

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: P560531

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560531
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-LD4-2LO-50-UNV-82-85-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

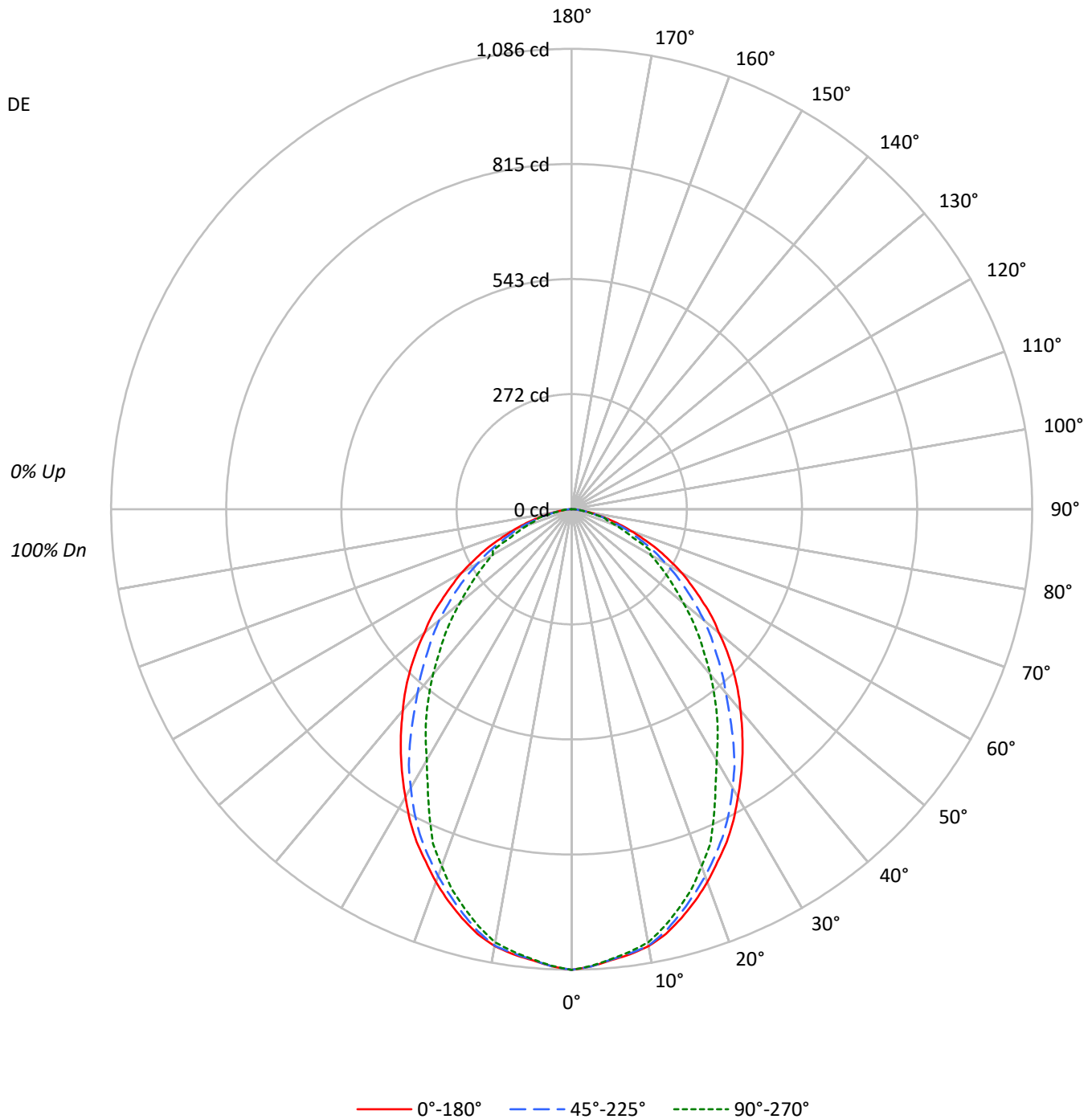
Lumens per Lamp: N/A
Luminaire Lumens: 2133.0 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5847	5847	5847
5°	5768	5761	5755
10°	5718	5711	5670
15°	5564	5508	5431
20°	5360	5273	5129
25°	5139	5027	4714
30°	4871	4715	4246
35°	4614	4357	3928
40°	4351	3971	3574
45°	4102	3671	3232
50°	3797	3408	2882
55°	3512	3088	2581
60°	3218	2758	2312
65°	2831	2416	2048
70°	2332	2115	1739
75°	1855	1620	1697
80°	1246	1168	1091
85°	778	932	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4102 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.1	4.7
10°-20°	277.6	13.0
20°-30°	384.3	18.0
30°-40°	409.7	19.2
40°-50°	373.8	17.5
50°-60°	292.9	13.7
60°-70°	190.9	8.9
70°-80°	84.6	4.0
80°-90°	18.2	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°	763.0	35.8
0°-40°	1172.7	55.0
0°-60°	1839.4	86.2
0°-90°	2133.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2133.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1068	1066	1066	1065	1065	101
15°	999	999	988	978	975	281
25°	865	860	847	816	794	397
35°	702	697	663	613	598	439
45°	539	528	482	442	425	415
55°	374	363	329	290	275	336
65°	222	210	190	193	161	219
75°	89	83	78	74	82	96
85°	13	14	15	16	18	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.5	1086.5	1086.5	1086.5	1086.5
2.5°	1079.0	1079.0	1079.0	1077.7	1077.7
5°	1067.7	1066.4	1066.4	1065.2	1065.2
7.5°	1058.9	1057.6	1056.4	1055.1	1052.6
10°	1046.3	1046.3	1045.1	1038.8	1037.5
12.5°	1026.2	1025.0	1019.9	1011.2	1008.6
15°	998.6	998.6	988.5	978.5	974.7
17.5°	968.4	967.2	954.6	944.6	939.6
20°	935.8	933.3	920.7	904.4	895.6
22.5°	899.4	899.4	884.3	862.9	854.1
25°	865.4	860.4	846.6	816.5	793.9
27.5°	826.5	819.0	803.9	761.2	734.8
30°	783.8	780.0	758.7	703.4	683.3
32.5°	743.6	737.3	714.7	656.9	640.6
35°	702.2	697.1	663.2	613.0	597.9
37.5°	660.7	654.4	611.7	571.5	552.7
40°	619.3	611.7	565.2	528.8	508.7
42.5°	580.3	570.3	525.0	486.1	463.5
45°	538.9	527.6	482.3	442.1	424.6
47.5°	497.4	487.4	445.9	404.5	384.4
50°	453.5	444.7	407.0	365.5	344.2
52.5°	417.0	403.2	366.8	325.3	307.7
55°	374.3	363.0	329.1	290.2	275.1
57.5°	335.4	324.1	292.7	256.2	243.7
60°	299.0	282.6	256.2	224.8	214.8
62.5°	258.8	246.2	223.6	197.2	209.8
65°	222.3	209.8	189.7	193.4	160.8
67.5°	182.1	175.9	158.3	140.7	135.7
70°	148.2	140.7	134.4	115.6	110.5
72.5°	118.1	110.5	101.7	91.7	87.9
75°	89.2	82.9	77.9	74.1	81.6
77.5°	61.5	59.0	55.3	51.5	50.2
80°	40.2	38.9	37.7	36.4	35.2
82.5°	23.9	23.9	23.9	23.9	23.9
85°	12.6	13.8	15.1	16.3	17.6
87.5°	7.5	7.5	8.8	10.0	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)