

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: P547252

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-93-94-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: P547252
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-LD4-3STD-50-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

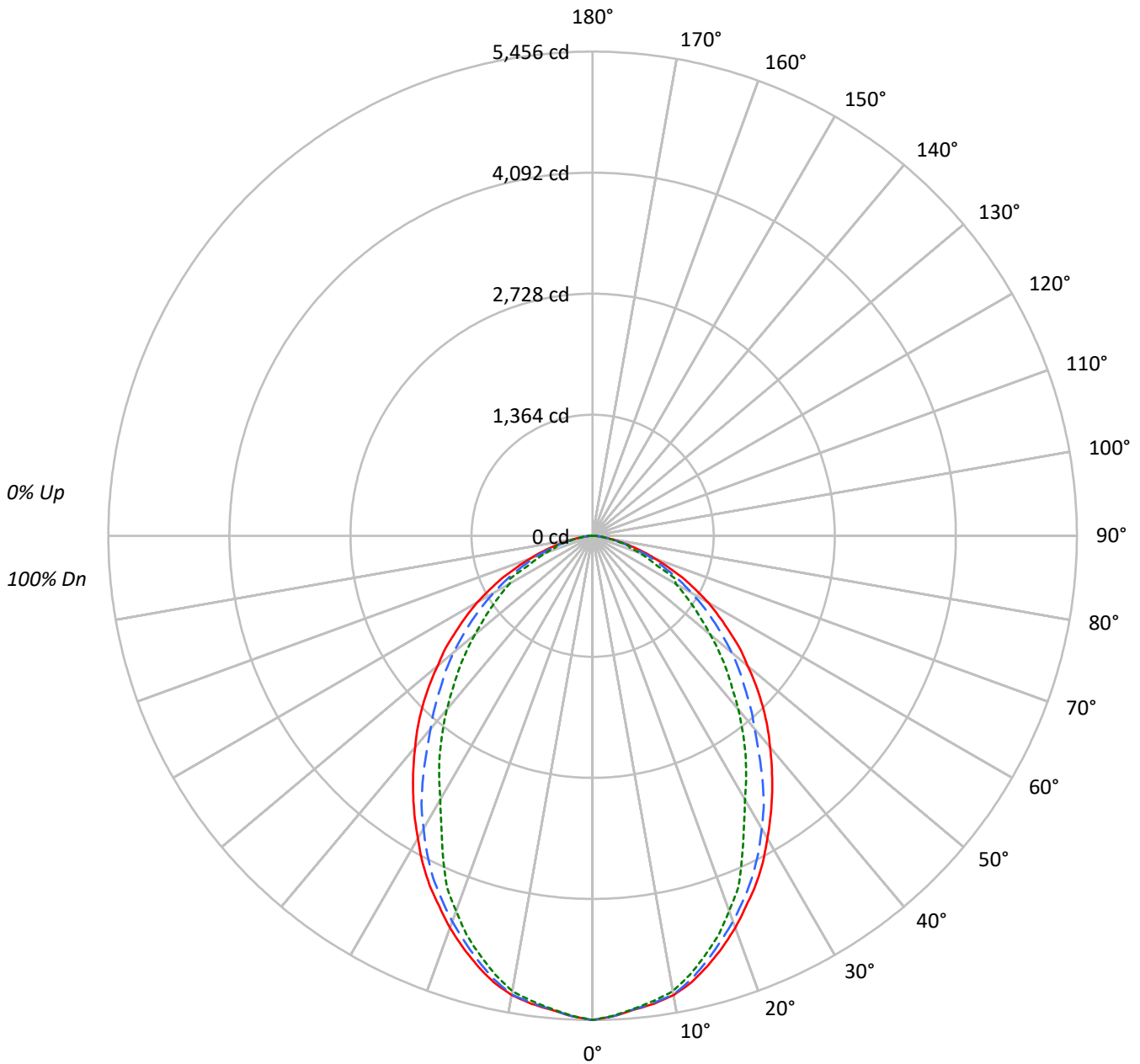
Lumens per Lamp: N/A
Luminaire Lumens: 10712.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	7342	7342	7342
5°	7242	7233	7225
10°	7179	7171	7119
15°	6986	6915	6819
20°	6729	6621	6440
25°	6452	6312	5919
30°	6116	5920	5331
35°	5792	5471	4932
40°	5462	4986	4487
45°	5149	4609	4057
50°	4767	4278	3618
55°	4410	3877	3241
60°	4040	3463	2903
65°	3555	3032	2571
70°	2928	2655	2184
75°	2328	2033	2131
80°	1564	1466	1368
85°	974	1169	1363



