

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: P559552

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559552  
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-LD4-2STD-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

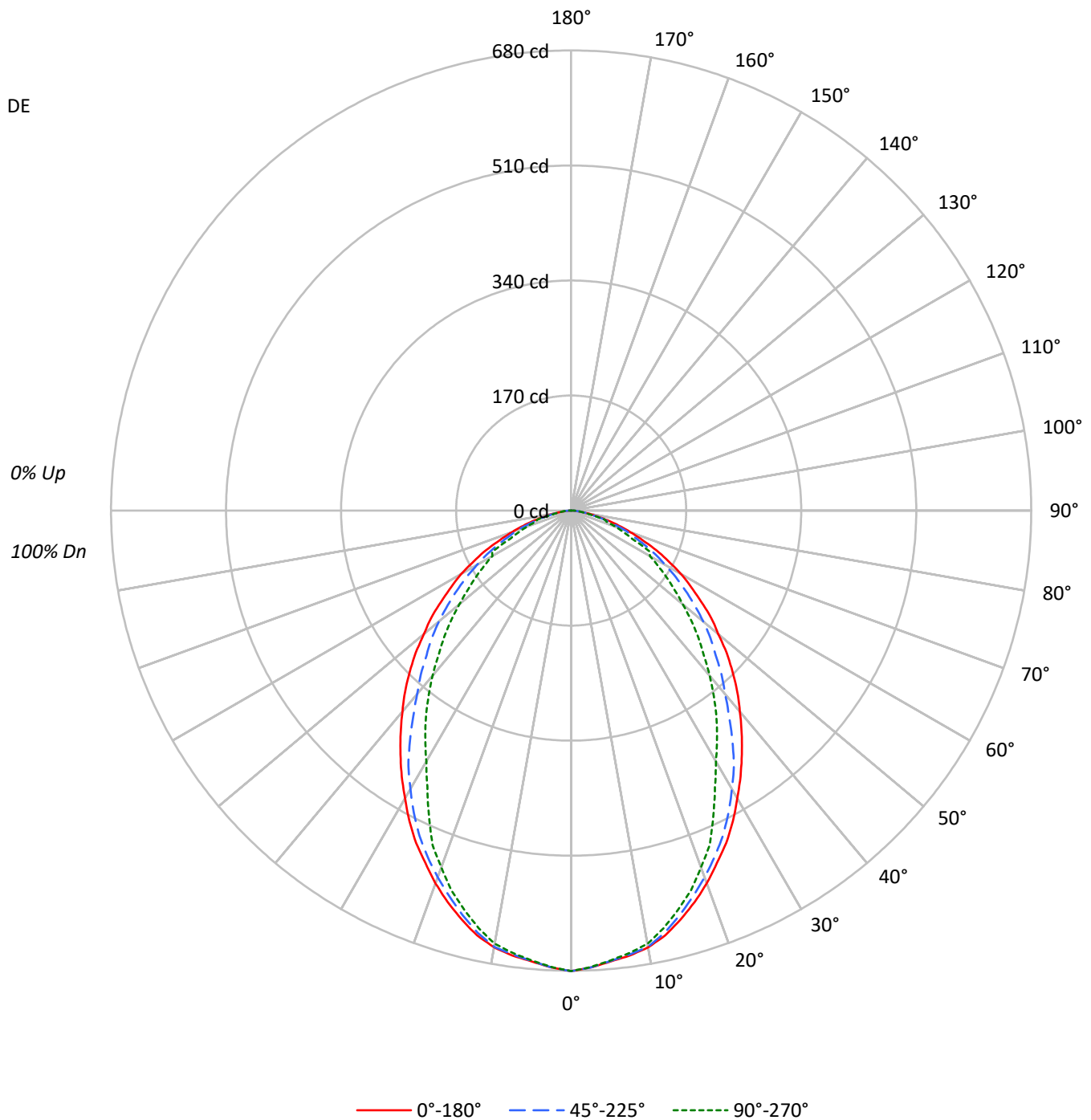
Lumens per Lamp: N/A  
Luminaire Lumens: 1336.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7325	7325	7325
5°	7225	7218	7209
10°	7163	7155	7103
15°	6970	6900	6803
20°	6714	6606	6426
25°	6438	6298	5905
30°	6101	5906	5320
35°	5779	5458	4921
40°	5450	4974	4477
45°	5138	4599	4048
50°	4756	4268	3610
55°	4401	3868	3233
60°	4030	3455	2895
65°	3548	3026	2565
70°	2921	2650	2178
75°	2325	2030	2125
80°	1562	1463	1364
85°	976	1161	1359

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5138 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.3	4.7
10°-20°	173.9	13.0
20°-30°	240.7	18.0
30°-40°	256.6	19.2
40°-50°	234.1	17.5
50°-60°	183.4	13.7
60°-70°	119.5	8.9
70°-80°	53.0	4.0
80°-90°	11.4	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°	477.9	35.8
0°-40°	734.5	55.0
0°-60°	1152.1	86.2
0°-90°	1336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1336.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	669	668	668	667	667	63
15°	626	626	619	613	610	176
25°	542	539	530	511	497	249
35°	440	437	415	384	374	275
45°	338	330	302	277	266	260
55°	234	227	206	182	172	210
65°	139	131	119	121	101	137
75°	56	52	49	46	51	60
85°	8	9	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°	680.5	680.5	680.5	680.5	680.5
2.5°	675.8	675.8	675.8	675.0	675.0
5°	668.7	668.0	668.0	667.2	667.2
7.5°	663.2	662.4	661.7	660.9	659.3
10°	655.4	655.4	654.6	650.6	649.9
12.5°	642.8	642.0	638.8	633.3	631.8
15°	625.5	625.5	619.2	612.9	610.5
17.5°	606.6	605.8	597.9	591.6	588.5
20°	586.1	584.6	576.7	566.5	561.0
22.5°	563.3	563.3	553.9	540.5	535.0
25°	542.1	538.9	530.3	511.4	497.2
27.5°	517.7	513.0	503.5	476.8	460.2
30°	490.9	488.6	475.2	440.6	428.0
32.5°	465.8	461.8	447.7	411.5	401.2
35°	439.8	436.6	415.4	383.9	374.5
37.5°	413.8	409.9	383.1	358.0	346.2
40°	387.9	383.1	354.0	331.2	318.6
42.5°	363.5	357.2	328.9	304.5	290.3
45°	337.5	330.4	302.1	276.9	265.9
47.5°	311.6	305.3	279.3	253.3	240.7
50°	284.0	278.5	254.9	228.9	215.6
52.5°	261.2	252.5	229.7	203.8	192.8
55°	234.5	227.4	206.1	181.7	172.3
57.5°	210.1	203.0	183.3	160.5	152.6
60°	187.2	177.0	160.5	140.8	134.5
62.5°	162.1	154.2	140.0	123.5	131.4
65°	139.3	131.4	118.8	121.2	100.7
67.5°	114.1	110.1	99.1	88.1	85.0
70°	92.8	88.1	84.2	72.4	69.2
72.5°	74.0	69.2	63.7	57.4	55.1
75°	55.9	51.9	48.8	46.4	51.1
77.5°	38.6	37.0	34.6	32.3	31.5
80°	25.2	24.4	23.6	22.8	22.0
82.5°	14.9	14.9	14.9	14.9	14.9
85°	7.9	8.7	9.4	10.2	11.0
87.5°	4.7	4.7	5.5	6.3	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)