

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: P558740

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558740
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-LD4-1LO-40-UNV-82-86-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

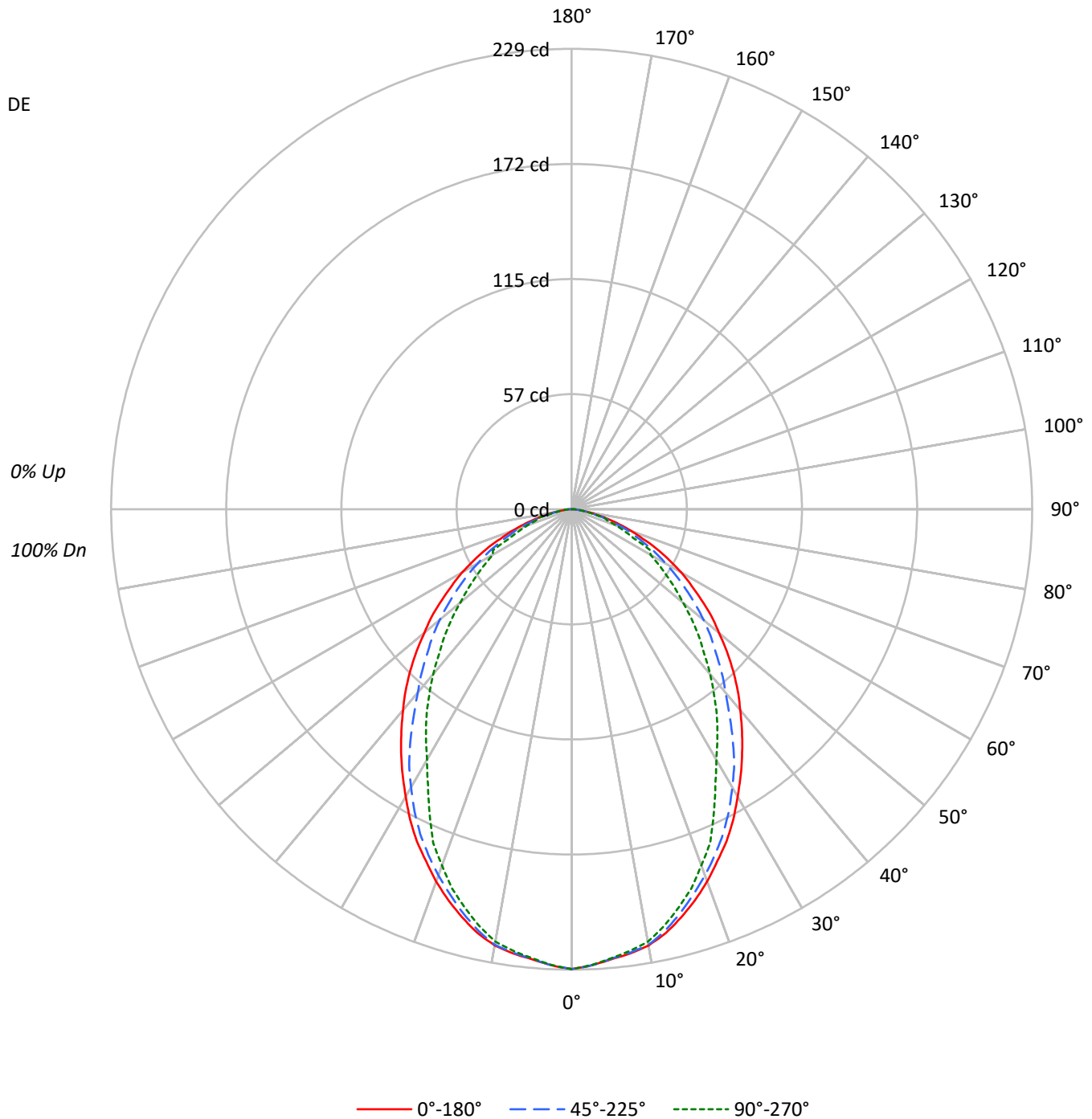
Lumens per Lamp: N/A
Luminaire Lumens: 449.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
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°	2462	2462	2462
5°	2428	2426	2422
10°	2408	2405	2387
15°	2342	2319	2287
20°	2257	2220	2159
25°	2164	2116	1985
30°	2051	1985	1787
35°	1942	1834	1654
40°	1832	1672	1505
45°	1726	1545	1361
50°	1599	1435	1212
55°	1479	1301	1087
60°	1354	1160	973
65°	1192	1016	861
70°	982	891	733
75°	782	682	715
80°	527	490	459
85°	321	395	457

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1726 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.3	4.7
10°-20°	58.4	13.0
20°-30°	80.9	18.0
30°-40°	86.3	19.2
40°-50°	78.7	17.5
50°-60°	61.6	13.7
60°-70°	40.2	8.9
70°-80°	17.8	4.0
80°-90°	3.8	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°	160.6	35.8
0°-40°	246.9	55.0
0°-60°	387.2	86.2
0°-90°	449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	449.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	229	229	229	229	229	
5°	225	224	224	224	224	21
15°	210	210	208	206	205	59
25°	182	181	178	172	167	84
35°	148	147	140	129	126	92
45°	113	111	102	93	89	87
55°	79	76	69	61	58	71
65°	47	44	40	41	34	46
75°	19	18	16	16	17	20
85°	3	3	3	3	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	228.7	228.7	228.7	228.7	228.7
2.5°	227.1	227.1	227.1	226.9	226.9
5°	224.7	224.5	224.5	224.2	224.2
7.5°	222.9	222.6	222.4	222.1	221.6
10°	220.3	220.3	220.0	218.7	218.4
12.5°	216.0	215.8	214.7	212.9	212.3
15°	210.2	210.2	208.1	206.0	205.2
17.5°	203.9	203.6	201.0	198.8	197.8
20°	197.0	196.5	193.8	190.4	188.5
22.5°	189.3	189.3	186.1	181.6	179.8
25°	182.2	181.1	178.2	171.9	167.1
27.5°	174.0	172.4	169.2	160.2	154.7
30°	165.0	164.2	159.7	148.1	143.8
32.5°	156.5	155.2	150.4	138.3	134.8
35°	147.8	146.7	139.6	129.0	125.9
37.5°	139.1	137.8	128.8	120.3	116.3
40°	130.4	128.8	119.0	111.3	107.1
42.5°	122.2	120.0	110.5	102.3	97.6
45°	113.4	111.1	101.5	93.1	89.4
47.5°	104.7	102.6	93.9	85.1	80.9
50°	95.5	93.6	85.7	76.9	72.4
52.5°	87.8	84.9	77.2	68.5	64.8
55°	78.8	76.4	69.3	61.1	57.9
57.5°	70.6	68.2	61.6	53.9	51.3
60°	62.9	59.5	53.9	47.3	45.2
62.5°	54.5	51.8	47.1	41.5	44.2
65°	46.8	44.2	39.9	40.7	33.8
67.5°	38.3	37.0	33.3	29.6	28.6
70°	31.2	29.6	28.3	24.3	23.3
72.5°	24.9	23.3	21.4	19.3	18.5
75°	18.8	17.5	16.4	15.6	17.2
77.5°	13.0	12.4	11.6	10.8	10.6
80°	8.5	8.2	7.9	7.7	7.4
82.5°	5.0	5.0	5.0	5.0	5.0
85°	2.6	2.9	3.2	3.4	3.7
87.5°	1.6	1.6	1.9	2.1	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)