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	507.9	4.7
10°-20°	1394.0	13.0
20°-30°	1929.9	18.0
30°-40°	2057.8	19.2
40°-50°	1877.3	17.5
50°-60°	1470.7	13.7
60°-70°	958.5	8.9
70°-80°	424.7	4.0
80°-90°	91.2	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°	3831.8	35.8
0°-40°	5889.6	55.0
0°-60°	9237.6	86.2
0°-90°	10712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10712.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5456	5456	5456	5456	5456	
5°	5362	5356	5356	5349	5349	509
15°	5015	5015	4964	4914	4895	1410
25°	4346	4321	4252	4100	3987	1995
35°	3526	3501	3331	3078	3003	2205
45°	2706	2649	2422	2220	2132	2085
55°	1880	1823	1653	1457	1382	1686
65°	1116	1054	952	972	807	1100
75°	448	416	391	372	410	480
85°	63	69	76	82	88	88
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5456.5	5456.5	5456.5	5456.5	5456.5
2.5°	5418.7	5418.7	5418.7	5412.4	5412.4
5°	5361.9	5355.6	5355.6	5349.3	5349.3
7.5°	5317.8	5311.5	5305.2	5298.8	5286.2
10°	5254.7	5254.7	5248.4	5216.8	5210.5
12.5°	5153.8	5147.5	5122.2	5078.1	5065.4
15°	5015.0	5015.0	4964.5	4914.0	4895.1
17.5°	4863.6	4857.3	4794.2	4743.7	4718.5
20°	4699.6	4687.0	4623.9	4541.9	4497.7
22.5°	4516.6	4516.6	4440.9	4333.7	4289.5
25°	4346.3	4321.1	4251.7	4100.3	3986.8
27.5°	4150.8	4112.9	4037.2	3822.7	3690.3
30°	3936.3	3917.4	3810.1	3532.6	3431.6
32.5°	3734.4	3702.9	3589.3	3299.2	3217.2
35°	3526.3	3501.0	3330.7	3078.4	3002.7
37.5°	3318.1	3286.5	3072.1	2870.2	2775.6
40°	3109.9	3072.1	2838.7	2655.7	2554.8
42.5°	2914.4	2863.9	2636.8	2441.3	2327.7
45°	2706.2	2649.4	2422.3	2220.5	2132.2
47.5°	2498.0	2447.6	2239.4	2031.2	1930.3
50°	2277.2	2233.1	2043.8	1835.7	1728.4
52.5°	2094.3	2024.9	1842.0	1633.8	1545.5
55°	1879.8	1823.1	1652.7	1457.2	1381.5
57.5°	1684.3	1627.5	1469.8	1286.9	1223.8
60°	1501.3	1419.3	1286.9	1129.2	1078.7
62.5°	1299.5	1236.4	1122.9	990.4	1053.5
65°	1116.5	1053.5	952.5	971.5	807.4
67.5°	914.7	883.1	794.8	706.5	681.3
70°	744.4	706.5	675.0	580.3	555.1
72.5°	593.0	555.1	511.0	460.5	441.6
75°	447.9	416.3	391.1	372.2	410.0
77.5°	309.1	296.5	277.6	258.6	252.3
80°	201.9	195.6	189.2	182.9	176.6
82.5°	119.9	119.9	119.9	119.9	119.9
85°	63.1	69.4	75.7	82.0	88.3
87.5°	37.8	37.8	44.2	50.5	56.8
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)