

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: P560666

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560666
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-LD4-2STD-40-UNV-82-94-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2413.0 lumens
Efficiency: N/A
Efficacy: 72.5 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

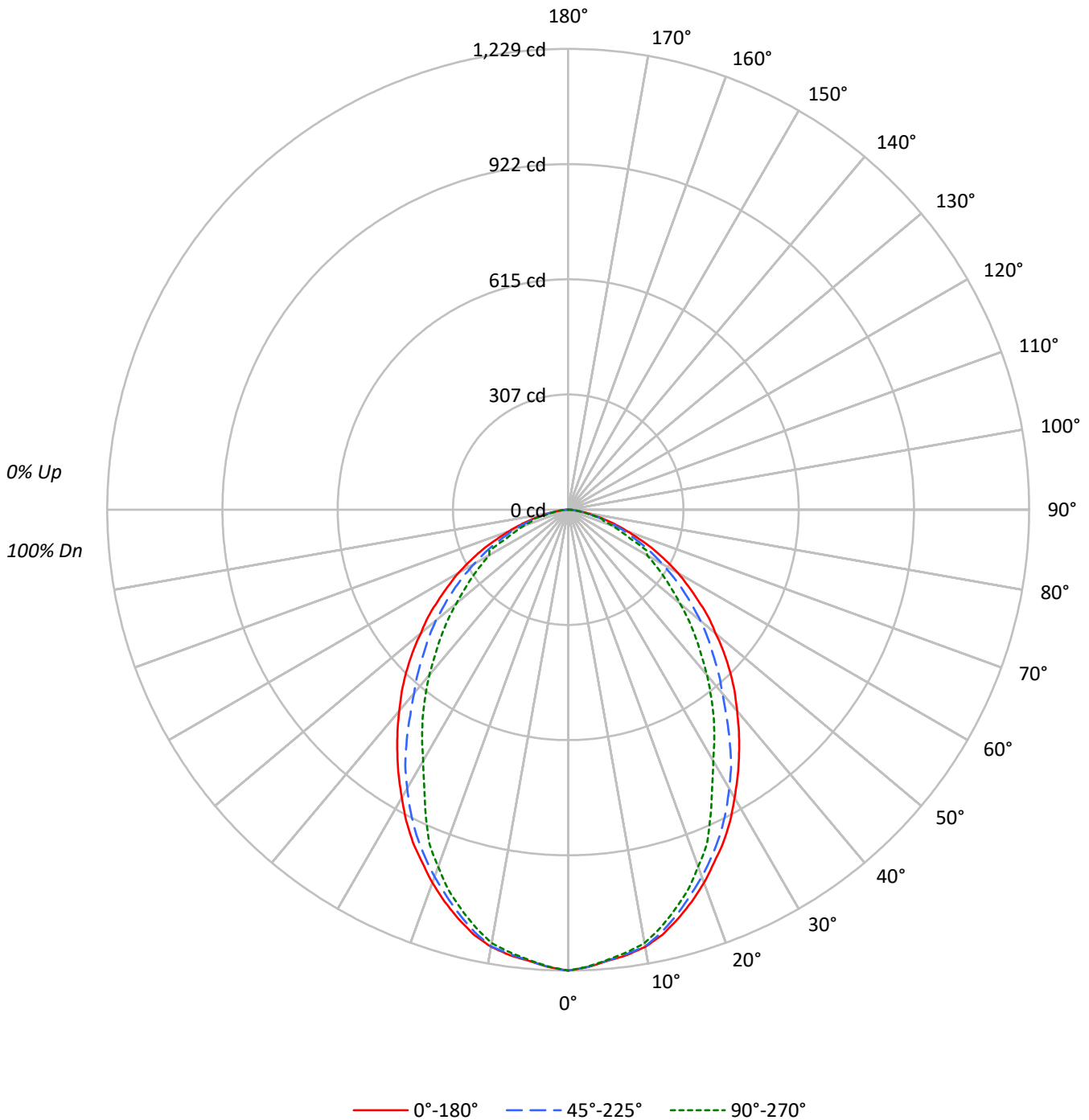
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6615	6615	6615
5°	6525	6518	6510
10°	6469	6461	6414
15°	6294	6231	6144
20°	6063	5966	5803
25°	5814	5687	5333
30°	5510	5334	4804
35°	5219	4930	4444
40°	4921	4492	4043
45°	4640	4153	3656
50°	4295	3855	3260
55°	3974	3493	2920
60°	3640	3120	2616
65°	3203	2733	2316
70°	2639	2392	1967
75°	2098	1832	1921
80°	1410	1320	1234
85°	877	1056	1229

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4640 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.4	4.7
10°-20°	314.0	13.0
20°-30°	434.7	18.0
30°-40°	463.5	19.2
40°-50°	422.9	17.5
50°-60°	331.3	13.7
60°-70°	215.9	8.9
70°-80°	95.7	4.0
80°-90°	20.5	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°	863.1	35.8
0°-40°	1326.7	55.0
0°-60°	2080.9	86.2
0°-90°	2413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1229	1229	1229	1229	1229	
5°	1208	1206	1206	1205	1205	115
15°	1130	1130	1118	1107	1103	318
25°	979	973	958	924	898	449
35°	794	789	750	693	676	497
45°	610	597	546	500	480	470
55°	424	411	372	328	311	380
65°	252	237	215	219	182	248
75°	101	94	88	84	92	108
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1229.1	1229.1	1229.1	1229.1	1229.1
2.5°	1220.6	1220.6	1220.6	1219.2	1219.2
5°	1207.8	1206.4	1206.4	1205.0	1205.0
7.5°	1197.9	1196.5	1195.0	1193.6	1190.8
10°	1183.7	1183.7	1182.3	1175.2	1173.7
12.5°	1160.9	1159.5	1153.8	1143.9	1141.0
15°	1129.7	1129.7	1118.3	1106.9	1102.7
17.5°	1095.6	1094.2	1079.9	1068.6	1062.9
20°	1058.6	1055.8	1041.6	1023.1	1013.2
22.5°	1017.4	1017.4	1000.4	976.2	966.3
25°	979.1	973.4	957.7	923.6	898.1
27.5°	935.0	926.5	909.4	861.1	831.3
30°	886.7	882.4	858.3	795.8	773.0
32.5°	841.2	834.1	808.5	743.2	724.7
35°	794.3	788.6	750.3	693.4	676.4
37.5°	747.4	740.3	692.0	646.5	625.2
40°	700.5	692.0	639.4	598.2	575.5
42.5°	656.5	645.1	594.0	549.9	524.3
45°	609.6	596.8	545.7	500.2	480.3
47.5°	562.7	551.3	504.4	457.6	434.8
50°	513.0	503.0	460.4	413.5	389.3
52.5°	471.8	456.1	414.9	368.0	348.1
55°	423.5	410.7	372.3	328.2	311.2
57.5°	379.4	366.6	331.1	289.9	275.7
60°	338.2	319.7	289.9	254.4	243.0
62.5°	292.7	278.5	252.9	223.1	237.3
65°	251.5	237.3	214.6	218.8	181.9
67.5°	206.0	198.9	179.0	159.2	153.5
70°	167.7	159.2	152.0	130.7	125.0
72.5°	133.6	125.0	115.1	103.7	99.5
75°	100.9	93.8	88.1	83.8	92.4
77.5°	69.6	66.8	62.5	58.3	56.8
80°	45.5	44.1	42.6	41.2	39.8
82.5°	27.0	27.0	27.0	27.0	27.0
85°	14.2	15.6	17.1	18.5	19.9
87.5°	8.5	8.5	9.9	11.4	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)