

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: P559699

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559699  
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-40-UNV-82-85-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

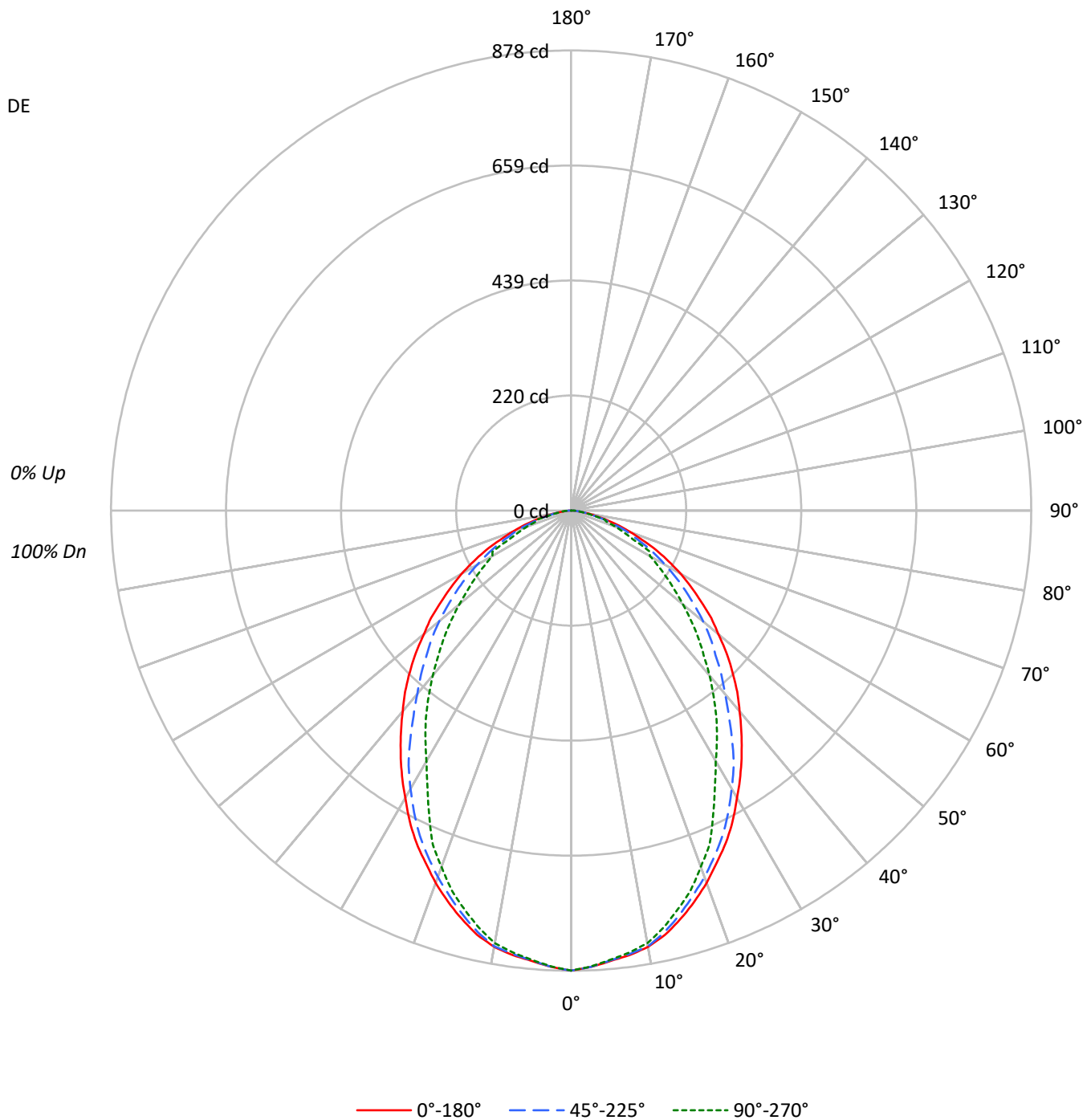
Lumens per Lamp: N/A  
Luminaire Lumens: 1723.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4724	4724	4724
5°	4660	4654	4648
10°	4619	4614	4580
15°	4494	4449	4387
20°	4329	4259	4143
25°	4151	4061	3808
30°	3934	3808	3430
35°	3727	3520	3173
40°	3514	3208	2887
45°	3313	2965	2611
50°	3067	2752	2328
55°	2837	2494	2085
60°	2599	2228	1868
65°	2287	1951	1654
70°	1884	1709	1405
75°	1497	1308	1372
80°	1007	942	880
85°	624	753	877

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3313 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.7	4.7
10°-20°	224.2	13.0
20°-30°	310.4	18.0
30°-40°	331.0	19.2
40°-50°	302.0	17.5
50°-60°	236.6	13.7
60°-70°	154.2	8.9
70°-80°	68.3	4.0
80°-90°	14.7	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°	616.3	35.8
0°-40°	947.3	55.0
0°-60°	1485.8	86.2
0°-90°	1723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1723.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	878	878	878	878	878	
5°	862	861	861	860	860	82
15°	807	807	798	790	787	227
25°	699	695	684	660	641	321
35°	567	563	536	495	483	355
45°	435	426	390	357	343	335
55°	302	293	266	234	222	271
65°	180	169	153	156	130	177
75°	72	67	63	60	66	77
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°	877.7	877.7	877.7	877.7	877.7
2.5°	871.6	871.6	871.6	870.6	870.6
5°	862.5	861.4	861.4	860.4	860.4
7.5°	855.4	854.3	853.3	852.3	850.3
10°	845.2	845.2	844.2	839.1	838.1
12.5°	829.0	828.0	823.9	816.8	814.8
15°	806.6	806.6	798.5	790.4	787.4
17.5°	782.3	781.3	771.1	763.0	759.0
20°	755.9	753.9	743.7	730.5	723.4
22.5°	726.5	726.5	714.3	697.1	690.0
25°	699.1	695.0	683.9	659.5	641.3
27.5°	667.6	661.6	649.4	614.9	593.6
30°	633.1	630.1	612.8	568.2	552.0
32.5°	600.7	595.6	577.3	530.7	517.5
35°	567.2	563.1	535.7	495.1	483.0
37.5°	533.7	528.6	494.1	461.7	446.4
40°	500.2	494.1	456.6	427.2	410.9
42.5°	468.8	460.7	424.1	392.7	374.4
45°	435.3	426.2	389.6	357.2	343.0
47.5°	401.8	393.7	360.2	326.7	310.5
50°	366.3	359.2	328.7	295.3	278.0
52.5°	336.9	325.7	296.3	262.8	248.6
55°	302.4	293.2	265.8	234.4	222.2
57.5°	270.9	261.8	236.4	207.0	196.8
60°	241.5	228.3	207.0	181.6	173.5
62.5°	209.0	198.9	180.6	159.3	169.4
65°	179.6	169.4	153.2	156.3	129.9
67.5°	147.1	142.1	127.8	113.6	109.6
70°	119.7	113.6	108.6	93.3	89.3
72.5°	95.4	89.3	82.2	74.1	71.0
75°	72.0	67.0	62.9	59.9	66.0
77.5°	49.7	47.7	44.6	41.6	40.6
80°	32.5	31.5	30.4	29.4	28.4
82.5°	19.3	19.3	19.3	19.3	19.3
85°	10.1	11.2	12.2	13.2	14.2
87.5°	6.1	6.1	7.1	8.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)