

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: P546527

Luminaire Tested: **FMR-24-4-LD4-1LO-40-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: P546527
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-LD4-1LO-40-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

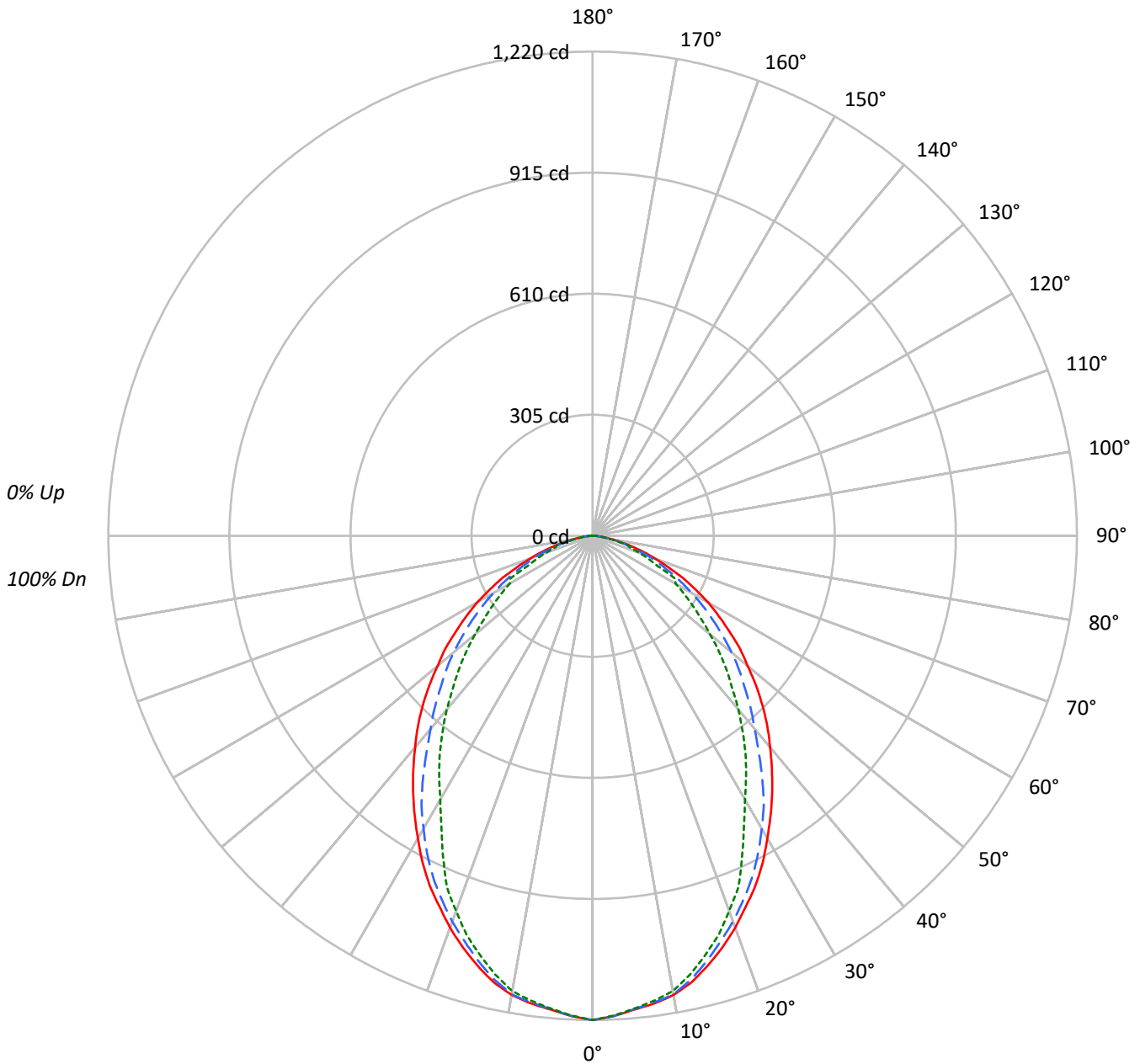
Lumens per Lamp: N/A
Luminaire Lumens: 2395.0 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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				20				
RC	80				70				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			100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1641	1641	1641
5°	1619	1617	1615
10°	1605	1603	1592
15°	1562	1546	1525
20°	1504	1480	1440
25°	1443	1411	1323
30°	1367	1324	1192
35°	1295	1223	1103
40°	1221	1115	1003
45°	1151	1031	907
50°	1066	957	809
55°	986	867	725
60°	903	774	649
65°	795	678	575
70°	655	594	488
75°	520	454	477
80°	349	328	306
85°	218	261	304



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.6	4.7
10°-20°	311.7	13.0
20°-30°	431.5	18.0
30°-40°	460.1	19.2
40°-50°	419.7	17.5
50°-60°	328.8	13.7
60°-70°	214.3	8.9
70°-80°	94.9	4.0
80°-90°	20.4	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°	856.7	35.8
0°-40°	1316.8	55.0
0°-60°	2065.3	86.2
0°-90°	2395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1220	1220	1220	1220	1220	
5°	1199	1197	1197	1196	1196	114
15°	1121	1121	1110	1099	1094	315
25°	972	966	951	917	891	446
35°	788	783	745	688	671	493
45°	605	592	542	496	477	466
55°	420	408	370	326	309	377
65°	250	236	213	217	180	246
75°	100	93	87	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1220.0	1220.0	1220.0	1220.0	1220.0
2.5°	1211.5	1211.5	1211.5	1210.1	1210.1
5°	1198.8	1197.4	1197.4	1196.0	1196.0
7.5°	1189.0	1187.5	1186.1	1184.7	1181.9
10°	1174.8	1174.8	1173.4	1166.4	1165.0
12.5°	1152.3	1150.9	1145.2	1135.4	1132.5
15°	1121.3	1121.3	1110.0	1098.7	1094.5
17.5°	1087.4	1086.0	1071.9	1060.6	1055.0
20°	1050.7	1047.9	1033.8	1015.5	1005.6
22.5°	1009.8	1009.8	992.9	968.9	959.1
25°	971.8	966.1	950.6	916.7	891.4
27.5°	928.0	919.6	902.6	854.7	825.1
30°	880.1	875.8	851.9	789.8	767.2
32.5°	834.9	827.9	802.5	737.6	719.3
35°	788.4	782.8	744.7	688.3	671.3
37.5°	741.9	734.8	686.9	641.7	620.6
40°	695.3	686.9	634.7	593.8	571.2
42.5°	651.6	640.3	589.5	545.8	520.4
45°	605.1	592.4	541.6	496.5	476.7
47.5°	558.5	547.2	500.7	454.1	431.6
50°	509.1	499.3	457.0	410.4	386.4
52.5°	468.2	452.7	411.8	365.3	345.5
55°	420.3	407.6	369.5	325.8	308.9
57.5°	376.6	363.9	328.6	287.7	273.6
60°	335.7	317.3	287.7	252.5	241.2
62.5°	290.5	276.4	251.0	221.4	235.5
65°	249.6	235.5	213.0	217.2	180.5
67.5°	204.5	197.5	177.7	158.0	152.3
70°	166.4	158.0	150.9	129.8	124.1
72.5°	132.6	124.1	114.2	103.0	98.7
75°	100.1	93.1	87.4	83.2	91.7
77.5°	69.1	66.3	62.1	57.8	56.4
80°	45.1	43.7	42.3	40.9	39.5
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.3	19.7
87.5°	8.5	8.5	9.9	11.3	12.7
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)