

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: P558720

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558720
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-LD4-1LO-40-UNV-81-84-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 474.0 lumens
Efficiency: N/A
Efficacy: 81.7 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

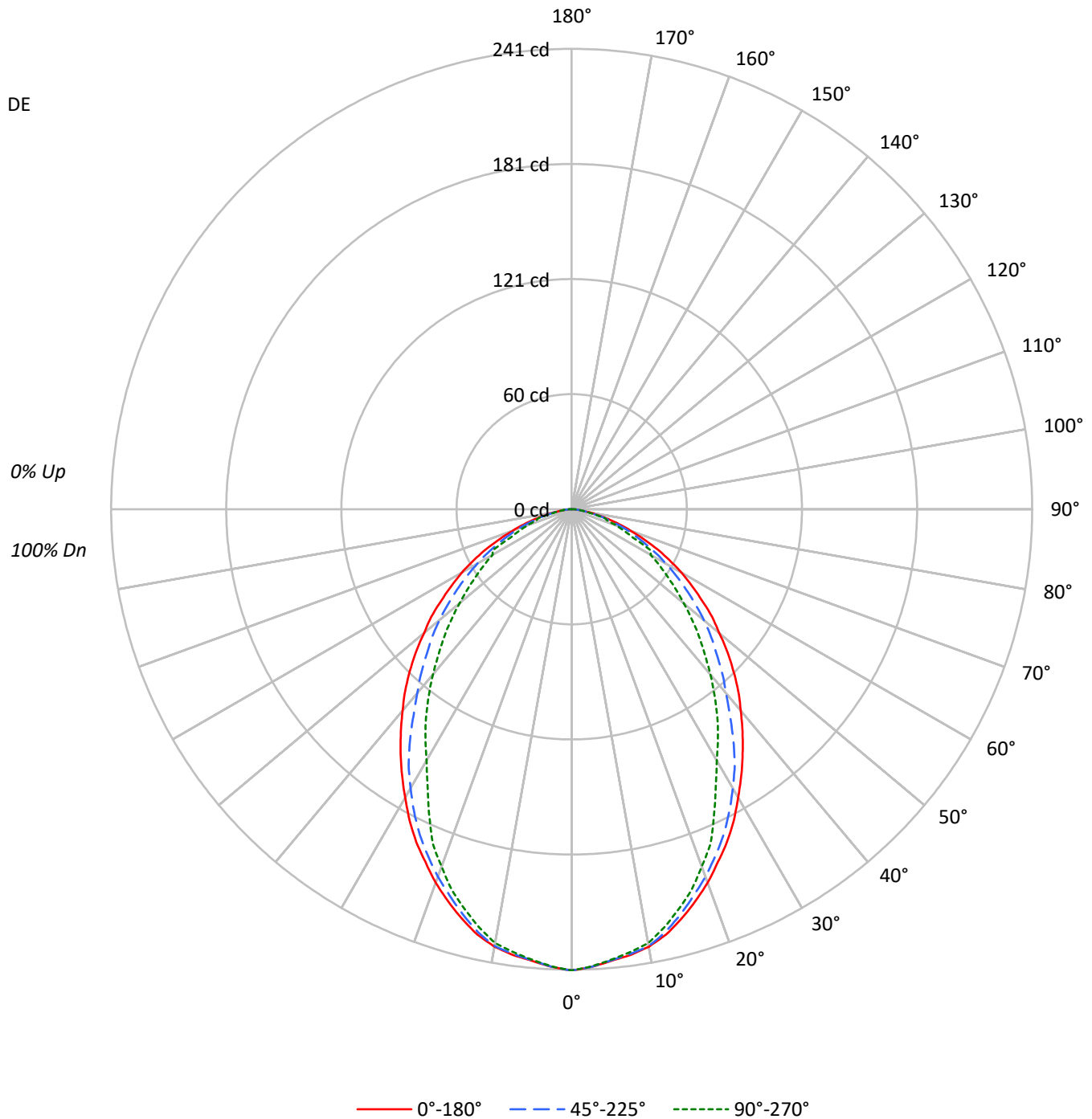
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2598	2598	2598
5°	2564	2561	2558
10°	2541	2538	2520
15°	2473	2448	2414
20°	2383	2344	2279
25°	2284	2234	2095
30°	2165	2096	1887
35°	2050	1937	1746
40°	1933	1765	1588
45°	1822	1632	1435
50°	1688	1514	1281
55°	1561	1372	1147
60°	1429	1225	1027
65°	1258	1072	909
70°	1035	941	774
75°	823	719	753
80°	552	521	483
85°	346	408	482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1822 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.5	4.7
10°-20°	61.7	13.0
20°-30°	85.4	18.0
30°-40°	91.1	19.2
40°-50°	83.1	17.5
50°-60°	65.1	13.7
60°-70°	42.4	8.9
70°-80°	18.8	4.0
80°-90°	4.0	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°	169.6	35.8
0°-40°	260.6	55.0
0°-60°	408.7	86.2
0°-90°	474.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	241	241	241	241	241	
5°	237	237	237	237	237	23
15°	222	222	220	217	217	62
25°	192	191	188	181	176	88
35°	156	155	147	136	133	98
45°	120	117	107	98	94	92
55°	83	81	73	64	61	75
65°	49	47	42	43	36	49
75°	20	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	241.4	241.4	241.4	241.4	241.4
2.5°	239.8	239.8	239.8	239.5	239.5
5°	237.3	237.0	237.0	236.7	236.7
7.5°	235.3	235.0	234.8	234.5	233.9
10°	232.5	232.5	232.2	230.8	230.6
12.5°	228.1	227.8	226.7	224.7	224.1
15°	221.9	221.9	219.7	217.4	216.6
17.5°	215.2	214.9	212.1	209.9	208.8
20°	208.0	207.4	204.6	201.0	199.0
22.5°	199.9	199.9	196.5	191.8	189.8
25°	192.3	191.2	188.1	181.4	176.4
27.5°	183.7	182.0	178.6	169.2	163.3
30°	174.2	173.3	168.6	156.3	151.8
32.5°	165.2	163.9	158.8	146.0	142.4
35°	156.0	154.9	147.4	136.2	132.9
37.5°	146.8	145.4	135.9	127.0	122.8
40°	137.6	135.9	125.6	117.5	113.0
42.5°	129.0	126.7	116.7	108.0	103.0
45°	119.7	117.2	107.2	98.3	94.3
47.5°	110.5	108.3	99.1	89.9	85.4
50°	100.8	98.8	90.4	81.2	76.5
52.5°	92.7	89.6	81.5	72.3	68.4
55°	83.2	80.7	73.1	64.5	61.1
57.5°	74.5	72.0	65.0	56.9	54.2
60°	66.4	62.8	56.9	50.0	47.7
62.5°	57.5	54.7	49.7	43.8	46.6
65°	49.4	46.6	42.1	43.0	35.7
67.5°	40.5	39.1	35.2	31.3	30.1
70°	32.9	31.3	29.9	25.7	24.6
72.5°	26.2	24.6	22.6	20.4	19.5
75°	19.8	18.4	17.3	16.5	18.1
77.5°	13.7	13.1	12.3	11.4	11.2
80°	8.9	8.7	8.4	8.1	7.8
82.5°	5.3	5.3	5.3	5.3	5.3
85°	2.8	3.1	3.3	3.6	3.9
87.5°	1.7	1.7	2.0	2.2	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)