

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: P559892

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559892
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-LD4-1LO-40-UNV-82-86-EDD-90
Description: 1X2 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: 871.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

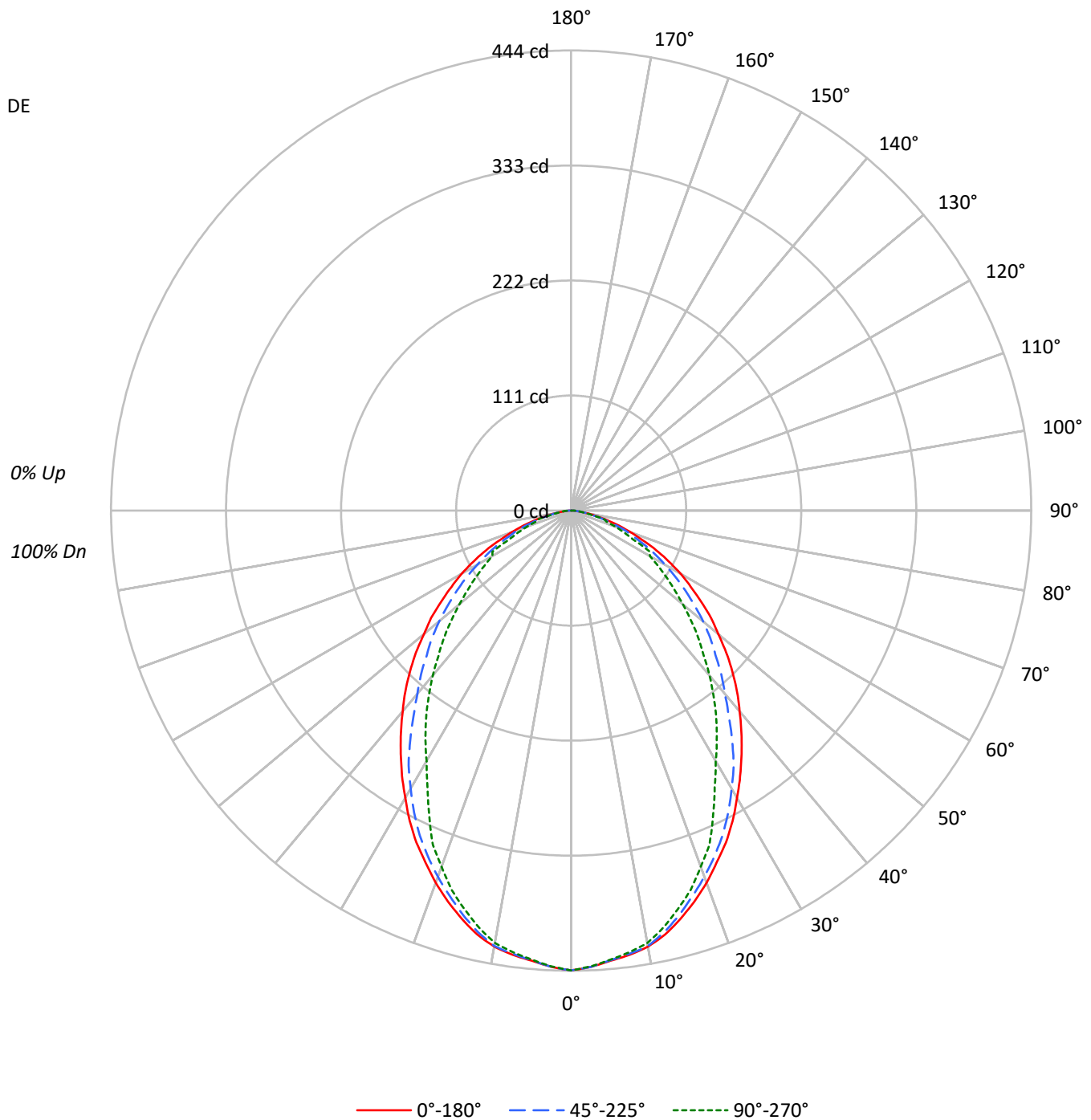
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2388	2388	2388
5°	2355	2353	2350
10°	2335	2332	2316
15°	2272	2249	2218
20°	2188	2153	2094
25°	2099	2053	1925
30°	1989	1925	1734
35°	1884	1779	1604
40°	1777	1622	1459
45°	1674	1499	1320
50°	1551	1392	1176
55°	1435	1261	1054
60°	1314	1126	944
65°	1156	987	837
70°	952	864	710
75°	757	661	692
80°	508	477	446
85°	315	383	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	4.7
10°-20°	113.3	13.0
20°-30°	156.9	18.0
30°-40°	167.3	19.2
40°-50°	152.7	17.5
50°-60°	119.6	13.7
60°-70°	77.9	8.9
70°-80°	34.5	4.0
80°-90°	7.4	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°	311.6	35.8
0°-40°	478.9	55.0
0°-60°	751.1	86.2
0°-90°	871.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	871.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	436	436	436	435	435	41
15°	408	408	404	400	398	115
25°	353	351	346	333	324	162
35°	287	285	271	250	244	179
45°	220	215	197	180	173	169
55°	153	148	134	118	112	137
65°	91	86	78	79	66	89
75°	36	34	32	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	443.7	443.7	443.7	443.7	443.7
2.5°	440.6	440.6	440.6	440.1	440.1
5°	436.0	435.5	435.5	435.0	435.0
7.5°	432.4	431.9	431.4	430.9	429.8
10°	427.3	427.3	426.7	424.2	423.7
12.5°	419.1	418.5	416.5	412.9	411.9
15°	407.8	407.8	403.7	399.6	398.0
17.5°	395.5	394.9	389.8	385.7	383.7
20°	382.1	381.1	376.0	369.3	365.7
22.5°	367.3	367.3	361.1	352.4	348.8
25°	353.4	351.4	345.7	333.4	324.2
27.5°	337.5	334.4	328.3	310.8	300.1
30°	320.1	318.5	309.8	287.2	279.0
32.5°	303.6	301.1	291.9	268.3	261.6
35°	286.7	284.7	270.8	250.3	244.1
37.5°	269.8	267.2	249.8	233.4	225.7
40°	252.9	249.8	230.8	215.9	207.7
42.5°	237.0	232.9	214.4	198.5	189.3
45°	220.0	215.4	197.0	180.5	173.4
47.5°	203.1	199.0	182.1	165.2	157.0
50°	185.2	181.6	166.2	149.3	140.5
52.5°	170.3	164.6	149.8	132.8	125.7
55°	152.9	148.2	134.4	118.5	112.3
57.5°	136.9	132.3	119.5	104.6	99.5
60°	122.1	115.4	104.6	91.8	87.7
62.5°	105.7	100.5	91.3	80.5	85.7
65°	90.8	85.7	77.5	79.0	65.7
67.5°	74.4	71.8	64.6	57.4	55.4
70°	60.5	57.4	54.9	47.2	45.1
72.5°	48.2	45.1	41.5	37.4	35.9
75°	36.4	33.9	31.8	30.3	33.3
77.5°	25.1	24.1	22.6	21.0	20.5
80°	16.4	15.9	15.4	14.9	14.4
82.5°	9.7	9.7	9.7	9.7	9.7
85°	5.1	5.6	6.2	6.7	7.2
87.5°	3.1	3.1	3.6	4.1	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)