

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: P559175

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-81-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559175  
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-50-UNV-81-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

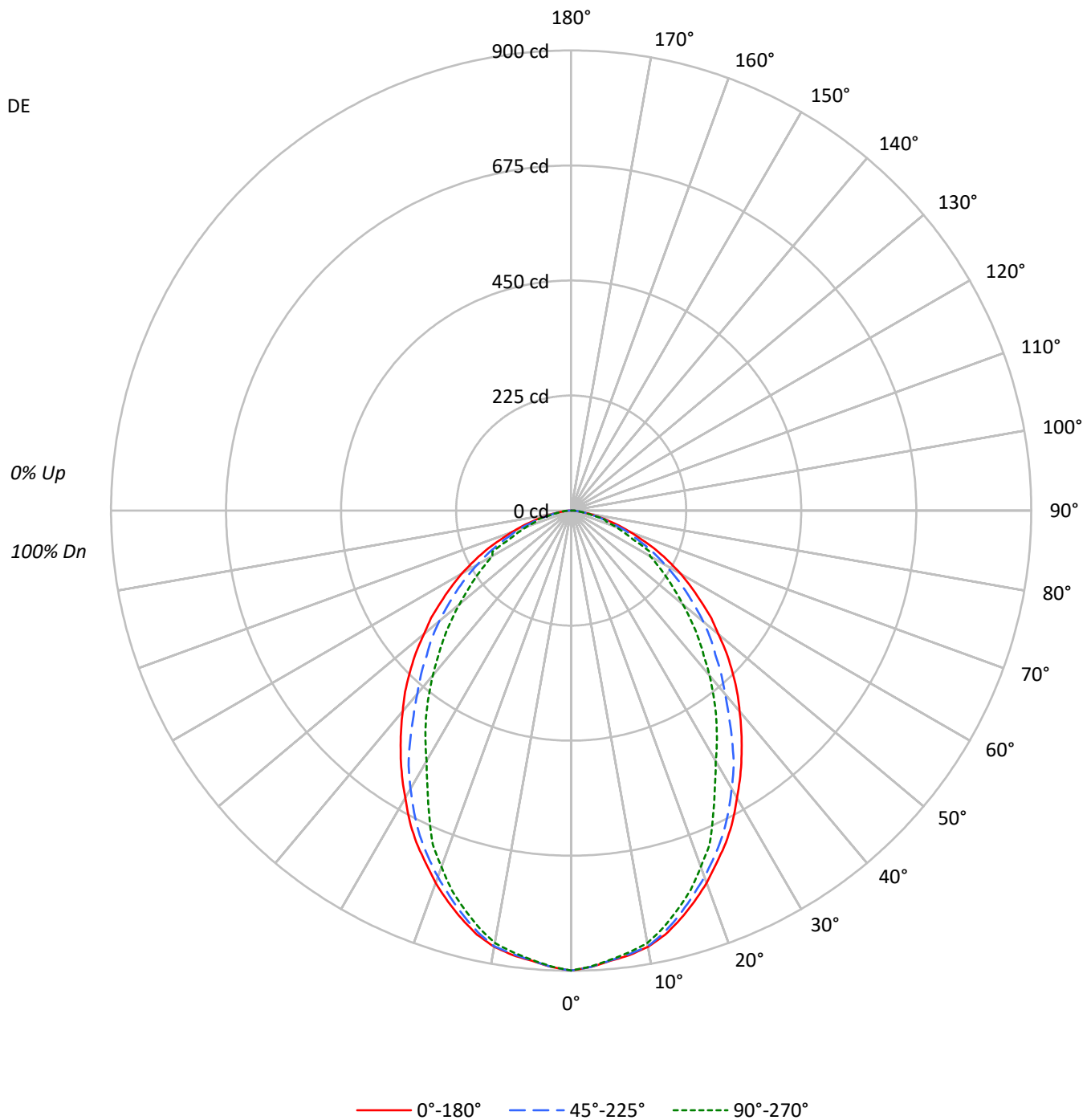
Lumens per Lamp: N/A  
Luminaire Lumens: 1766.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	9683	9683	9683
5°	9552	9540	9529
10°	9469	9458	9389
15°	9214	9121	8993
20°	8875	8732	8494
25°	8510	8324	7807
30°	8065	7807	7031
35°	7638	7215	6504
40°	7204	6576	5918
45°	6791	6078	5351
50°	6286	5643	4773
55°	5816	5114	4275
60°	5328	4568	3828
65°	4689	3999	3390
70°	3862	3503	2880
75°	3069	2682	2811
80°	2064	1934	1804
85°	1284	1544	1803

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6791 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.7	4.7
10°-20°	229.8	13.0
20°-30°	318.2	18.0
30°-40°	339.3	19.2
40°-50°	309.5	17.5
50°-60°	242.5	13.7
60°-70°	158.0	8.9
70°-80°	70.0	4.0
80°-90°	15.0	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°	631.7	35.8
0°-40°	971.0	55.0
0°-60°	1522.9	86.2
0°-90°	1766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1766.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	884	883	883	882	882	84
15°	827	827	818	810	807	232
25°	716	712	701	676	657	329
35°	581	577	549	508	495	363
45°	446	437	399	366	352	344
55°	310	301	272	240	228	278
65°	184	174	157	160	133	181
75°	74	69	64	61	68	79
85°	10	11	12	14	15	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	899.6	899.6	899.6	899.6	899.6
2.5°	893.3	893.3	893.3	892.3	892.3
5°	884.0	882.9	882.9	881.9	881.9
7.5°	876.7	875.7	874.6	873.6	871.5
10°	866.3	866.3	865.3	860.1	859.0
12.5°	849.7	848.6	844.5	837.2	835.1
15°	826.8	826.8	818.5	810.1	807.0
17.5°	801.8	800.8	790.4	782.1	777.9
20°	774.8	772.7	762.3	748.8	741.5
22.5°	744.6	744.6	732.1	714.5	707.2
25°	716.5	712.4	700.9	676.0	657.3
27.5°	684.3	678.1	665.6	630.2	608.4
30°	648.9	645.8	628.1	582.4	565.7
32.5°	615.7	610.5	591.7	543.9	530.4
35°	581.3	577.2	549.1	507.5	495.0
37.5°	547.0	541.8	506.5	473.2	457.6
40°	512.7	506.5	468.0	437.8	421.2
42.5°	480.5	472.1	434.7	402.5	383.8
45°	446.1	436.8	399.3	366.1	351.5
47.5°	411.8	403.5	369.2	334.9	318.2
50°	375.4	368.2	337.0	302.6	285.0
52.5°	345.3	333.8	303.7	269.4	254.8
55°	309.9	300.6	272.5	240.2	227.8
57.5°	277.7	268.3	242.3	212.2	201.8
60°	247.5	234.0	212.2	186.2	177.8
62.5°	214.2	203.8	185.1	163.3	173.7
65°	184.1	173.7	157.0	160.2	133.1
67.5°	150.8	145.6	131.0	116.5	112.3
70°	122.7	116.5	111.3	95.7	91.5
72.5°	97.8	91.5	84.2	75.9	72.8
75°	73.8	68.6	64.5	61.4	67.6
77.5°	51.0	48.9	45.8	42.6	41.6
80°	33.3	32.2	31.2	30.2	29.1
82.5°	19.8	19.8	19.8	19.8	19.8
85°	10.4	11.4	12.5	13.5	14.6
87.5°	6.2	6.2	7.3	8.3	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)