

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: P559912

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559912
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-93-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 818.0 lumens
Efficiency: N/A
Efficacy: 69.9 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

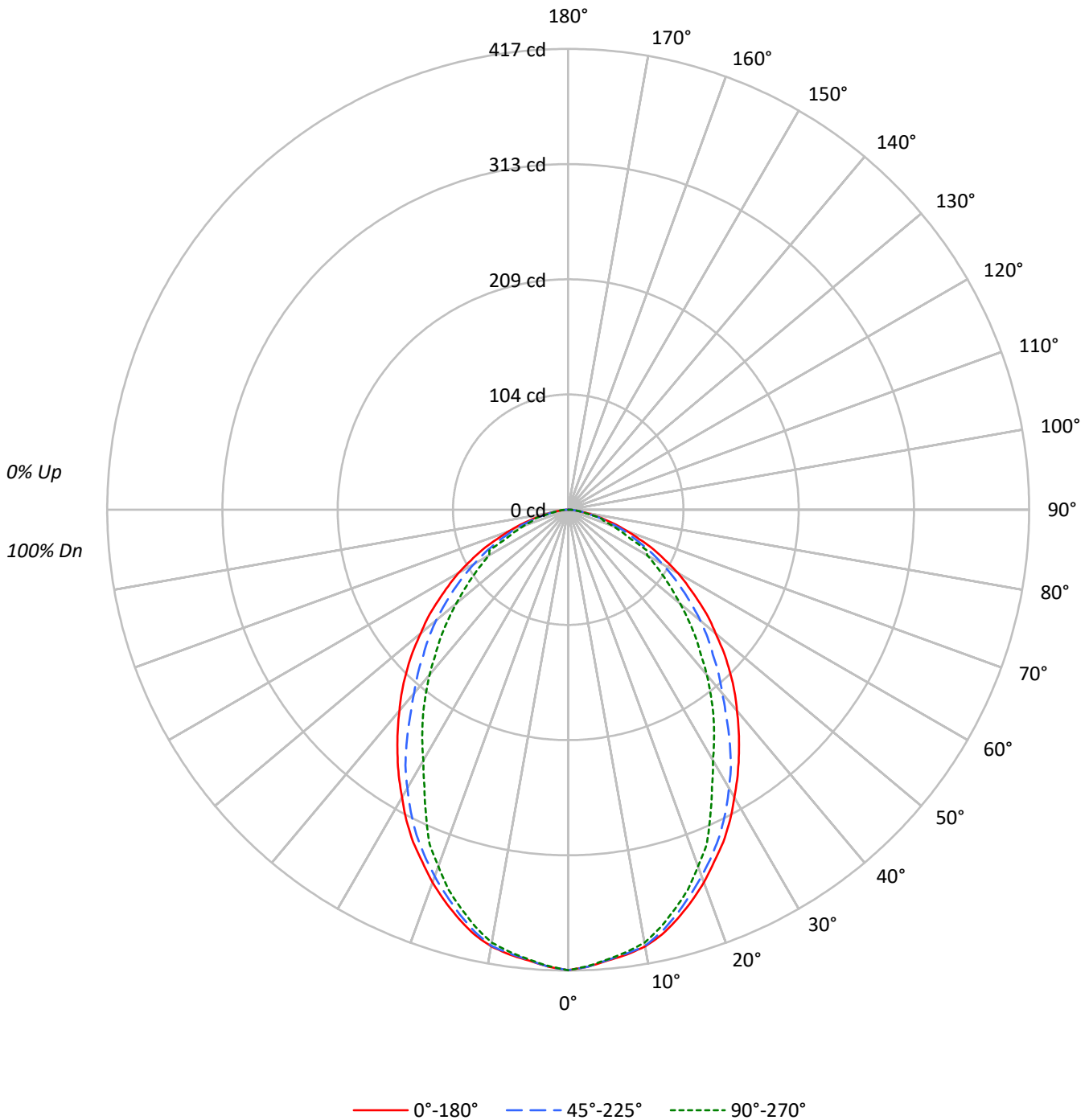
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2243	2243	2243
5°	2212	2210	2207
10°	2193	2190	2175
15°	2134	2112	2083
20°	2056	2022	1967
25°	1971	1928	1808
30°	1868	1808	1628
35°	1769	1671	1507
40°	1669	1523	1371
45°	1573	1408	1239
50°	1456	1307	1105
55°	1346	1184	990
60°	1234	1058	887
65°	1086	926	786
70°	894	810	667
75°	711	622	651
80°	477	449	418
85°	296	358	414

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.8	4.7
10°-20°	106.4	13.0
20°-30°	147.4	18.0
30°-40°	157.1	19.2
40°-50°	143.4	17.5
50°-60°	112.3	13.7
60°-70°	73.2	8.9
70°-80°	32.4	4.0
80°-90°	7.0	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°	292.6	35.8
0°-40°	449.8	55.0
0°-60°	705.4	86.2
0°-90°	818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	417	417	417	417	417	
5°	410	409	409	408	408	39
15°	383	383	379	375	374	108
25°	332	330	325	313	304	152
35°	269	267	254	235	229	168
45°	207	202	185	170	163	159
55°	144	139	126	111	106	129
65°	85	80	73	74	62	84
75°	34	32	30	28	31	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	416.7	416.7	416.7	416.7	416.7
2.5°	413.8	413.8	413.8	413.3	413.3
5°	409.5	409.0	409.0	408.5	408.5
7.5°	406.1	405.6	405.1	404.6	403.7
10°	401.3	401.3	400.8	398.4	397.9
12.5°	393.6	393.1	391.1	387.8	386.8
15°	383.0	383.0	379.1	375.3	373.8
17.5°	371.4	370.9	366.1	362.2	360.3
20°	358.9	357.9	353.1	346.8	343.5
22.5°	344.9	344.9	339.1	330.9	327.6
25°	331.9	330.0	324.7	313.1	304.4
27.5°	317.0	314.1	308.3	291.9	281.8
30°	300.6	299.1	291.0	269.8	262.0
32.5°	285.2	282.8	274.1	251.9	245.7
35°	269.3	267.3	254.3	235.1	229.3
37.5°	253.4	251.0	234.6	219.2	212.0
40°	237.5	234.6	216.8	202.8	195.1
42.5°	222.5	218.7	201.4	186.4	177.8
45°	206.7	202.3	185.0	169.6	162.8
47.5°	190.8	186.9	171.0	155.1	147.4
50°	173.9	170.5	156.1	140.2	132.0
52.5°	159.9	154.6	140.7	124.8	118.0
55°	143.5	139.2	126.2	111.3	105.5
57.5°	128.6	124.3	112.2	98.3	93.5
60°	114.6	108.4	98.3	86.2	82.4
62.5°	99.2	94.4	85.7	75.6	80.4
65°	85.3	80.4	72.7	74.2	61.7
67.5°	69.8	67.4	60.7	54.0	52.0
70°	56.8	54.0	51.5	44.3	42.4
72.5°	45.3	42.4	39.0	35.2	33.7
75°	34.2	31.8	29.9	28.4	31.3
77.5°	23.6	22.6	21.2	19.8	19.3
80°	15.4	14.9	14.5	14.0	13.5
82.5°	9.2	9.2	9.2	9.2	9.2
85°	4.8	5.3	5.8	6.3	6.7
87.5°	2.9	2.9	3.4	3.9	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)