

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: P559317

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559317
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-12-1-LD4-2LO-40-UNV-82-86-EDD
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

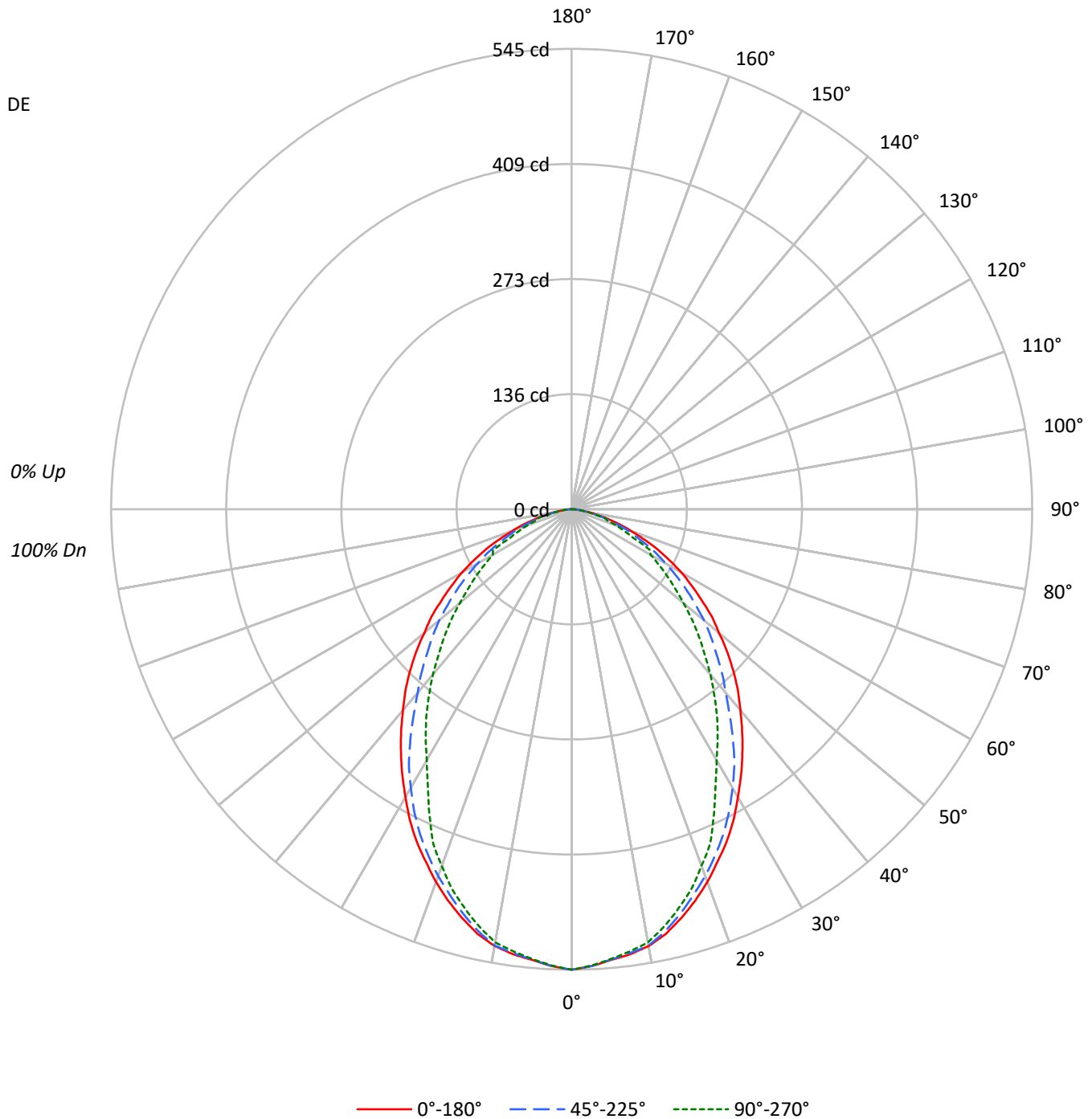
Lumens per Lamp: N/A
Luminaire Lumens: 1070.0 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	5866	5866	5866
5°	5787	5781	5773
10°	5737	5731	5689
15°	5582	5526	5449
20°	5377	5291	5147
25°	5156	5044	4729
30°	4887	4731	4261
35°	4628	4372	3941
40°	4364	3984	3586
45°	4115	3684	3242
50°	3810	3419	2890
55°	3524	3098	2590
60°	3229	2766	2319
65°	2840	2422	2055
70°	2341	2121	1744
75°	1859	1626	1705
80°	1252	1172	1091
85°	778	939	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4115 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.7	4.7
10°-20°	139.2	13.0
20°-30°	192.8	18.0
30°-40°	205.5	19.2
40°-50°	187.5	17.5
50°-60°	146.9	13.7
60°-70°	95.7	8.9
70°-80°	42.4	4.0
80°-90°	9.1	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°	382.8	35.8
0°-40°	588.3	55.0
0°-60°	922.7	86.2
0°-90°	1070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	545	545	545	545	545	
5°	536	535	535	534	534	51
15°	501	501	496	491	489	141
25°	434	432	425	410	398	199
35°	352	350	333	308	300	220
45°	270	265	242	222	213	208
55°	188	182	165	146	138	168
65°	112	105	95	97	81	110
75°	45	42	39	37	41	48
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	545.0	545.0	545.0	545.0	545.0
2.5°	541.3	541.3	541.3	540.6	540.6
5°	535.6	535.0	535.0	534.3	534.3
7.5°	531.2	530.6	529.9	529.3	528.0
10°	524.9	524.9	524.3	521.1	520.5
12.5°	514.8	514.2	511.6	507.2	506.0
15°	500.9	500.9	495.9	490.9	489.0
17.5°	485.8	485.2	478.9	473.8	471.3
20°	469.4	468.2	461.9	453.7	449.3
22.5°	451.2	451.2	443.6	432.9	428.5
25°	434.1	431.6	424.7	409.6	398.2
27.5°	414.6	410.8	403.3	381.8	368.6
30°	393.2	391.3	380.6	352.9	342.8
32.5°	373.0	369.9	358.5	329.5	321.4
35°	352.2	349.7	332.7	307.5	299.9
37.5°	331.4	328.3	306.9	286.7	277.2
40°	310.6	306.9	283.5	265.3	255.2
42.5°	291.1	286.1	263.4	243.9	232.5
45°	270.3	264.6	242.0	221.8	213.0
47.5°	249.5	244.5	223.7	202.9	192.8
50°	227.5	223.1	204.2	183.4	172.6
52.5°	209.2	202.3	184.0	163.2	154.4
55°	187.8	182.1	165.1	145.6	138.0
57.5°	168.2	162.6	146.8	128.5	122.2
60°	150.0	141.8	128.5	112.8	107.7
62.5°	129.8	123.5	112.2	98.9	105.2
65°	111.5	105.2	95.1	97.0	80.7
67.5°	91.4	88.2	79.4	70.6	68.1
70°	74.4	70.6	67.4	58.0	55.4
72.5°	59.2	55.4	51.0	46.0	44.1
75°	44.7	41.6	39.1	37.2	41.0
77.5°	30.9	29.6	27.7	25.8	25.2
80°	20.2	19.5	18.9	18.3	17.6
82.5°	12.0	12.0	12.0	12.0	12.0
85°	6.3	6.9	7.6	8.2	8.8
87.5°	3.8	3.8	4.4	5.0	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)