

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: P559113

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559113
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-LD4-2HI-40-UNV-81-88-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

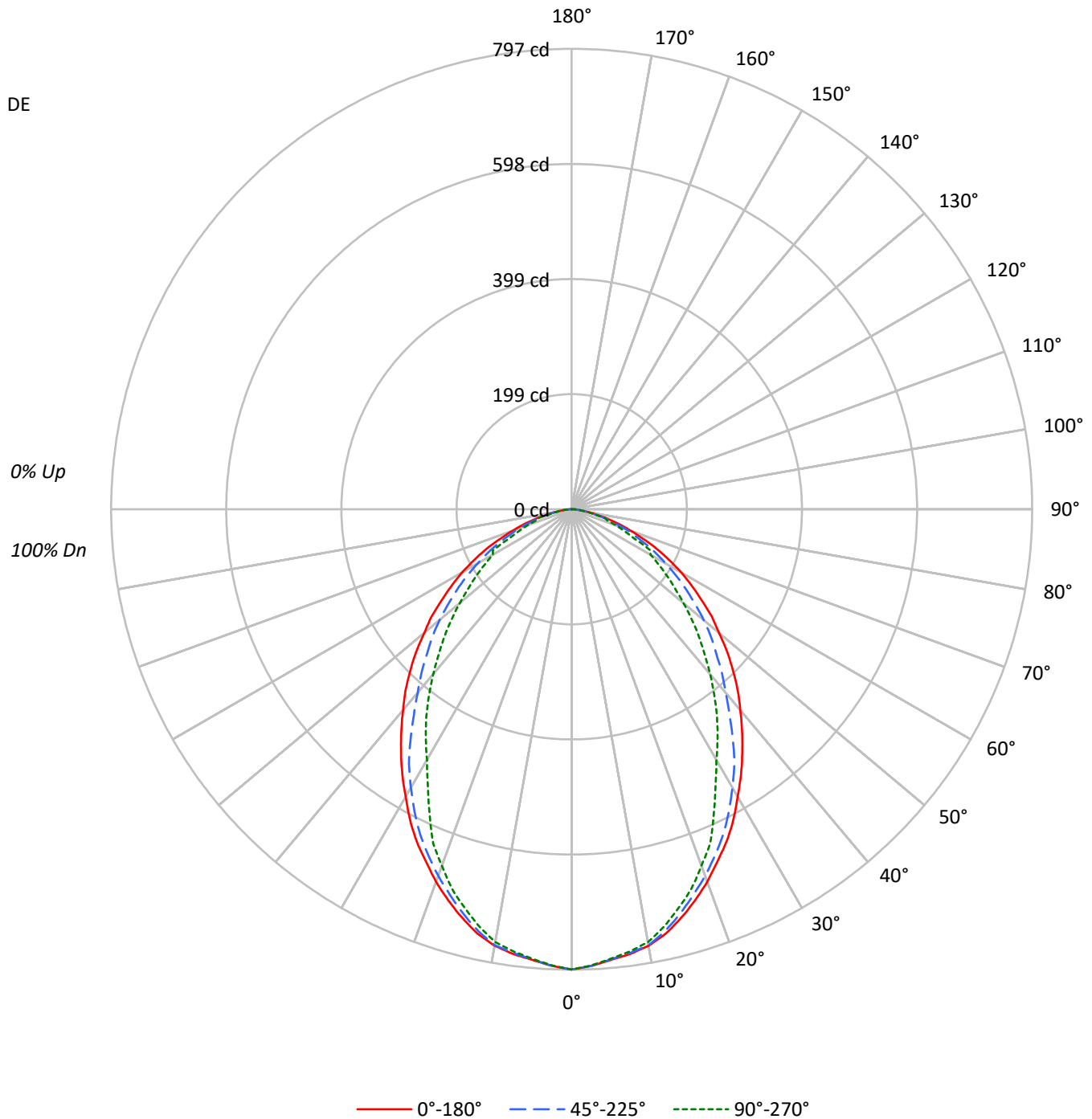
Lumens per Lamp: N/A
Luminaire Lumens: 1564.0 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	8576	8576	8576
5°	8459	8448	8439
10°	8385	8376	8316
15°	8159	8077	7964
20°	7860	7733	7522
25°	7537	7373	6913
30°	7143	6914	6227
35°	6765	6390	5761
40°	6381	5824	5241
45°	6014	5384	4739
50°	5568	4997	4227
55°	5151	4528	3785
60°	4719	4045	3391
65°	4152	3543	3003
70°	3421	3100	2549
75°	2720	2375	2491
80°	1829	1711	1599
85°	1136	1371	1593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6014 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.2	4.7
10°-20°	203.5	13.0
20°-30°	281.8	18.0
30°-40°	300.5	19.2
40°-50°	274.1	17.5
50°-60°	214.7	13.7
60°-70°	139.9	8.9
70°-80°	62.0	4.0
80°-90°	13.3	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°	559.5	35.8
0°-40°	859.9	55.0
0°-60°	1348.7	86.2
0°-90°	1564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	797	797	797	797	797	
5°	783	782	782	781	781	74
15°	732	732	725	718	715	206
25°	635	631	621	599	582	291
35°	515	511	486	450	438	322
45°	395	387	354	324	311	304
55°	274	266	241	213	202	246
65°	163	154	139	142	118	161
75°	65	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	796.7	796.7	796.7	796.7	796.7
2.5°	791.2	791.2	791.2	790.2	790.2
5°	782.9	781.9	781.9	781.0	781.0
7.5°	776.4	775.5	774.6	773.7	771.8
10°	767.2	767.2	766.3	761.7	760.8
12.5°	752.5	751.6	747.9	741.4	739.6
15°	732.2	732.2	724.8	717.5	714.7
17.5°	710.1	709.2	700.0	692.6	688.9
20°	686.2	684.3	675.1	663.1	656.7
22.5°	659.4	659.4	648.4	632.7	626.3
25°	634.6	630.9	620.8	598.7	582.1
27.5°	606.0	600.5	589.5	558.1	538.8
30°	574.7	572.0	556.3	515.8	501.0
32.5°	545.2	540.6	524.1	481.7	469.7
35°	514.8	511.2	486.3	449.5	438.4
37.5°	484.5	479.9	448.5	419.1	405.2
40°	454.1	448.5	414.5	387.7	373.0
42.5°	425.5	418.1	385.0	356.4	339.9
45°	395.1	386.8	353.7	324.2	311.3
47.5°	364.7	357.4	327.0	296.6	281.8
50°	332.5	326.0	298.4	268.0	252.4
52.5°	305.8	295.6	268.9	238.5	225.6
55°	274.5	266.2	241.3	212.8	201.7
57.5°	245.9	237.6	214.6	187.9	178.7
60°	219.2	207.2	187.9	164.9	157.5
62.5°	189.7	180.5	163.9	144.6	153.8
65°	163.0	153.8	139.1	141.8	117.9
67.5°	133.5	128.9	116.0	103.2	99.5
70°	108.7	103.2	98.5	84.7	81.0
72.5°	86.6	81.0	74.6	67.2	64.5
75°	65.4	60.8	57.1	54.3	59.9
77.5°	45.1	43.3	40.5	37.8	36.8
80°	29.5	28.6	27.6	26.7	25.8
82.5°	17.5	17.5	17.5	17.5	17.5
85°	9.2	10.1	11.1	12.0	12.9
87.5°	5.5	5.5	6.4	7.4	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)