

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: P560119

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-80-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560119  
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-12-2-LD4-1STD-50-UNV-80-87-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

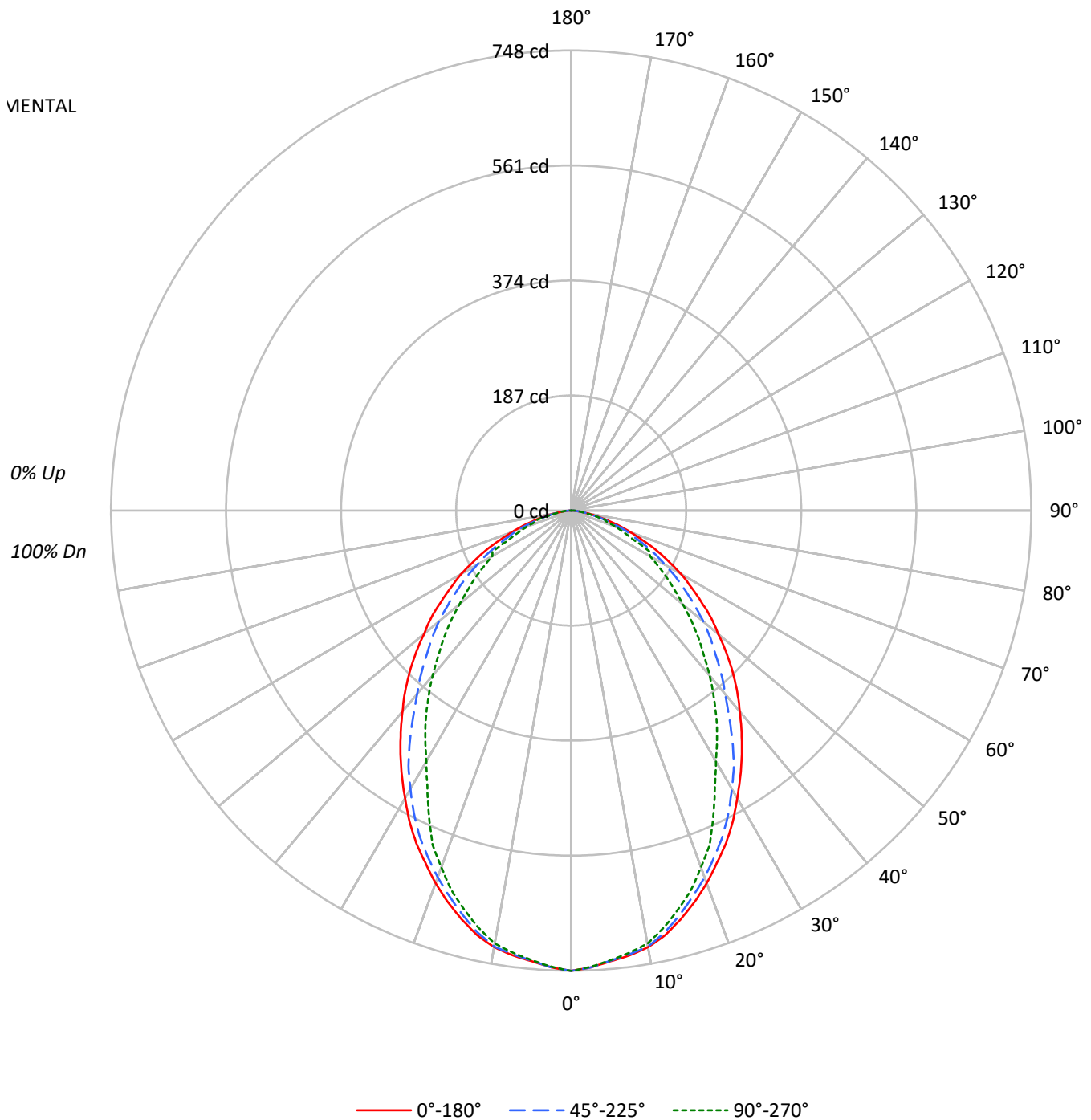
Lumens per Lamp: N/A  
Luminaire Lumens: 1469.0 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4027	4027	4027
5°	3972	3968	3963
10°	3938	3933	3905
15°	3832	3793	3740
20°	3691	3632	3533
25°	3539	3463	3246
30°	3355	3247	2925
35°	3177	3001	2706
40°	2996	2735	2462
45°	2825	2528	2226
50°	2615	2347	1984
55°	2419	2126	1778
60°	2216	1900	1592
65°	1950	1663	1410
70°	1607	1457	1197
75°	1277	1115	1169
80°	859	806	750
85°	537	642	747

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2825 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.7	4.7
10°-20°	191.2	13.0
20°-30°	264.7	18.0
30°-40°	282.2	19.2
40°-50°	257.4	17.5
50°-60°	201.7	13.7
60°-70°	131.5	8.9
70°-80°	58.2	4.0
80°-90°	12.5	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°	525.5	35.8
0°-40°	807.7	55.0
0°-60°	1266.8	86.2
0°-90°	1469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1469.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	735	734	734	734	734	70
15°	688	688	681	674	671	193
25°	596	593	583	562	547	274
35°	484	480	457	422	412	302
45°	371	363	332	304	292	286
55°	258	250	227	200	190	231
65°	153	144	131	133	111	151
75°	61	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	748.3	748.3	748.3	748.3	748.3
2.5°	743.1	743.1	743.1	742.2	742.2
5°	735.3	734.4	734.4	733.6	733.6
7.5°	729.3	728.4	727.5	726.7	724.9
10°	720.6	720.6	719.7	715.4	714.6
12.5°	706.8	705.9	702.4	696.4	694.7
15°	687.7	687.7	680.8	673.9	671.3
17.5°	667.0	666.1	657.5	650.5	647.1
20°	644.5	642.7	634.1	622.9	616.8
22.5°	619.4	619.4	609.0	594.3	588.3
25°	596.0	592.6	583.1	562.3	546.7
27.5°	569.2	564.0	553.6	524.2	506.1
30°	539.8	537.2	522.5	484.4	470.6
32.5°	512.1	507.8	492.2	452.4	441.2
35°	483.6	480.1	456.8	422.2	411.8
37.5°	455.0	450.7	421.3	393.6	380.6
40°	426.5	421.3	389.3	364.2	350.4
42.5°	399.7	392.7	361.6	334.8	319.2
45°	371.1	363.3	332.2	304.5	292.4
47.5°	342.6	335.6	307.1	278.6	264.7
50°	312.3	306.2	280.3	251.7	237.0
52.5°	287.2	277.7	252.6	224.1	211.9
55°	257.8	250.0	226.6	199.8	189.5
57.5°	231.0	223.2	201.6	176.5	167.8
60°	205.9	194.6	176.5	154.8	147.9
62.5°	178.2	169.6	154.0	135.8	144.5
65°	153.1	144.5	130.6	133.2	110.7
67.5°	125.4	121.1	109.0	96.9	93.4
70°	102.1	96.9	92.6	79.6	76.1
72.5°	81.3	76.1	70.1	63.2	60.6
75°	61.4	57.1	53.6	51.0	56.2
77.5°	42.4	40.7	38.1	35.5	34.6
80°	27.7	26.8	26.0	25.1	24.2
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.7	9.5	10.4	11.2	12.1
87.5°	5.2	5.2	6.1	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)