

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: P589589

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-80-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589589
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-4HI-40-UNV-80-84-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

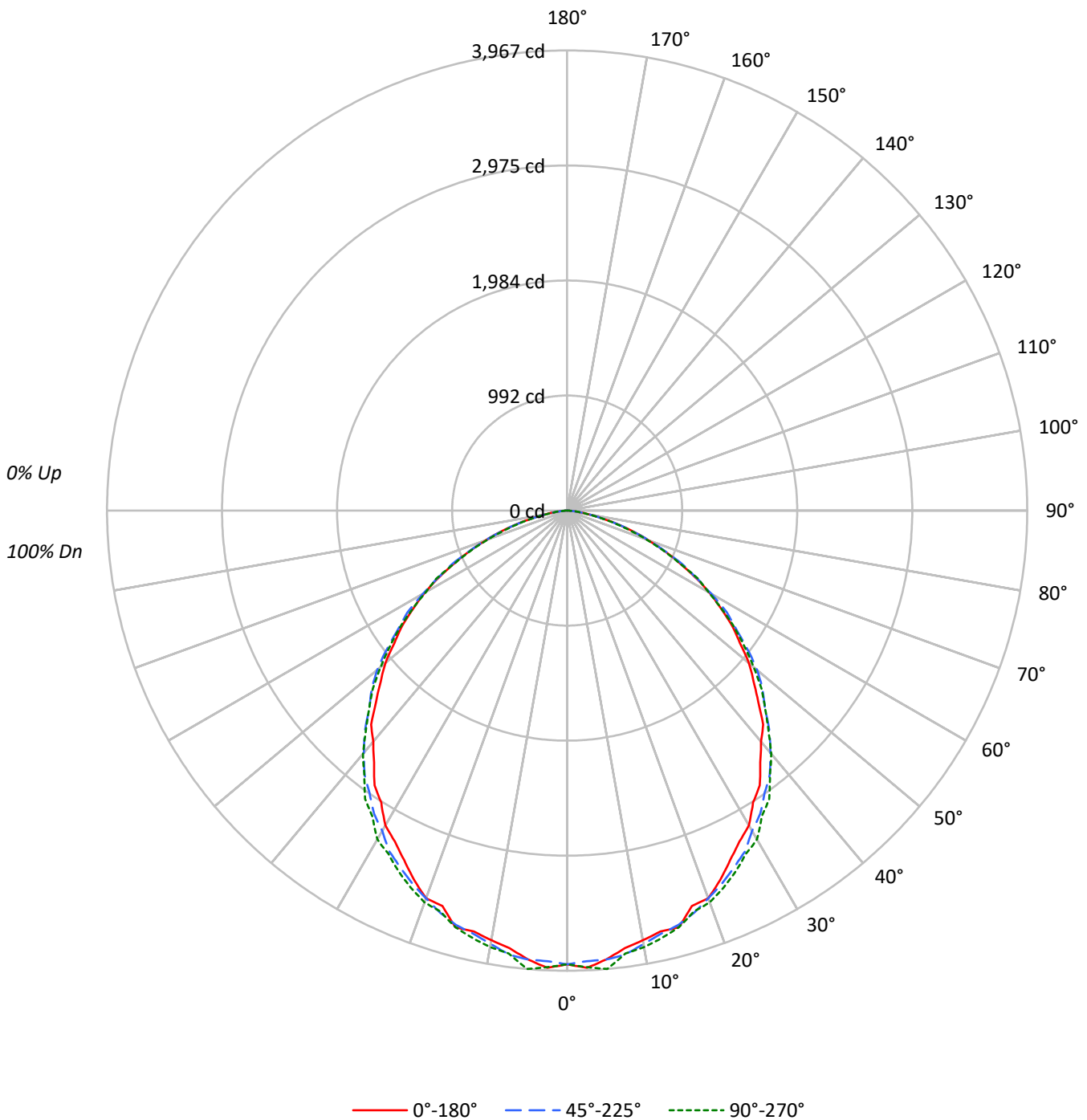
Lumens per Lamp: N/A
Luminaire Lumens: 9858.0 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10525	10525	10525
5°	10491	10495	10716
10°	10278	10368	10441
15°	10359	10303	10361
20°	10184	10184	10293
25°	9871	10087	10198
30°	9736	9907	10170
35°	9506	9755	9974
40°	9137	9576	9619
45°	8860	9175	9189
50°	8569	8956	8785
55°	8165	8323	8264
60°	7635	7711	7572
65°	6807	6981	6760
70°	5841	5861	5698
75°	4626	4615	4436
80°	3099	3013	2896
85°	1683	1667	1559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.9	3.7
10°-20°	1042.8	10.6
20°-30°	1562.3	15.8
30°-40°	1851.6	18.8
40°-50°	1855.0	18.8
50°-60°	1574.6	16.0
60°-70°	1061.6	10.8
70°-80°	466.5	4.7
80°-90°	75.8	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°	2972.9	30.2
0°-40°	4824.5	48.9
0°-60°	8254.1	83.7
0°-90°	9858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3911	3911	3911	3911	3911	
5°	3884	3874	3885	3874	3967	366
15°	3718	3676	3698	3718	3719	1036
25°	3325	3343	3397	3442	3435	1537
35°	2894	2902	2970	3038	3036	1797
45°	2328	2372	2411	2473	2414	1801
55°	1740	1729	1774	1762	1762	1548
65°	1069	1055	1096	1054	1062	1063
75°	445	436	444	413	427	477
