

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: P560596

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560596
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2301.0 lumens
Efficiency: N/A
Efficacy: 69.1 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

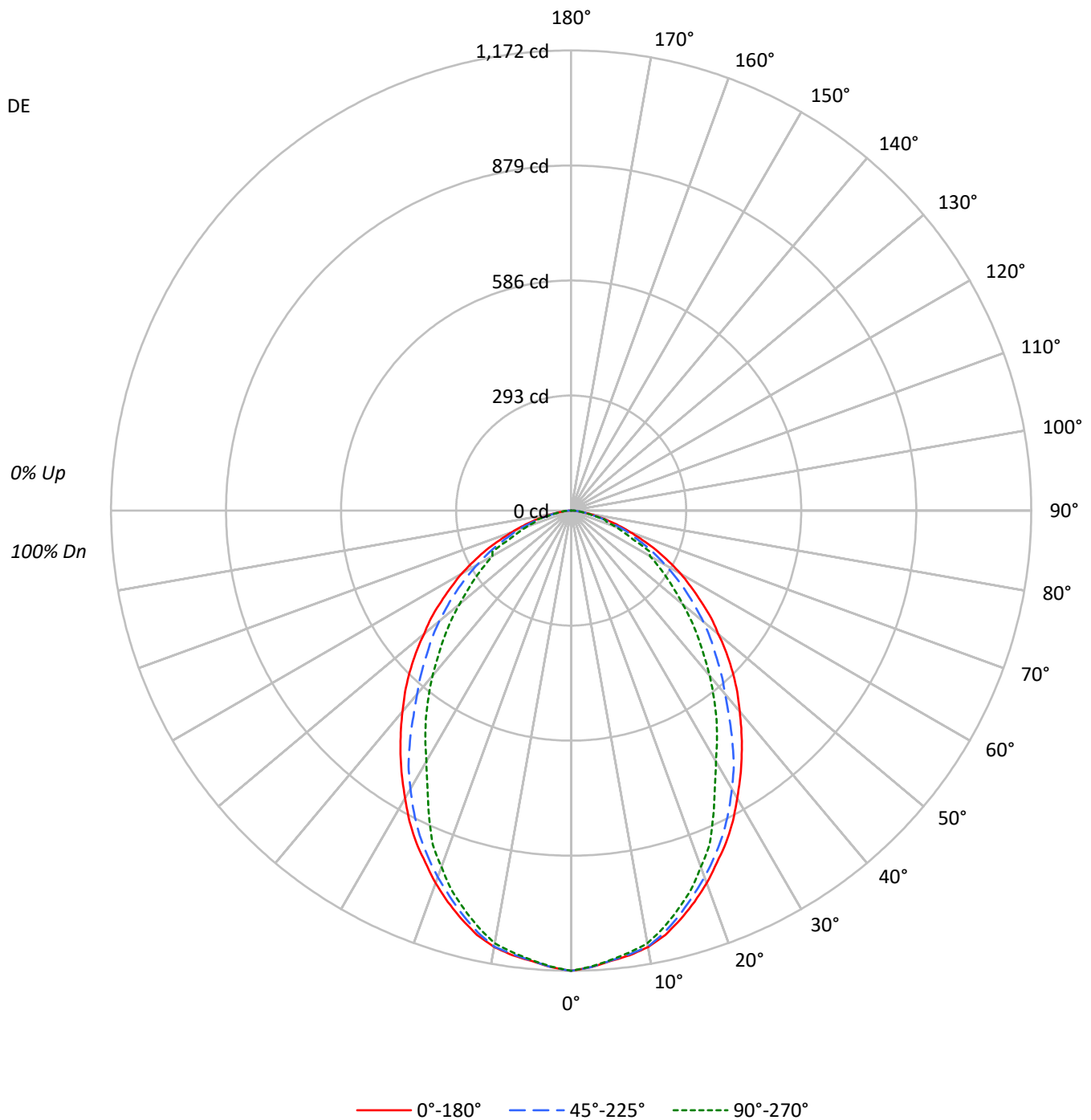
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6308	6308	6308
5°	6223	6215	6208
10°	6168	6161	6117
15°	6002	5942	5859
20°	5782	5688	5533
25°	5544	5423	5086
30°	5254	5086	4581
35°	4977	4701	4238
40°	4693	4284	3856
45°	4424	3960	3486
50°	4096	3676	3109
55°	3789	3331	2785
60°	3471	2975	2494
65°	3054	2606	2208
70°	2516	2282	1876
75°	2000	1747	1832
80°	1345	1261	1175
85°	840	1007	1173

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4424 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.1	4.7
10°-20°	299.4	13.0
20°-30°	414.5	18.0
30°-40°	442.0	19.2
40°-50°	403.3	17.5
50°-60°	315.9	13.7
60°-70°	205.9	8.9
70°-80°	91.2	4.0
80°-90°	19.6	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°	823.1	35.8
0°-40°	1265.1	55.0
0°-60°	1984.3	86.2
0°-90°	2301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2301.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1152	1150	1150	1149	1149	109
15°	1077	1077	1066	1056	1052	303
25°	934	928	913	881	856	429
35°	758	752	716	661	645	474
45°	581	569	520	477	458	448
55°	404	392	355	313	297	362
65°	240	226	205	209	173	236
75°	96	89	84	80	88	103
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1172.1	1172.1	1172.1	1172.1	1172.1
2.5°	1164.0	1164.0	1164.0	1162.6	1162.6
5°	1151.8	1150.4	1150.4	1149.1	1149.1
7.5°	1142.3	1140.9	1139.6	1138.2	1135.5
10°	1128.7	1128.7	1127.4	1120.6	1119.3
12.5°	1107.1	1105.7	1100.3	1090.8	1088.1
15°	1077.2	1077.2	1066.4	1055.6	1051.5
17.5°	1044.7	1043.4	1029.8	1019.0	1013.6
20°	1009.5	1006.8	993.2	975.6	966.1
22.5°	970.2	970.2	953.9	930.9	921.4
25°	933.6	928.2	913.3	880.8	856.4
27.5°	891.6	883.5	867.2	821.1	792.7
30°	845.5	841.5	818.4	758.8	737.1
32.5°	802.2	795.4	771.0	708.7	691.1
35°	757.5	752.0	715.5	661.3	645.0
37.5°	712.7	706.0	659.9	616.5	596.2
40°	668.0	659.9	609.8	570.5	548.8
42.5°	626.0	615.2	566.4	524.4	500.0
45°	581.3	569.1	520.3	477.0	458.0
47.5°	536.6	525.8	481.0	436.3	414.6
50°	489.2	479.7	439.0	394.3	371.3
52.5°	449.9	435.0	395.7	351.0	332.0
55°	403.8	391.6	355.0	313.0	296.8
57.5°	361.8	349.6	315.7	276.4	262.9
60°	322.5	304.9	276.4	242.5	231.7
62.5°	279.1	265.6	241.2	212.7	226.3
65°	239.8	226.3	204.6	208.7	173.4
67.5°	196.5	189.7	170.7	151.8	146.3
70°	159.9	151.8	145.0	124.7	119.2
72.5°	127.4	119.2	109.8	98.9	94.9
75°	96.2	89.4	84.0	79.9	88.1
77.5°	66.4	63.7	59.6	55.6	54.2
80°	43.4	42.0	40.7	39.3	37.9
82.5°	25.7	25.7	25.7	25.7	25.7
85°	13.6	14.9	16.3	17.6	19.0
87.5°	8.1	8.1	9.5	10.8	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)