

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: P559112

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559112
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-12-1-LD4-2HI-40-UNV-81-88-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

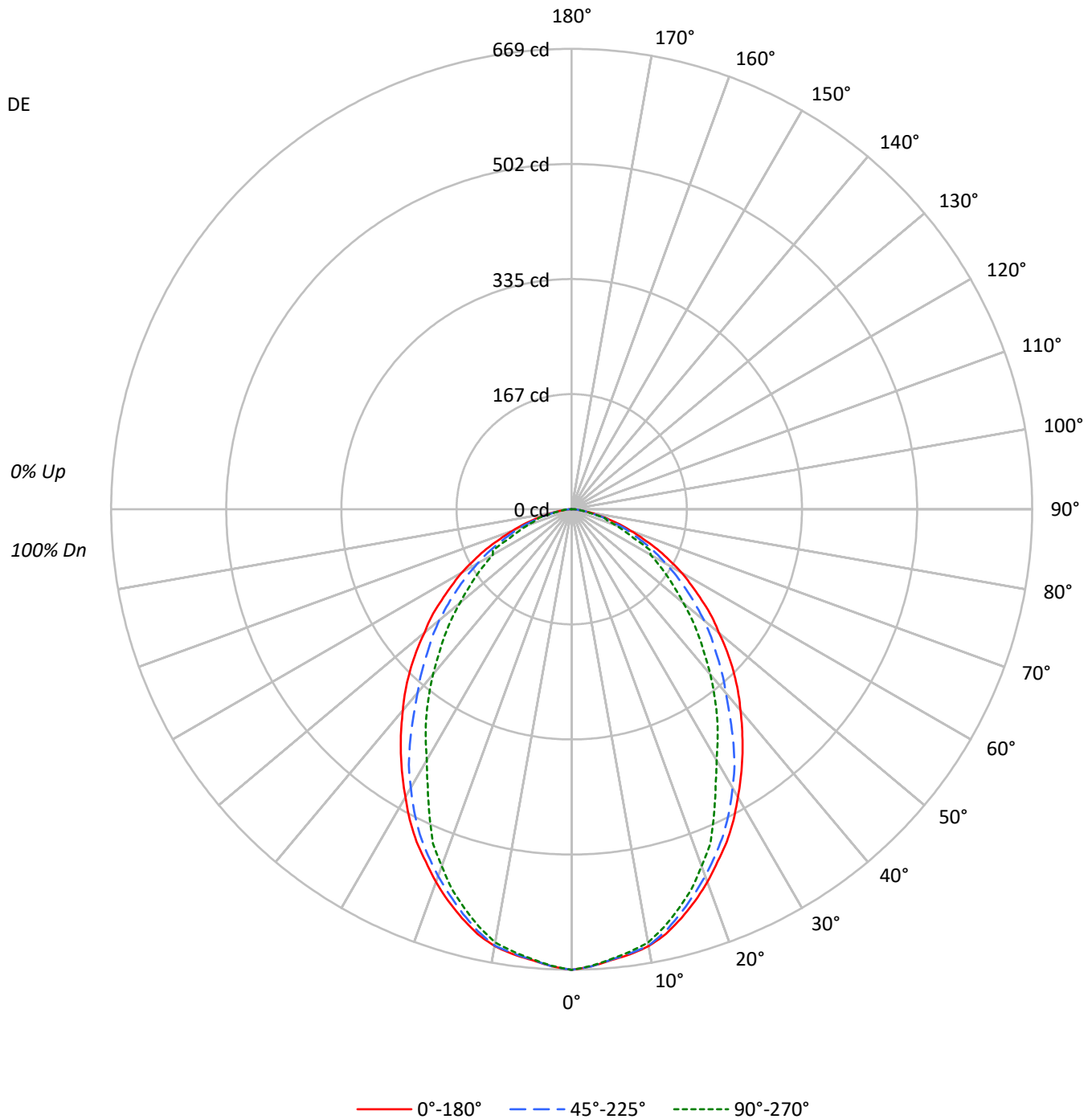
Lumens per Lamp: N/A
Luminaire Lumens: 1314.0 lumens
Efficiency: N/A
Efficacy: 60.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7204	7204	7204
5°	7106	7099	7090
10°	7045	7037	6986
15°	6856	6786	6692
20°	6604	6497	6320
25°	6331	6194	5808
30°	6001	5809	5231
35°	5684	5369	4840
40°	5361	4893	4404
45°	5054	4523	3981
50°	4677	4198	3550
55°	4328	3804	3181
60°	3965	3399	2848
65°	3489	2975	2521
70°	2873	2606	2143
75°	2283	1996	2092
80°	1537	1438	1345
85°	951	1149	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5054 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.3	4.7
10°-20°	171.0	13.0
20°-30°	236.7	18.0
30°-40°	252.4	19.2
40°-50°	230.3	17.5
50°-60°	180.4	13.7
60°-70°	117.6	8.9
70°-80°	52.1	4.0
80°-90°	11.2	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°	470.0	35.8
0°-40°	722.4	55.0
0°-60°	1133.1	86.2
0°-90°	1314.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1314.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	658	657	657	656	656	62
15°	615	615	609	603	600	173
25°	533	530	522	503	489	245
35°	433	430	409	378	368	270
45°	332	325	297	272	262	256
55°	231	224	203	179	170	207
65°	137	129	117	119	99	135
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	669.3	669.3	669.3	669.3	669.3
2.5°	664.7	664.7	664.7	663.9	663.9
5°	657.7	657.0	657.0	656.2	656.2
7.5°	652.3	651.5	650.8	650.0	648.4
10°	644.6	644.6	643.8	639.9	639.2
12.5°	632.2	631.4	628.3	622.9	621.4
15°	615.2	615.2	609.0	602.8	600.5
17.5°	596.6	595.8	588.1	581.9	578.8
20°	576.5	574.9	567.2	557.1	551.7
22.5°	554.0	554.0	544.8	531.6	526.2
25°	533.1	530.1	521.5	503.0	489.0
27.5°	509.2	504.5	495.2	468.9	452.7
30°	482.8	480.5	467.4	433.3	420.9
32.5°	458.1	454.2	440.3	404.7	394.6
35°	432.6	429.5	408.6	377.6	368.3
37.5°	407.0	403.1	376.8	352.1	340.5
40°	381.5	376.8	348.2	325.8	313.4
42.5°	357.5	351.3	323.4	299.5	285.5
45°	332.0	325.0	297.1	272.4	261.5
47.5°	306.4	300.2	274.7	249.2	236.8
50°	279.3	273.9	250.7	225.2	212.0
52.5°	256.9	248.4	225.9	200.4	189.6
55°	230.6	223.6	202.7	178.7	169.5
57.5°	206.6	199.6	180.3	157.9	150.1
60°	184.2	174.1	157.9	138.5	132.3
62.5°	159.4	151.7	137.7	121.5	129.2
65°	137.0	129.2	116.8	119.2	99.0
67.5°	112.2	108.3	97.5	86.7	83.6
70°	91.3	86.7	82.8	71.2	68.1
72.5°	72.7	68.1	62.7	56.5	54.2
75°	54.9	51.1	48.0	45.7	50.3
77.5°	37.9	36.4	34.0	31.7	31.0
80°	24.8	24.0	23.2	22.4	21.7
82.5°	14.7	14.7	14.7	14.7	14.7
85°	7.7	8.5	9.3	10.1	10.8
87.5°	4.6	4.6	5.4	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)