

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: P558999

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-82-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558999  
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-LD4-1STD-50-UNV-82-87-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

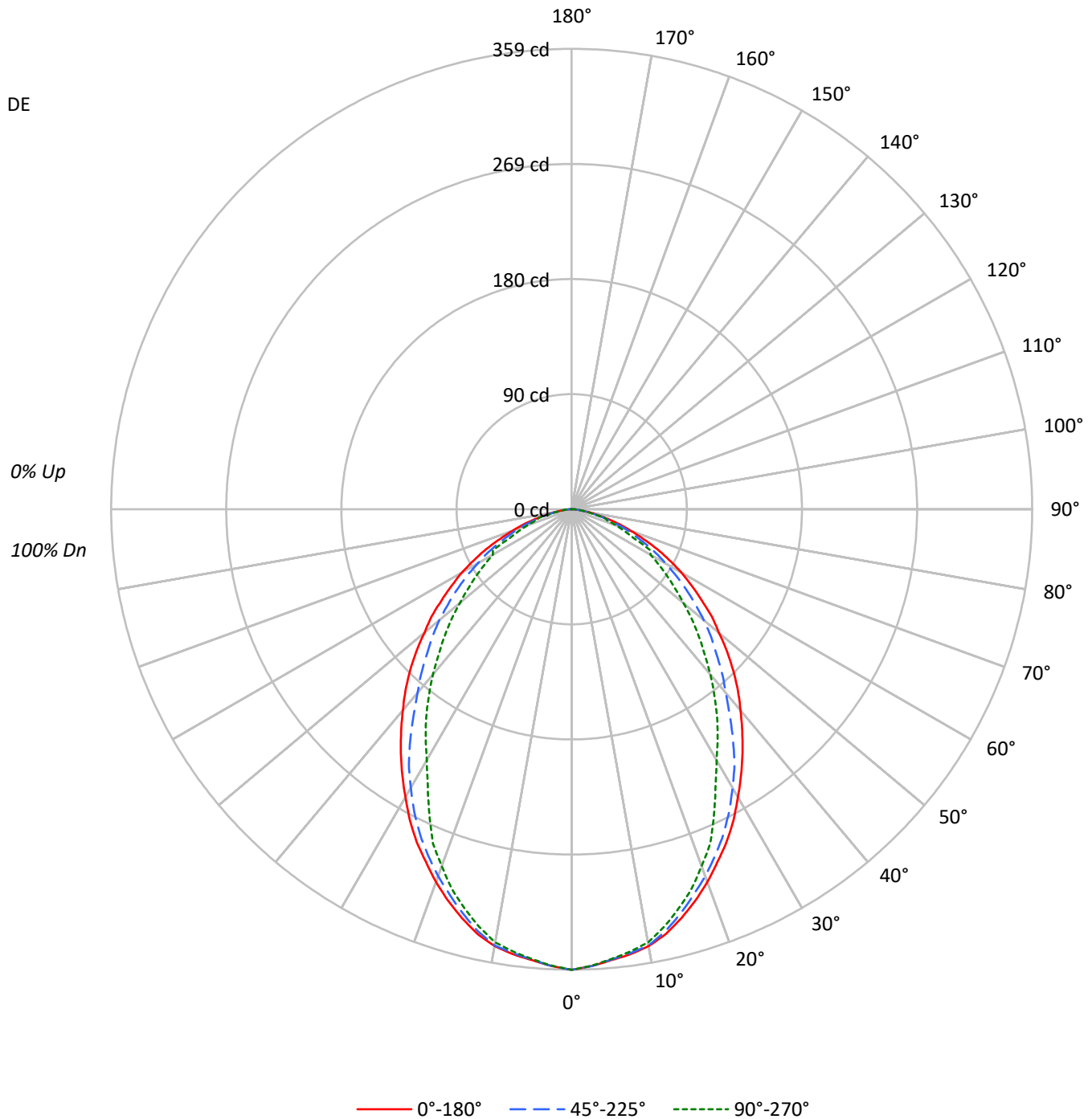
Lumens per Lamp: N/A  
Luminaire Lumens: 705.0 lumens  
Efficiency: N/A  
Efficacy: 84.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3865	3865	3865
5°	3813	3809	3804
10°	3780	3775	3748
15°	3679	3641	3590
20°	3543	3486	3391
25°	3397	3323	3116
30°	3220	3117	2806
35°	3050	2880	2597
40°	2876	2625	2362
45°	2711	2426	2136
50°	2510	2252	1906
55°	2321	2042	1706
60°	2127	1823	1528
65°	1872	1597	1352
70°	1542	1397	1149
75°	1227	1069	1123
80°	824	775	719
85°	519	618	716

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2711 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.4	4.7
10°-20°	91.7	13.0
20°-30°	127.0	18.0
30°-40°	135.4	19.2
40°-50°	123.6	17.5
50°-60°	96.8	13.7
60°-70°	63.1	8.9
70°-80°	27.9	4.0
80°-90°	6.0	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°	252.2	35.8
0°-40°	387.6	55.0
0°-60°	608.0	86.2
0°-90°	705.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	705.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	359	359	359	359	359	
5°	353	352	352	352	352	33
15°	330	330	327	323	322	93
25°	286	284	280	270	262	131
35°	232	230	219	203	198	145
45°	178	174	159	146	140	137
55°	124	120	109	96	91	111
65°	74	69	63	64	53	72
75°	30	27	26	24	27	32
85°	4	5	5	5	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	359.1	359.1	359.1	359.1	359.1
2.5°	356.6	356.6	356.6	356.2	356.2
5°	352.9	352.5	352.5	352.1	352.1
7.5°	350.0	349.6	349.2	348.7	347.9
10°	345.8	345.8	345.4	343.3	342.9
12.5°	339.2	338.8	337.1	334.2	333.4
15°	330.1	330.1	326.7	323.4	322.2
17.5°	320.1	319.7	315.5	312.2	310.5
20°	309.3	308.5	304.3	298.9	296.0
22.5°	297.3	297.3	292.3	285.2	282.3
25°	286.0	284.4	279.8	269.9	262.4
27.5°	273.2	270.7	265.7	251.6	242.9
30°	259.1	257.8	250.8	232.5	225.8
32.5°	245.8	243.7	236.2	217.1	211.7
35°	232.1	230.4	219.2	202.6	197.6
37.5°	218.4	216.3	202.2	188.9	182.7
40°	204.7	202.2	186.8	174.8	168.1
42.5°	191.8	188.5	173.5	160.7	153.2
45°	178.1	174.4	159.4	146.1	140.3
47.5°	164.4	161.1	147.4	133.7	127.0
50°	149.9	147.0	134.5	120.8	113.8
52.5°	137.8	133.3	121.2	107.5	101.7
55°	123.7	120.0	108.8	95.9	90.9
57.5°	110.8	107.1	96.7	84.7	80.5
60°	98.8	93.4	84.7	74.3	71.0
62.5°	85.5	81.4	73.9	65.2	69.3
65°	73.5	69.3	62.7	63.9	53.1
67.5°	60.2	58.1	52.3	46.5	44.8
70°	49.0	46.5	44.4	38.2	36.5
72.5°	39.0	36.5	33.6	30.3	29.1
75°	29.5	27.4	25.7	24.5	27.0
77.5°	20.3	19.5	18.3	17.0	16.6
80°	13.3	12.9	12.5	12.0	11.6
82.5°	7.9	7.9	7.9	7.9	7.9
85°	4.2	4.6	5.0	5.4	5.8
87.5°	2.5	2.5	2.9	3.3	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)