

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P590240

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590240
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
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2LO-35-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

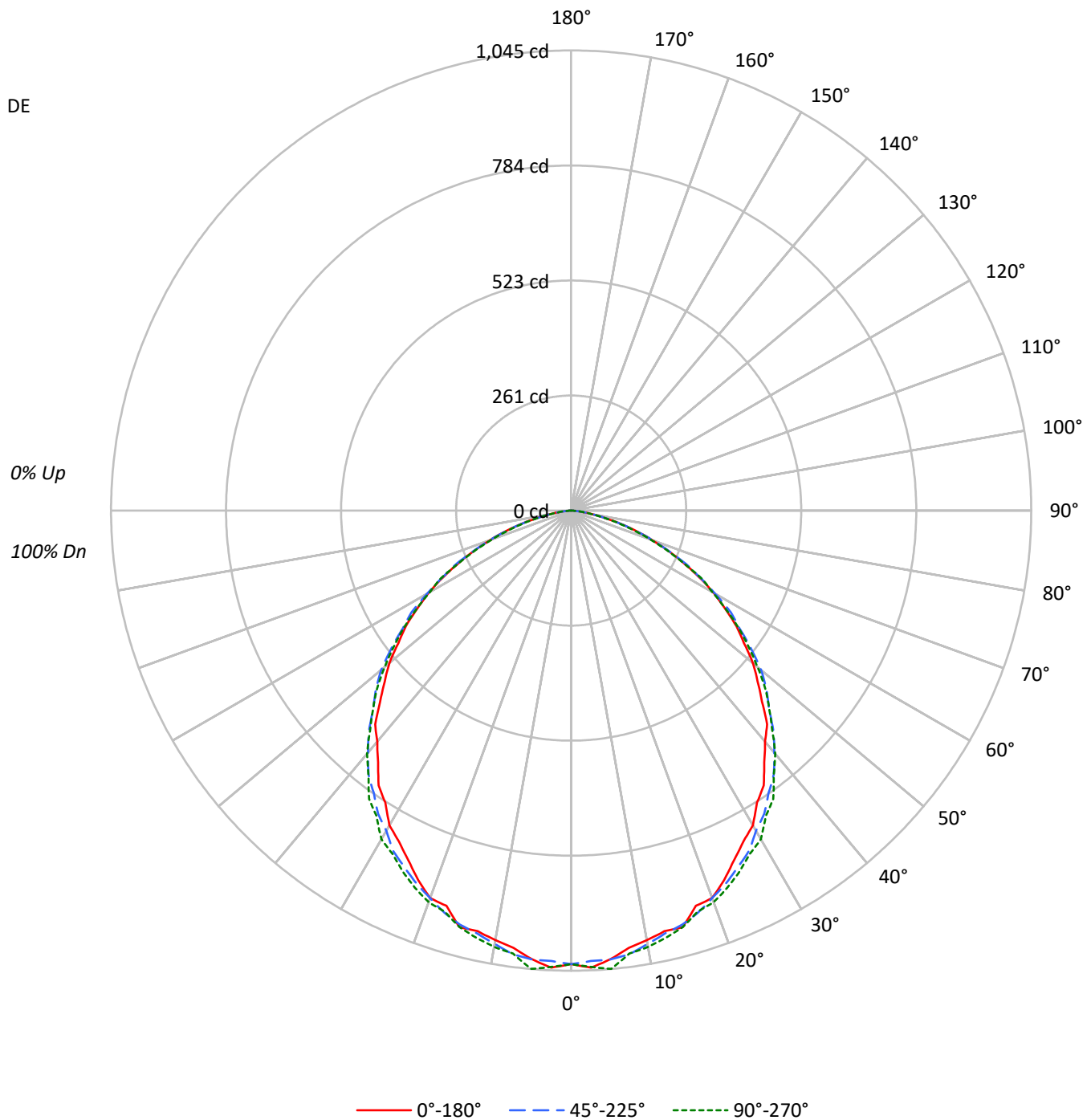
Lumens per Lamp: N/A
Luminaire Lumens: 2596.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V):
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: 24 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									70									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°	2772	2772	2772
5°	2763	2764	2822
10°	2707	2730	2749
15°	2728	2713	2729
20°	2682	2682	2710
25°	2600	2656	2686
30°	2564	2609	2678
35°	2503	2569	2627
40°	2406	2522	2533
45°	2333	2416	2420
50°	2256	2359	2313
55°	2150	2192	2176
60°	2011	2031	1994
65°	1792	1838	1780
70°	1538	1544	1500
75°	1219	1215	1169
80°	817	793	762
85°	445	438	411

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2479 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	3.7
10°-20°	274.6	10.6
20°-30°	411.4	15.8
30°-40°	487.6	18.8
40°-50°	488.5	18.8
50°-60°	414.6	16.0
60°-70°	279.6	10.8
70°-80°	122.8	4.7
80°-90°	20.0	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°	782.9	30.2
0°-40°	1270.5	48.9
0°-60°	2173.6	83.7
0°-90°	2596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2596.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1023	1020	1023	1020	1045	96
15°	979	968	974	979	979	273
25°	876	880	895	906	904	405
35°	762	764	782	800	800	473
45°	613	624	635	651	636	474
55°	458	455	467	464	464	408
65°	282	278	289	278	280	280
75°	117	115	117	109	112	126
85°	14	14	14	14	13	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1030.0	1030.0	1030.0	1030.0	1030.0
2.5°	1038.9	1031.1	1023.8	1032.3	1037.5
5°	1022.7	1020.3	1023.1	1020.1	1044.7
7.5°	1001.7	1010.9	1016.2	1012.9	1014.3
10°	990.5	987.3	999.2	1007.4	1006.2
12.5°	978.6	983.3	984.0	992.9	993.7
15°	979.2	967.9	973.9	979.0	979.4
17.5°	941.2	953.4	957.5	969.1	954.8
20°	936.5	927.6	936.5	948.4	946.5
22.5°	907.9	898.0	917.1	927.6	927.0
25°	875.5	880.3	894.6	906.3	904.5
27.5°	847.0	852.6	873.1	889.2	878.8
30°	825.1	822.3	839.6	853.9	861.9
32.5°	785.9	796.0	816.2	830.4	822.8
35°	762.0	764.3	782.0	800.1	799.6
37.5°	720.4	730.9	755.8	760.9	756.2
40°	684.9	695.4	717.9	723.3	721.1
42.5°	658.7	660.6	679.9	686.1	676.1
45°	613.1	624.5	634.9	651.3	635.8
47.5°	574.3	579.6	601.9	606.3	598.2
50°	539.0	540.9	563.4	557.9	552.6
52.5°	494.7	502.6	515.2	514.1	507.9
55°	458.3	455.2	467.2	464.0	463.9
57.5°	414.5	419.9	429.7	424.6	416.5
60°	373.6	373.7	377.3	371.6	370.5
62.5°	328.0	329.6	330.4	323.3	334.7
65°	281.5	277.8	288.7	277.7	279.6
67.5°	238.9	240.7	239.7	232.7	235.4
70°	195.5	197.9	196.2	188.3	190.7
72.5°	155.9	152.9	154.8	145.0	149.5
75°	117.2	114.8	116.9	108.7	112.4
77.5°	79.8	81.7	80.3	75.9	78.5
80°	52.7	51.2	51.2	48.7	49.2
82.5°	30.7	29.3	28.9	28.1	29.3
85°	14.4	14.0	14.2	13.8	13.3
87.5°	5.2	5.3	5.3	5.1	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)