

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: P560515

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2LO-50-UNV-81-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

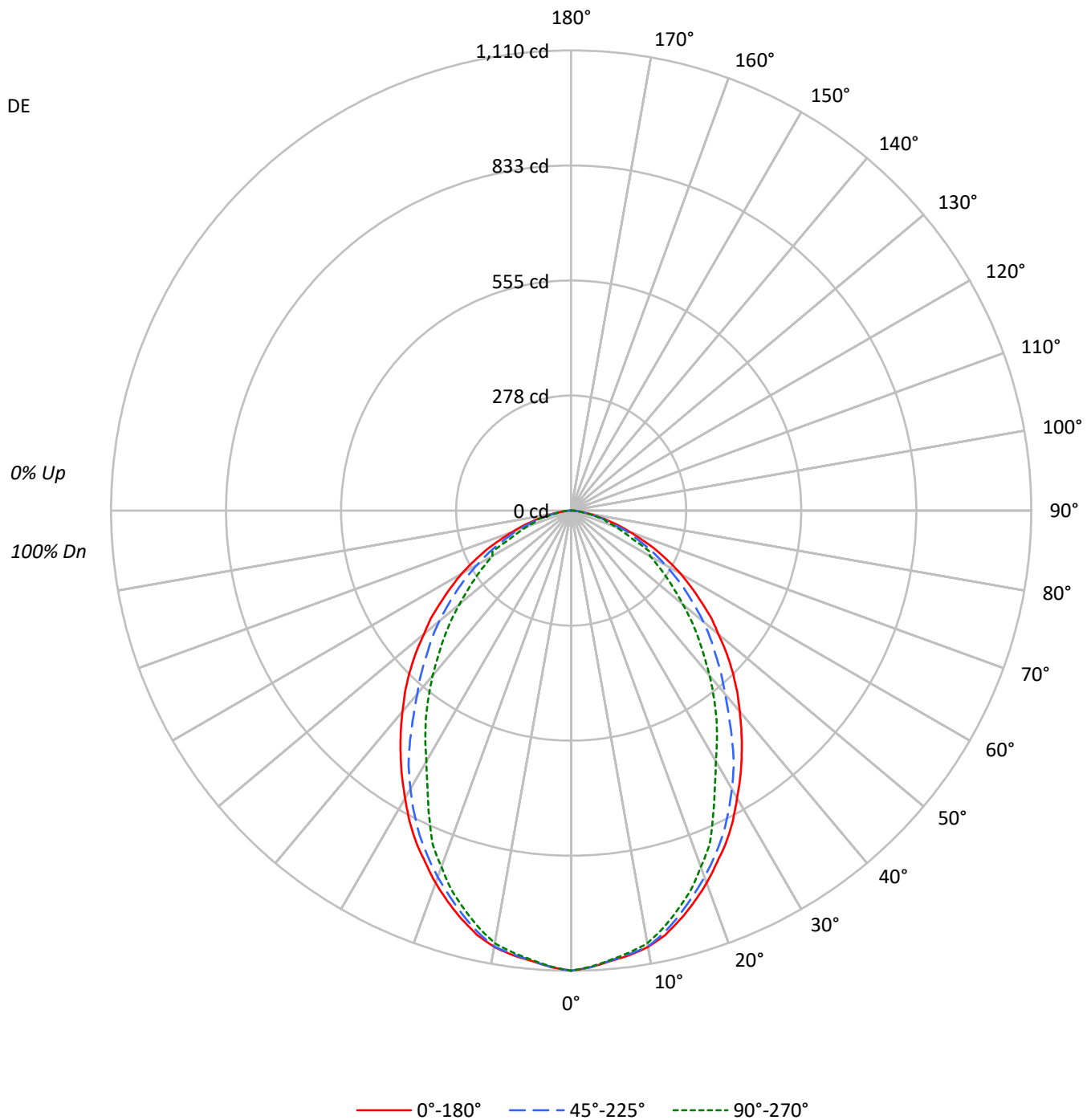
Lumens per Lamp: N/A
Luminaire Lumens: 2179.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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					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	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°	5974	5974	5974
5°	5893	5886	5878
10°	5842	5834	5792
15°	5684	5627	5548
20°	5475	5387	5240
25°	5250	5136	4816
30°	4976	4816	4338
35°	4713	4451	4013
40°	4444	4057	3651
45°	4190	3750	3301
50°	3878	3481	2944
55°	3588	3155	2637
60°	3287	2818	2362
65°	2892	2468	2091
70°	2382	2161	1777
75°	1894	1655	1734
80°	1274	1193	1113
85°	790	951	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4190 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.3	4.7
10°-20°	283.6	13.0
20°-30°	392.6	18.0
30°-40°	418.6	19.2
40°-50°	381.9	17.5
50°-60°	299.2	13.7
60°-70°	195.0	8.9
70°-80°	86.4	4.0
80°-90°	18.6	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°	779.5	35.8
0°-40°	1198.0	55.0
0°-60°	1879.1	86.2
0°-90°	2179.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1091	1089	1089	1088	1088	104
15°	1020	1020	1010	1000	996	287
25°	884	879	865	834	811	406
35°	717	712	678	626	611	448
45°	550	539	493	452	434	424
55°	382	371	336	296	281	343
65°	227	214	194	198	164	224
75°	91	85	80	76	83	98
85°	13	14	15	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1110.0	1110.0	1110.0	1110.0	1110.0
2.5°	1102.3	1102.3	1102.3	1101.0	1101.0
5°	1090.7	1089.4	1089.4	1088.1	1088.1
7.5°	1081.7	1080.4	1079.2	1077.9	1075.3
10°	1068.9	1068.9	1067.6	1061.2	1059.9
12.5°	1048.4	1047.1	1041.9	1033.0	1030.4
15°	1020.1	1020.1	1009.9	999.6	995.8
17.5°	989.3	988.1	975.2	965.0	959.8
20°	956.0	953.4	940.6	923.9	914.9
22.5°	918.8	918.8	903.4	881.5	872.6
25°	884.1	879.0	864.9	834.1	811.0
27.5°	844.3	836.6	821.2	777.6	750.7
30°	800.7	796.9	775.0	718.6	698.1
32.5°	759.6	753.2	730.1	671.1	654.4
35°	717.3	712.2	677.5	626.2	610.8
37.5°	675.0	668.5	624.9	583.8	564.6
40°	632.6	624.9	577.4	540.2	519.7
42.5°	592.8	582.6	536.4	496.6	473.5
45°	550.5	538.9	492.7	451.7	433.7
47.5°	508.1	497.9	455.5	413.2	392.7
50°	463.2	454.2	415.8	373.4	351.6
52.5°	426.0	411.9	374.7	332.3	314.4
55°	382.4	370.8	336.2	296.4	281.0
57.5°	342.6	331.1	299.0	261.8	248.9
60°	305.4	288.7	261.8	229.7	219.4
62.5°	264.3	251.5	228.4	201.5	214.3
65°	227.1	214.3	193.8	197.6	164.2
67.5°	186.1	179.6	161.7	143.7	138.6
70°	151.4	143.7	137.3	118.1	112.9
72.5°	120.6	112.9	103.9	93.7	89.8
75°	91.1	84.7	79.6	75.7	83.4
77.5°	62.9	60.3	56.5	52.6	51.3
80°	41.1	39.8	38.5	37.2	35.9
82.5°	24.4	24.4	24.4	24.4	24.4
85°	12.8	14.1	15.4	16.7	18.0
87.5°	7.7	7.7	9.0	10.3	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)