

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: P559619

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-81-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559619  
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-LD4-1HI-35-UNV-81-85-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

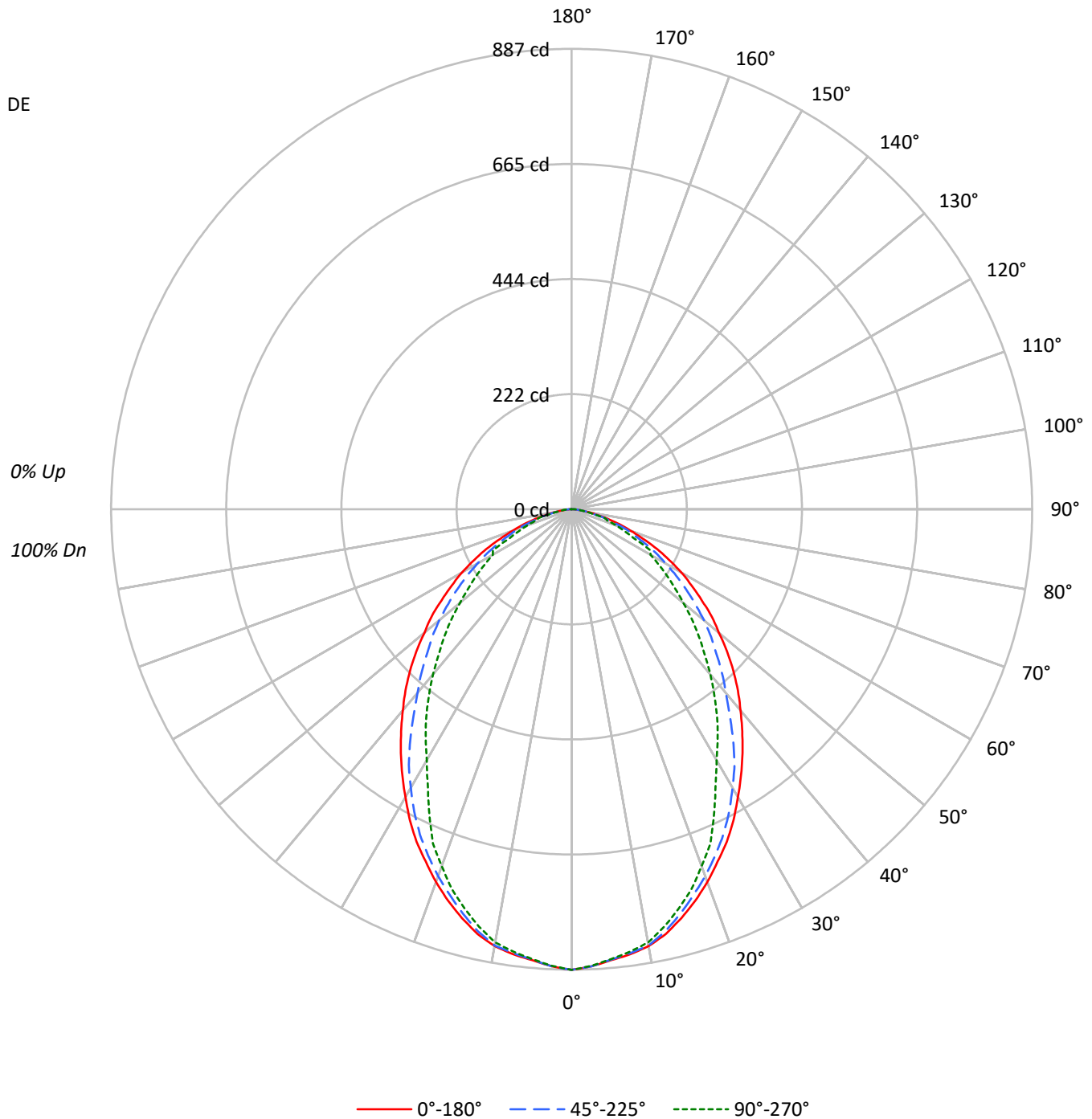
Lumens per Lamp: N/A  
Luminaire Lumens: 1742.0 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4776	4776	4776
5°	4711	4705	4700
10°	4670	4664	4630
15°	4544	4498	4436
20°	4377	4306	4189
25°	4197	4106	3850
30°	3978	3851	3468
35°	3767	3558	3208
40°	3553	3243	2919
45°	3350	2998	2639
50°	3100	2783	2354
55°	2868	2522	2108
60°	2627	2253	1888
65°	2313	1973	1672
70°	1904	1728	1421
75°	1514	1323	1387
80°	1017	955	890
85°	636	760	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3350 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.6	4.7
10°-20°	226.7	13.0
20°-30°	313.8	18.0
30°-40°	334.6	19.2
40°-50°	305.3	17.5
50°-60°	239.2	13.7
60°-70°	155.9	8.9
70°-80°	69.1	4.0
80°-90°	14.8	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°	623.1	35.8
0°-40°	957.8	55.0
0°-60°	1502.2	86.2
0°-90°	1742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1742.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	872	871	871	870	870	83
15°	816	816	807	799	796	229
25°	707	703	691	667	648	324
35°	573	569	542	501	488	358
45°	440	431	394	361	347	339
55°	306	296	269	237	225	274
65°	182	171	155	158	131	179
75°	73	68	64	60	67	78
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	887.4	887.4	887.4	887.4	887.4
2.5°	881.2	881.2	881.2	880.2	880.2
5°	872.0	870.9	870.9	869.9	869.9
7.5°	864.8	863.8	862.7	861.7	859.7
10°	854.5	854.5	853.5	848.4	847.3
12.5°	838.1	837.1	833.0	825.8	823.7
15°	815.5	815.5	807.3	799.1	796.1
17.5°	790.9	789.9	779.6	771.4	767.3
20°	764.3	762.2	751.9	738.6	731.4
22.5°	734.5	734.5	722.2	704.8	697.6
25°	706.8	702.7	691.4	666.8	648.3
27.5°	675.0	668.8	656.5	621.7	600.1
30°	640.1	637.0	619.6	574.5	558.1
32.5°	607.3	602.2	583.7	536.5	523.2
35°	573.4	569.3	541.6	500.6	488.3
37.5°	539.6	534.5	499.6	466.8	451.4
40°	505.7	499.6	461.6	431.9	415.5
42.5°	473.9	465.7	428.8	397.0	378.5
45°	440.1	430.9	393.9	361.1	346.7
47.5°	406.2	398.0	364.2	330.3	313.9
50°	370.3	363.1	332.4	298.5	281.1
52.5°	340.6	329.3	299.5	265.7	251.3
55°	305.7	296.5	268.8	237.0	224.7
57.5°	273.9	264.7	239.0	209.3	199.0
60°	244.1	230.8	209.3	183.6	175.4
62.5°	211.3	201.1	182.6	161.1	171.3
65°	181.6	171.3	154.9	158.0	131.3
67.5°	148.7	143.6	129.3	114.9	110.8
70°	121.0	114.9	109.8	94.4	90.3
72.5°	96.4	90.3	83.1	74.9	71.8
75°	72.8	67.7	63.6	60.5	66.7
77.5°	50.3	48.2	45.1	42.1	41.0
80°	32.8	31.8	30.8	29.7	28.7
82.5°	19.5	19.5	19.5	19.5	19.5
85°	10.3	11.3	12.3	13.3	14.4
87.5°	6.2	6.2	7.2	8.2	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)