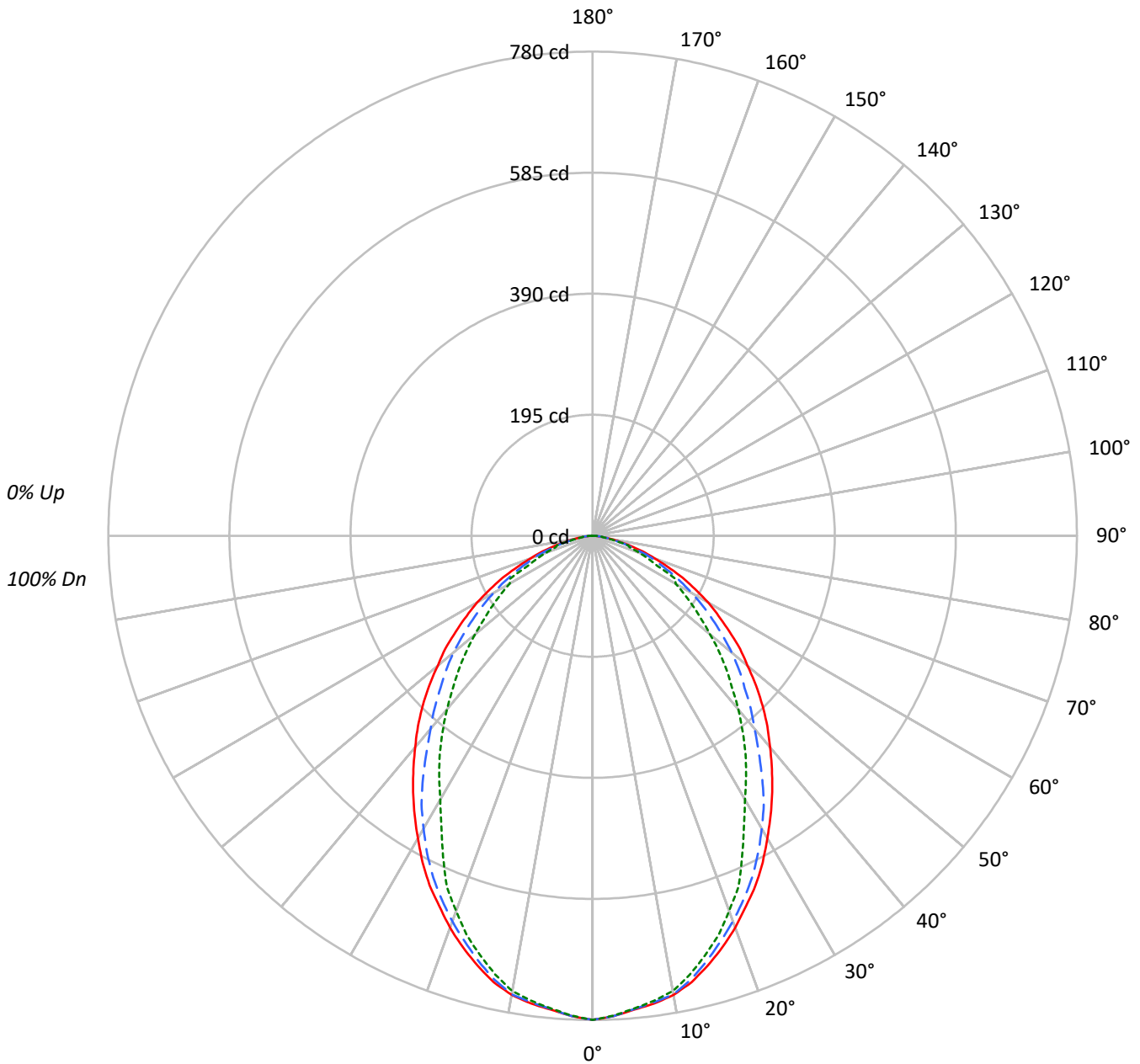
Lumens per Lamp: N/A  
Luminaire Lumens: 1531.0 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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

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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°	8395	8395	8395
5°	8280	8270	8260
10°	8208	8199	8140
15°	7988	7906	7796
20°	7694	7570	7363
25°	7378	7217	6767
30°	6993	6769	6096
35°	6623	6255	5640
40°	6246	5701	5130
45°	5888	5270	4638
50°	5451	4891	4136
55°	5043	4433	3704
60°	4620	3959	3320
65°	4065	3466	2939
70°	3349	3037	2496
75°	2662	2325	2437
80°	1791	1674	1562
85°	1112	1334	1556



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.6	4.7
10°-20°	199.2	13.0
20°-30°	275.8	18.0
30°-40°	294.1	19.2
40°-50°	268.3	17.5
50°-60°	210.2	13.7
60°-70°	137.0	8.9
70°-80°	60.7	4.0
80°-90°	13.0	0.8
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°	547.6	35.8
0°-40°	841.8	55.0
0°-60°	1320.3	86.2
0°-90°	1531.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1531.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	766	765	765	764	764	73
15°	717	717	710	702	700	202
25°	621	618	608	586	570	285
35°	504	500	476	440	429	315
45°	387	379	346	317	305	298
55°	269	261	236	208	197	241
65°	160	151	136	139	115	157
75°	64	60	56	53	59	69
85°	9	10	11	12	13	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	779.9	779.9	779.9	779.9	779.9
2.5°	774.5	774.5	774.5	773.6	773.6
5°	766.3	765.4	765.4	764.5	764.5
7.5°	760.0	759.1	758.2	757.3	755.5
10°	751.0	751.0	750.1	745.6	744.7
12.5°	736.6	735.7	732.1	725.8	724.0
15°	716.8	716.8	709.5	702.3	699.6
17.5°	695.1	694.2	685.2	678.0	674.4
20°	671.7	669.9	660.9	649.1	642.8
22.5°	645.5	645.5	634.7	619.4	613.1
25°	621.2	617.6	607.7	586.0	569.8
27.5°	593.2	587.8	577.0	546.4	527.4
30°	562.6	559.9	544.6	504.9	490.5
32.5°	533.7	529.2	513.0	471.5	459.8
35°	504.0	500.4	476.0	440.0	429.2
37.5°	474.2	469.7	439.1	410.2	396.7
40°	444.5	439.1	405.7	379.6	365.1
42.5°	416.5	409.3	376.9	348.9	332.7
45°	386.8	378.7	346.2	317.4	304.7
47.5°	357.0	349.8	320.1	290.3	275.9
50°	325.5	319.2	292.1	262.4	247.0
52.5°	299.3	289.4	263.3	233.5	220.9
55°	268.7	260.6	236.2	208.3	197.4
57.5°	240.7	232.6	210.1	183.9	174.9
60°	214.6	202.9	183.9	161.4	154.2
62.5°	185.7	176.7	160.5	141.5	150.6
65°	159.6	150.6	136.1	138.8	115.4
67.5°	130.7	126.2	113.6	101.0	97.4
70°	106.4	101.0	96.5	82.9	79.3
72.5°	84.7	79.3	73.0	65.8	63.1
75°	64.0	59.5	55.9	53.2	58.6
77.5°	44.2	42.4	39.7	37.0	36.1
80°	28.9	27.9	27.0	26.1	25.2
82.5°	17.1	17.1	17.1	17.1	17.1
85°	9.0	9.9	10.8	11.7	12.6
87.5°	5.4	5.4	6.3	7.2	8.1
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)