85°	54	53	54	52	50	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3911.4	3911.4	3911.4	3911.4	3911.4
2.5°	3945.2	3915.4	3887.7	3920.0	3939.7
5°	3883.6	3874.5	3885.1	3873.5	3967.0
7.5°	3803.8	3838.7	3858.9	3846.3	3851.8
10°	3761.4	3749.3	3794.2	3825.6	3821.0
12.5°	3716.0	3734.1	3736.7	3770.5	3773.5
15°	3718.5	3675.6	3698.3	3717.5	3719.0
17.5°	3574.0	3620.5	3636.2	3680.1	3625.6
20°	3556.4	3522.5	3556.4	3601.3	3594.3
22.5°	3447.8	3409.9	3482.6	3522.5	3520.0
25°	3324.6	3342.7	3397.3	3441.7	3434.7
27.5°	3216.5	3237.7	3315.5	3376.6	3337.2
30°	3133.2	3122.6	3188.2	3242.8	3273.1
32.5°	2984.2	3022.6	3099.3	3153.4	3124.6
35°	2893.8	2902.4	2969.5	3038.2	3036.2
37.5°	2735.7	2775.6	2870.0	2889.2	2871.6
40°	2600.9	2640.8	2726.1	2746.8	2738.2
42.5°	2501.4	2508.5	2581.7	2605.4	2567.5
45°	2328.2	2371.6	2411.0	2473.1	2414.5
47.5°	2180.7	2200.9	2285.7	2302.4	2271.6
50°	2046.9	2053.9	2139.3	2118.6	2098.4
52.5°	1878.7	1908.5	1956.5	1952.4	1928.7
55°	1740.3	1728.7	1774.1	1762.0	1761.5
57.5°	1574.2	1594.4	1631.7	1612.5	1581.7
60°	1418.6	1419.1	1432.8	1411.0	1407.0
62.5°	1245.4	1251.4	1254.5	1227.7	1271.1
65°	1069.1	1055.0	1096.4	1054.5	1061.6
67.5°	907.0	914.1	910.1	883.8	893.9
70°	742.4	751.5	744.9	715.1	724.2
72.5°	591.9	580.8	587.8	550.5	567.6
75°	444.9	435.8	443.9	412.6	426.7
77.5°	303.0	310.1	305.0	288.4	298.0
80°	200.0	194.4	194.4	184.8	186.9
82.5°	116.7	111.1	109.6	106.6	111.1
85°	54.5	53.0	54.0	52.5	50.5
87.5°	19.7	20.2	20.2	19.2	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)