

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: P589105

Luminaire Tested: **FMR-24-2-LD4-2LO-35-UNV-93-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589105
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-LD4-2LO-35-UNV-93-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

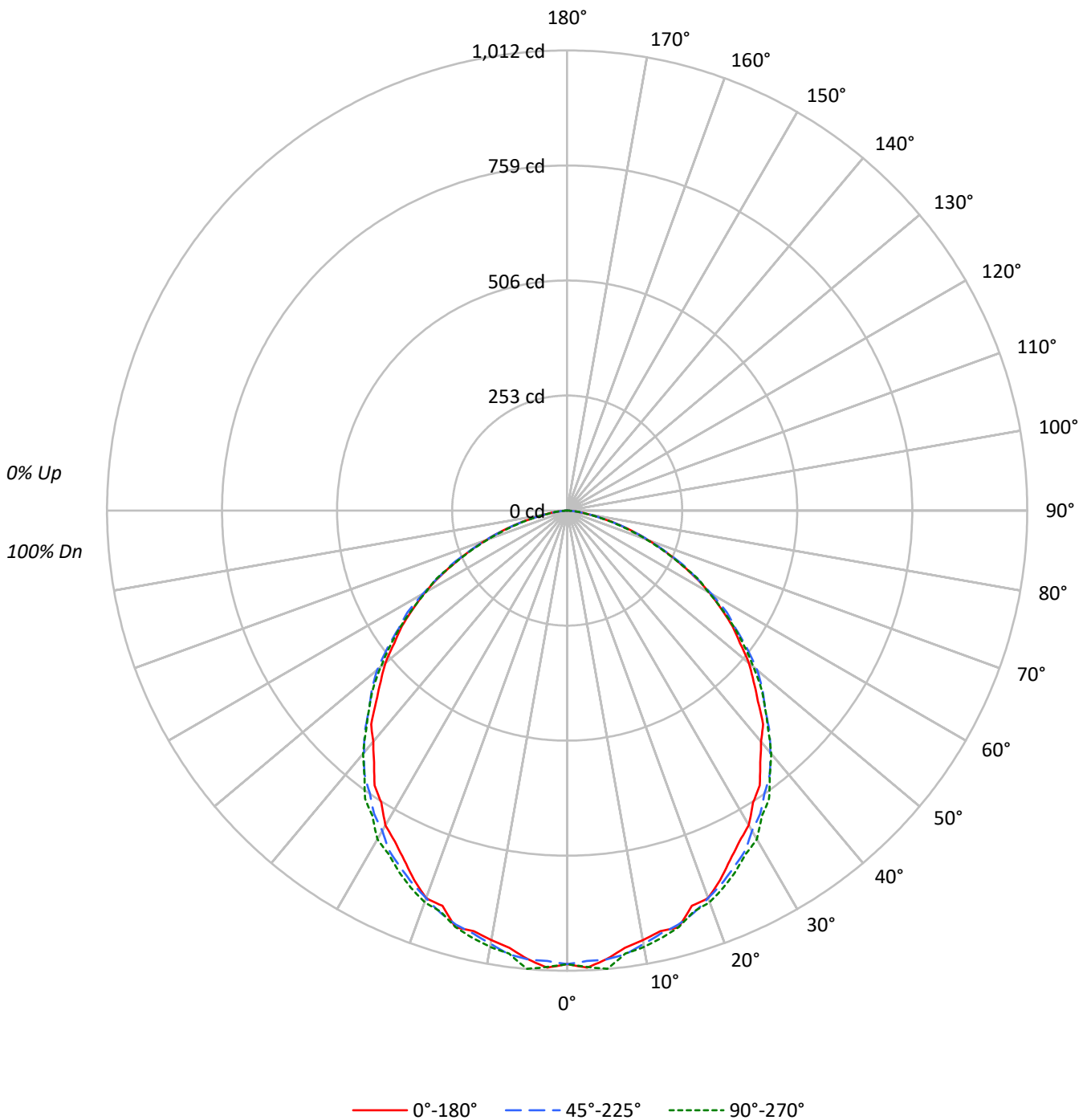
Lumens per Lamp: N/A
Luminaire Lumens: 2514.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2684	2684	2684
5°	2675	2676	2733
10°	2621	2644	2663
15°	2642	2627	2642
20°	2597	2597	2625
25°	2517	2572	2601
30°	2483	2527	2594
35°	2424	2488	2544
40°	2330	2442	2453
45°	2259	2340	2343
50°	2185	2284	2240
55°	2082	2122	2107
60°	1947	1967	1931
65°	1736	1780	1724
70°	1489	1495	1453
75°	1180	1177	1131
80°	790	769	739
85°	429	426	398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.8	3.7
10°-20°	265.9	10.6
20°-30°	398.4	15.8
30°-40°	472.2	18.8
40°-50°	473.1	18.8
50°-60°	401.6	16.0
60°-70°	270.7	10.8
70°-80°	119.0	4.7
80°-90°	19.3	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°	758.2	30.2
0°-40°	1230.4	48.9
0°-60°	2105.0	83.7
0°-90°	2514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	990	988	991	988	1012	93
15°	948	937	943	948	948	264
25°	848	852	866	878	876	392
35°	738	740	757	775	774	458
45°	594	605	615	631	616	459
55°	444	441	452	449	449	395
65°	273	269	280	269	271	271
75°	114	111	113	105	109	122
85°	14	14	14	13	13	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	997.5	997.5	997.5	997.5	997.5
2.5°	1006.1	998.5	991.4	999.7	1004.7
5°	990.4	988.1	990.8	987.8	1011.7
7.5°	970.1	978.9	984.1	980.9	982.3
10°	959.2	956.1	967.6	975.6	974.4
12.5°	947.6	952.3	952.9	961.6	962.3
15°	948.3	937.3	943.1	948.0	948.4
17.5°	911.5	923.3	927.3	938.5	924.6
20°	907.0	898.3	907.0	918.4	916.6
22.5°	879.3	869.6	888.1	898.3	897.7
25°	847.8	852.5	866.4	877.7	875.9
27.5°	820.3	825.7	845.5	861.1	851.1
30°	799.0	796.3	813.1	827.0	834.7
32.5°	761.0	770.8	790.4	804.2	796.8
35°	738.0	740.2	757.3	774.8	774.3
37.5°	697.7	707.8	731.9	736.8	732.3
40°	663.3	673.5	695.2	700.5	698.3
42.5°	637.9	639.7	658.4	664.4	654.8
45°	593.7	604.8	614.9	630.7	615.8
47.5°	556.1	561.3	582.9	587.2	579.3
50°	522.0	523.8	545.6	540.3	535.1
52.5°	479.1	486.7	498.9	497.9	491.9
55°	443.8	440.9	452.4	449.4	449.2
57.5°	401.4	406.6	416.1	411.2	403.4
60°	361.8	361.9	365.4	359.8	358.8
62.5°	317.6	319.1	319.9	313.1	324.2
65°	272.7	269.0	279.6	268.9	270.7
67.5°	231.3	233.1	232.1	225.4	228.0
70°	189.3	191.6	190.0	182.4	184.7
72.5°	150.9	148.1	149.9	140.4	144.8
75°	113.5	111.1	113.2	105.2	108.8
77.5°	77.3	79.1	77.8	73.5	76.0
80°	51.0	49.6	49.6	47.1	47.7
82.5°	29.8	28.3	27.9	27.2	28.3
85°	13.9	13.5	13.8	13.4	12.9
87.5°	5.0	5.2	5.2	4.9	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)