

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: P558857

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-81-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558857  
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-35-UNV-81-88-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

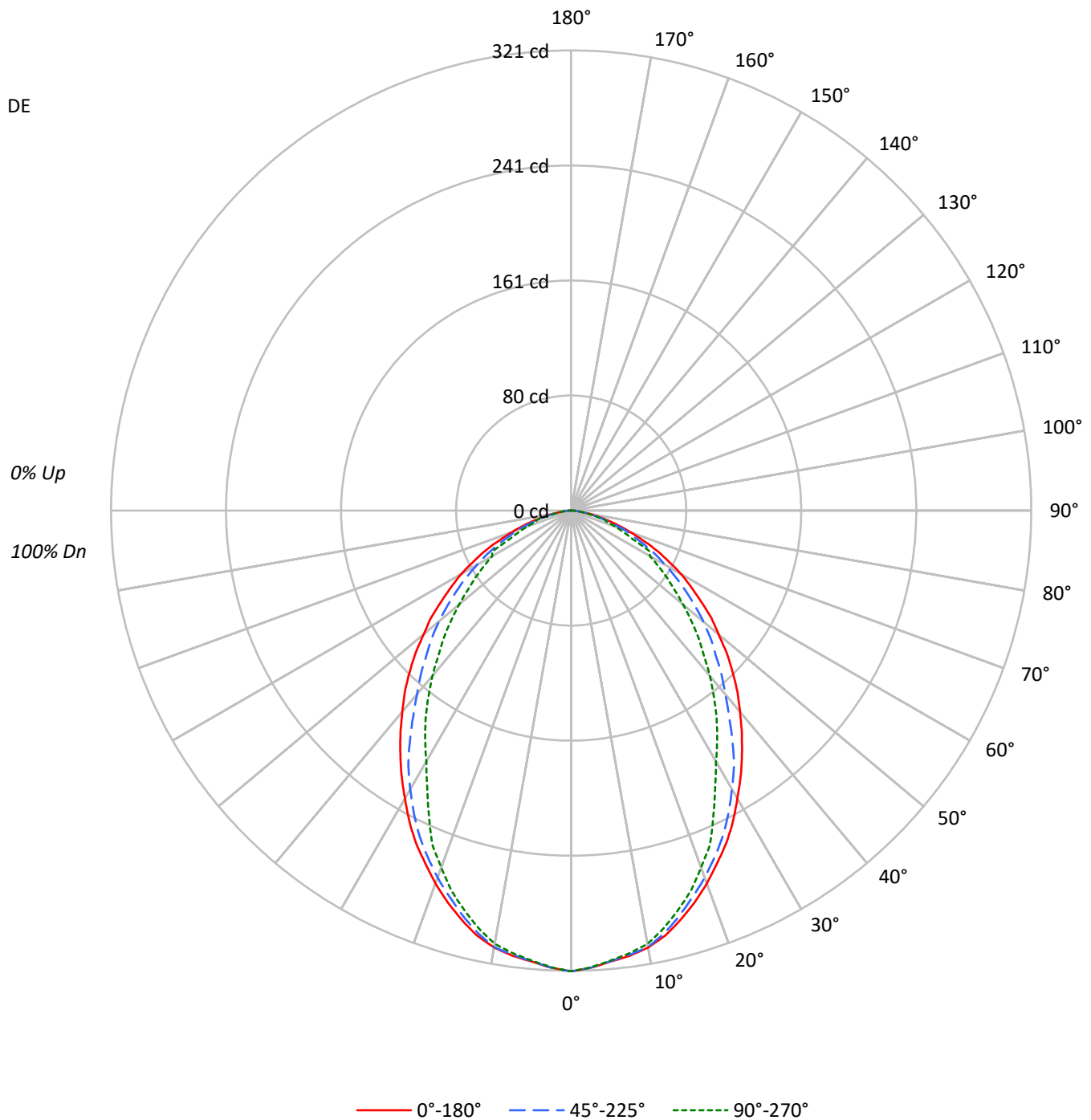
Lumens per Lamp: N/A  
Luminaire Lumens: 631.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3460	3460	3460
5°	3412	3409	3405
10°	3383	3380	3354
15°	3292	3258	3214
20°	3171	3120	3034
25°	3040	2974	2789
30°	2882	2789	2512
35°	2729	2578	2325
40°	2574	2349	2115
45°	2426	2172	1912
50°	2246	2016	1705
55°	2077	1828	1528
60°	1903	1632	1367
65°	1676	1429	1212
70°	1378	1253	1029
75°	1098	957	1006
80°	738	688	645
85°	457	556	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2426 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.9	4.7
10°-20°	82.1	13.0
20°-30°	113.7	18.0
30°-40°	121.2	19.2
40°-50°	110.6	17.5
50°-60°	86.6	13.7
60°-70°	56.5	8.9
70°-80°	25.0	4.0
80°-90°	5.4	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°	225.7	35.8
0°-40°	346.9	55.0
0°-60°	544.1	86.2
0°-90°	631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	631.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	321	321	321	321	321	
5°	316	316	316	315	315	30
15°	295	295	292	290	288	83
25°	256	254	250	242	235	118
35°	208	206	196	181	177	130
45°	159	156	143	131	126	123
55°	111	107	97	86	81	99
65°	66	62	56	57	48	65
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	321.4	321.4	321.4	321.4	321.4
2.5°	319.2	319.2	319.2	318.8	318.8
5°	315.8	315.5	315.5	315.1	315.1
7.5°	313.2	312.9	312.5	312.1	311.4
10°	309.5	309.5	309.2	307.3	306.9
12.5°	303.6	303.2	301.7	299.1	298.4
15°	295.4	295.4	292.4	289.5	288.4
17.5°	286.5	286.1	282.4	279.4	277.9
20°	276.8	276.1	272.4	267.5	264.9
22.5°	266.1	266.1	261.6	255.3	252.7
25°	256.0	254.5	250.4	241.5	234.8
27.5°	244.5	242.3	237.8	225.2	217.4
30°	231.9	230.8	224.4	208.1	202.1
32.5°	220.0	218.1	211.4	194.3	189.5
35°	207.7	206.2	196.2	181.3	176.9
37.5°	195.5	193.6	181.0	169.1	163.5
40°	183.2	181.0	167.2	156.4	150.5
42.5°	171.7	168.7	155.3	143.8	137.1
45°	159.4	156.1	142.7	130.8	125.6
47.5°	147.1	144.2	131.9	119.7	113.7
50°	134.1	131.5	120.4	108.1	101.8
52.5°	123.4	119.3	108.5	96.2	91.0
55°	110.7	107.4	97.4	85.8	81.4
57.5°	99.2	95.9	86.6	75.8	72.1
60°	88.4	83.6	75.8	66.5	63.5
62.5°	76.5	72.8	66.1	58.3	62.1
65°	65.8	62.1	56.1	57.2	47.6
67.5°	53.9	52.0	46.8	41.6	40.1
70°	43.8	41.6	39.8	34.2	32.7
72.5°	34.9	32.7	30.1	27.1	26.0
75°	26.4	24.5	23.0	21.9	24.2
77.5°	18.2	17.5	16.3	15.2	14.9
80°	11.9	11.5	11.1	10.8	10.4
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.7	4.1	4.5	4.8	5.2
87.5°	2.2	2.2	2.6	3.0	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)