

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: P559232

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559232
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-LD4-2LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

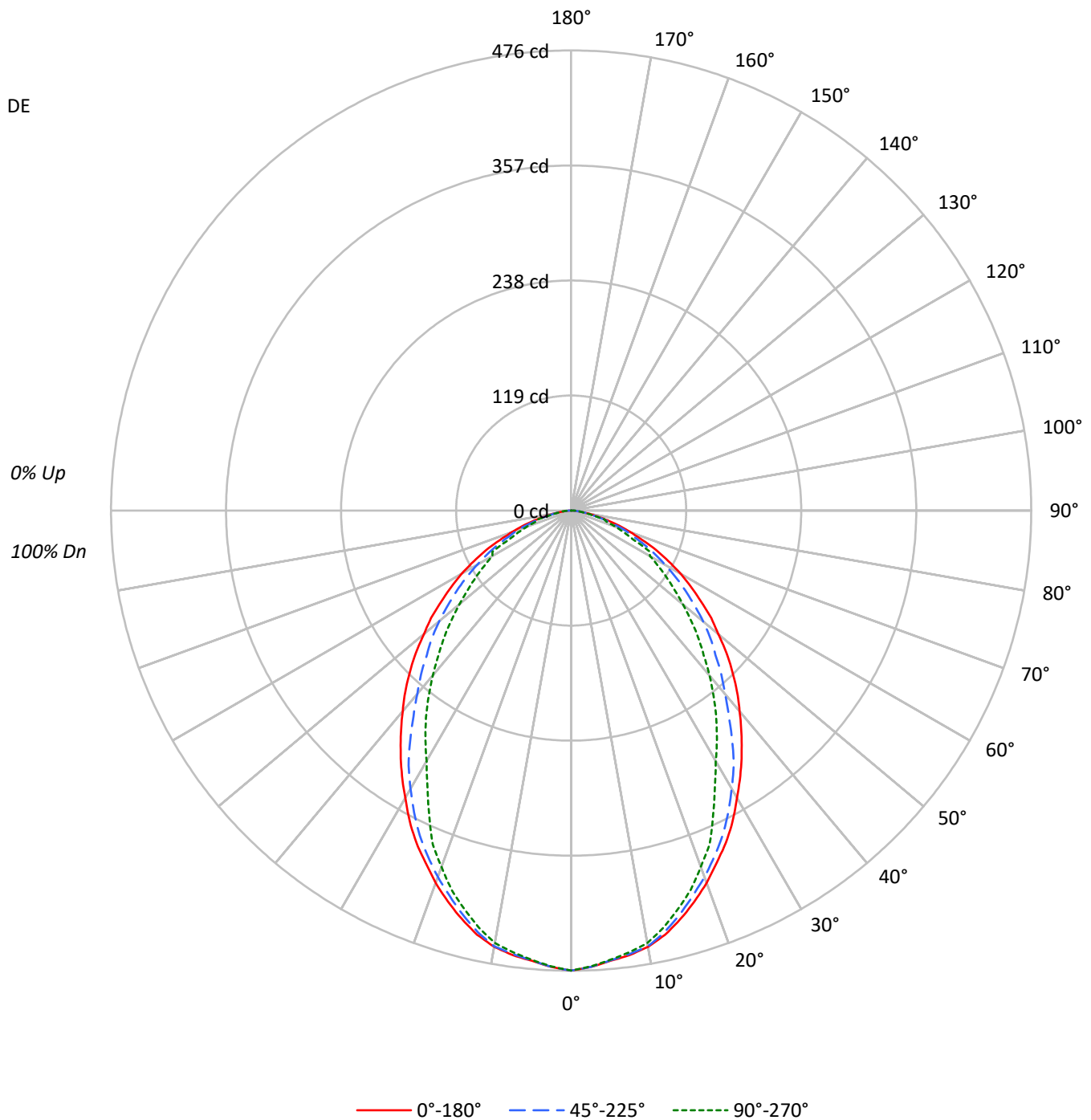
Lumens per Lamp: N/A
Luminaire Lumens: 934.1 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	47	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°	5121	5121	5121
5°	5051	5046	5039
10°	5008	5002	4965
15°	4873	4824	4756
20°	4694	4619	4493
25°	4501	4403	4128
30°	4266	4129	3719
35°	4041	3816	3440
40°	3811	3478	3131
45°	3593	3215	2830
50°	3326	2984	2524
55°	3076	2704	2261
60°	2818	2415	2026
65°	2481	2117	1793
70°	2043	1854	1523
75°	1626	1418	1489
80°	1091	1023	955
85°	679	815	951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3593 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	4.7
10°-20°	121.5	13.0
20°-30°	168.3	18.0
30°-40°	179.4	19.2
40°-50°	163.7	17.5
50°-60°	128.3	13.7
60°-70°	83.6	8.9
70°-80°	37.1	4.0
80°-90°	8.0	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°	334.1	35.8
0°-40°	513.5	55.0
0°-60°	805.5	86.2
0°-90°	934.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	934.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	468	467	467	466	466	44
15°	437	437	433	428	427	123
25°	379	377	371	358	348	174
35°	308	305	290	268	262	192
45°	236	231	211	194	186	182
55°	164	159	144	127	120	147
65°	97	92	83	85	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	475.8	475.8	475.8	475.8	475.8
2.5°	472.5	472.5	472.5	471.9	471.9
5°	467.5	467.0	467.0	466.4	466.4
7.5°	463.7	463.1	462.6	462.0	460.9
10°	458.2	458.2	457.6	454.9	454.3
12.5°	449.4	448.8	446.6	442.8	441.7
15°	437.3	437.3	432.9	428.5	426.8
17.5°	424.1	423.5	418.0	413.6	411.4
20°	409.8	408.7	403.2	396.0	392.2
22.5°	393.8	393.8	387.2	377.9	374.0
25°	379.0	376.8	370.7	357.5	347.6
27.5°	361.9	358.6	352.0	333.3	321.8
30°	343.2	341.6	332.2	308.0	299.2
32.5°	325.6	322.9	313.0	287.7	280.5
35°	307.5	305.3	290.4	268.4	261.8
37.5°	289.3	286.6	267.9	250.3	242.0
40°	271.2	267.9	247.5	231.6	222.8
42.5°	254.1	249.7	229.9	212.9	203.0
45°	236.0	231.0	211.2	193.6	185.9
47.5°	217.8	213.4	195.3	177.1	168.3
50°	198.6	194.7	178.2	160.1	150.7
52.5°	182.6	176.6	160.6	142.5	134.8
55°	163.9	159.0	144.1	127.1	120.5
57.5°	146.9	141.9	128.2	112.2	106.7
60°	130.9	123.8	112.2	98.5	94.1
62.5°	113.3	107.8	97.9	86.4	91.9
65°	97.4	91.9	83.1	84.7	70.4
67.5°	79.8	77.0	69.3	61.6	59.4
70°	64.9	61.6	58.9	50.6	48.4
72.5°	51.7	48.4	44.6	40.2	38.5
75°	39.1	36.3	34.1	32.5	35.8
77.5°	27.0	25.9	24.2	22.6	22.0
80°	17.6	17.1	16.5	16.0	15.4
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
87.5°	3.3	3.3	3.9	4.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)