

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: P560384

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560384
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-35-UNV-81-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

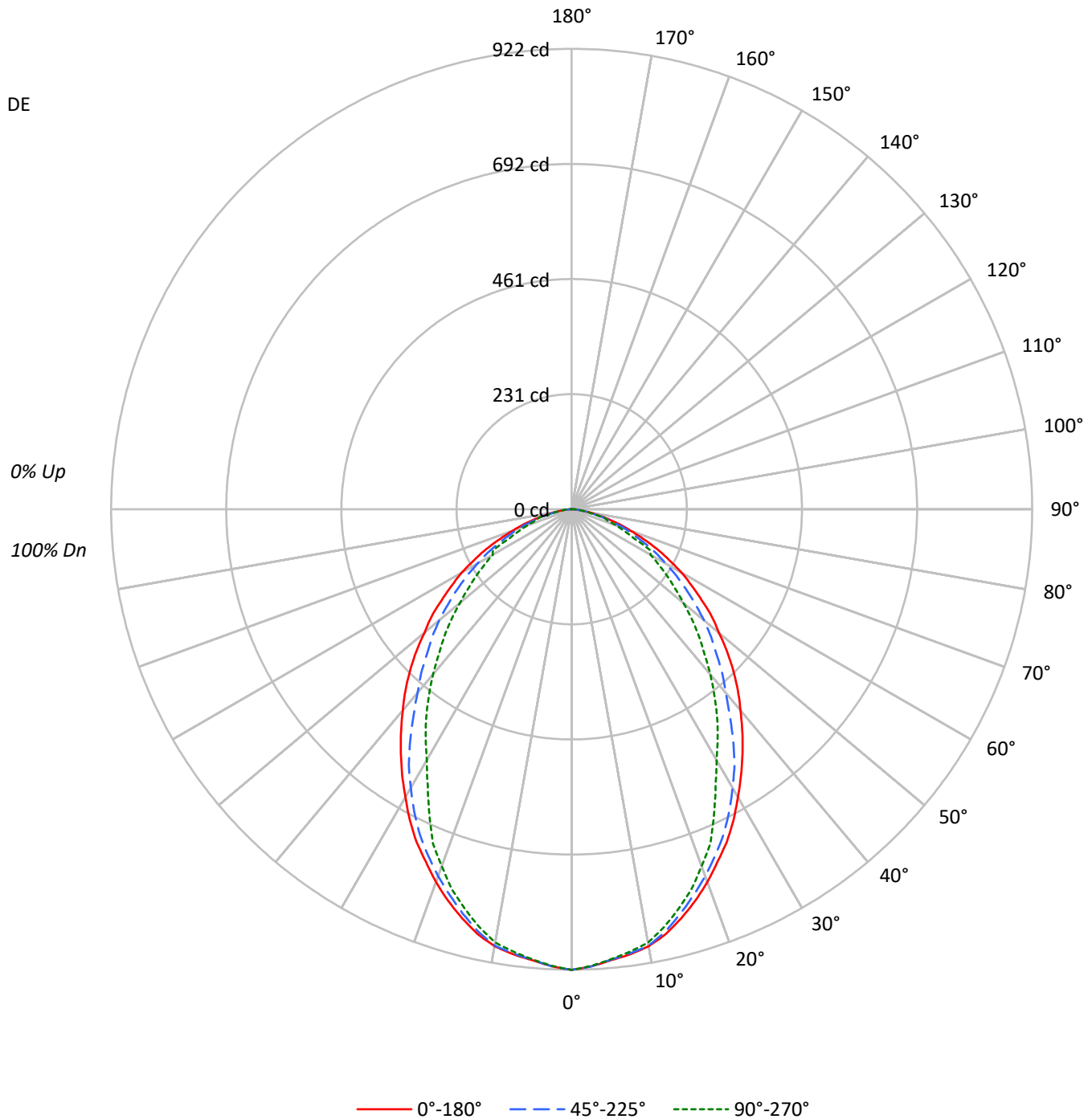
Lumens per Lamp: N/A
Luminaire Lumens: 1811.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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	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°	4965	4965	4965
5°	4897	4891	4886
10°	4855	4849	4814
15°	4724	4676	4611
20°	4550	4477	4355
25°	4363	4268	4002
30°	4136	4003	3606
35°	3917	3700	3335
40°	3694	3372	3034
45°	3482	3117	2744
50°	3224	2893	2447
55°	2982	2622	2192
60°	2732	2342	1963
65°	2404	2050	1738
70°	1980	1795	1476
75°	1574	1375	1441
80°	1057	992	927
85°	661	790	920

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3482 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	4.7
10°-20°	235.7	13.0
20°-30°	326.3	18.0
30°-40°	347.9	19.2
40°-50°	317.4	17.5
50°-60°	248.6	13.7
60°-70°	162.0	8.9
70°-80°	71.8	4.0
80°-90°	15.4	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°	647.8	35.8
0°-40°	995.7	55.0
0°-60°	1561.7	86.2
0°-90°	1811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	922	922	922	922	922	
5°	906	905	905	904	904	86
15°	848	848	839	831	828	238
25°	735	730	719	693	674	337
35°	596	592	563	520	508	373
45°	458	448	410	375	360	352
55°	318	308	279	246	234	285
65°	189	178	161	164	136	186
75°	76	70	66	63	69	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	922.5	922.5	922.5	922.5	922.5
2.5°	916.1	916.1	916.1	915.0	915.0
5°	906.5	905.4	905.4	904.4	904.4
7.5°	899.0	898.0	896.9	895.8	893.7
10°	888.4	888.4	887.3	882.0	880.9
12.5°	871.3	870.2	866.0	858.5	856.4
15°	847.8	847.8	839.3	830.8	827.6
17.5°	822.3	821.2	810.5	802.0	797.7
20°	794.5	792.4	781.7	767.9	760.4
22.5°	763.6	763.6	750.8	732.7	725.2
25°	734.8	730.5	718.8	693.2	674.0
27.5°	701.7	695.3	682.5	646.3	623.9
30°	665.5	662.3	644.1	597.2	580.2
32.5°	631.4	626.0	606.8	557.8	543.9
35°	596.2	591.9	563.1	520.4	507.6
37.5°	561.0	555.6	519.4	485.2	469.2
40°	525.8	519.4	479.9	449.0	431.9
42.5°	492.7	484.2	445.8	412.7	393.5
45°	457.5	447.9	409.5	375.4	360.5
47.5°	422.3	413.8	378.6	343.4	326.3
50°	385.0	377.5	345.5	310.3	292.2
52.5°	354.1	342.3	311.4	276.2	261.3
55°	317.8	308.2	279.4	246.4	233.6
57.5°	284.7	275.2	248.5	217.6	206.9
60°	253.8	240.0	217.6	190.9	182.4
62.5°	219.7	209.0	189.8	167.4	178.1
65°	188.8	178.1	161.0	164.2	136.5
67.5°	154.6	149.3	134.4	119.4	115.2
70°	125.8	119.4	114.1	98.1	93.8
72.5°	100.2	93.8	86.4	77.9	74.7
75°	75.7	70.4	66.1	62.9	69.3
77.5°	52.3	50.1	46.9	43.7	42.7
80°	34.1	33.1	32.0	30.9	29.9
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.7	12.8	13.9	14.9
87.5°	6.4	6.4	7.5	8.5	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)