

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: P559129

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559129  
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-40-UNV-82-88-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

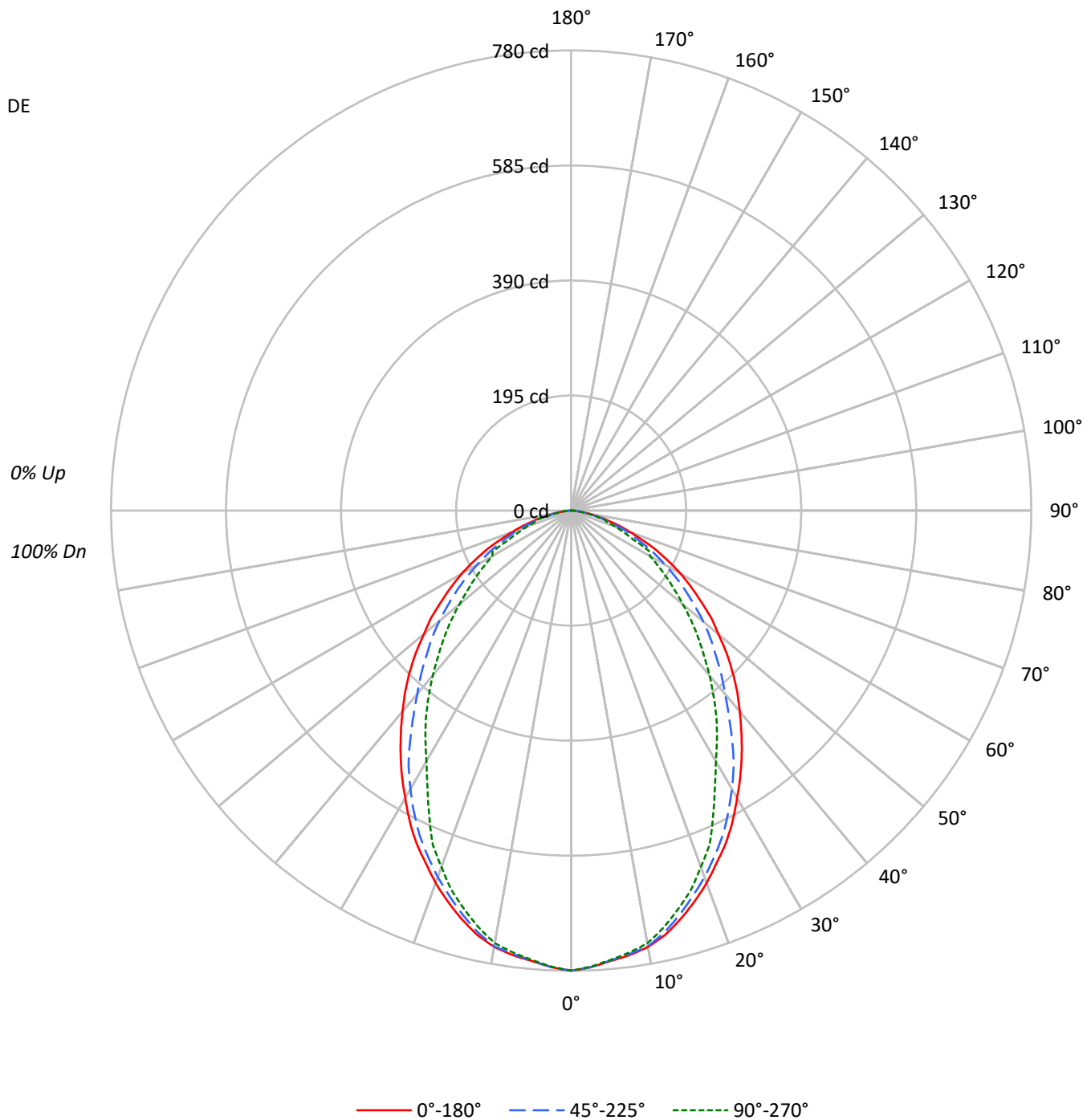
Lumens per Lamp: N/A  
Luminaire Lumens: 1531.0 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8395	8395	8395
5°	8280	8270	8260
10°	8208	8199	8140
15°	7988	7906	7796
20°	7694	7570	7363
25°	7378	7217	6767
30°	6993	6769	6096
35°	6623	6255	5640
40°	6246	5701	5130
45°	5888	5270	4638
50°	5451	4891	4136
55°	5043	4433	3704
60°	4620	3959	3320
65°	4065	3466	2939
70°	3349	3037	2496
75°	2662	2325	2437
80°	1791	1674	1562
85°	1112	1334	1556

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5888 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.6	4.7
10°-20°	199.2	13.0
20°-30°	275.8	18.0
30°-40°	294.1	19.2
40°-50°	268.3	17.5
50°-60°	210.2	13.7
60°-70°	137.0	8.9
70°-80°	60.7	4.0
80°-90°	13.0	0.8
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°	547.6	35.8
0°-40°	841.8	55.0
0°-60°	1320.3	86.2
0°-90°	1531.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1531.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	766	765	765	764	764	73
15°	717	717	710	702	700	202
25°	621	618	608	586	570	285
35°	504	500	476	440	429	315
45°	387	379	346	317	305	298
55°	269	261	236	208	197	241
65°	160	151	136	139	115	157
75°	64	60	56	53	59	69
85°	9	10	11	12	13	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	779.9	779.9	779.9	779.9	779.9
2.5°	774.5	774.5	774.5	773.6	773.6
5°	766.3	765.4	765.4	764.5	764.5
7.5°	760.0	759.1	758.2	757.3	755.5
10°	751.0	751.0	750.1	745.6	744.7
12.5°	736.6	735.7	732.1	725.8	724.0
15°	716.8	716.8	709.5	702.3	699.6
17.5°	695.1	694.2	685.2	678.0	674.4
20°	671.7	669.9	660.9	649.1	642.8
22.5°	645.5	645.5	634.7	619.4	613.1
25°	621.2	617.6	607.7	586.0	569.8
27.5°	593.2	587.8	577.0	546.4	527.4
30°	562.6	559.9	544.6	504.9	490.5
32.5°	533.7	529.2	513.0	471.5	459.8
35°	504.0	500.4	476.0	440.0	429.2
37.5°	474.2	469.7	439.1	410.2	396.7
40°	444.5	439.1	405.7	379.6	365.1
42.5°	416.5	409.3	376.9	348.9	332.7
45°	386.8	378.7	346.2	317.4	304.7
47.5°	357.0	349.8	320.1	290.3	275.9
50°	325.5	319.2	292.1	262.4	247.0
52.5°	299.3	289.4	263.3	233.5	220.9
55°	268.7	260.6	236.2	208.3	197.4
57.5°	240.7	232.6	210.1	183.9	174.9
60°	214.6	202.9	183.9	161.4	154.2
62.5°	185.7	176.7	160.5	141.5	150.6
65°	159.6	150.6	136.1	138.8	115.4
67.5°	130.7	126.2	113.6	101.0	97.4
70°	106.4	101.0	96.5	82.9	79.3
72.5°	84.7	79.3	73.0	65.8	63.1
75°	64.0	59.5	55.9	53.2	58.6
77.5°	44.2	42.4	39.7	37.0	36.1
80°	28.9	27.9	27.0	26.1	25.2
82.5°	17.1	17.1	17.1	17.1	17.1
85°	9.0	9.9	10.8	11.7	12.6
87.5°	5.4	5.4	6.3	7.2	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)