

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: P560018

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560018  
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-LD4-1STD-35-UNV-82-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

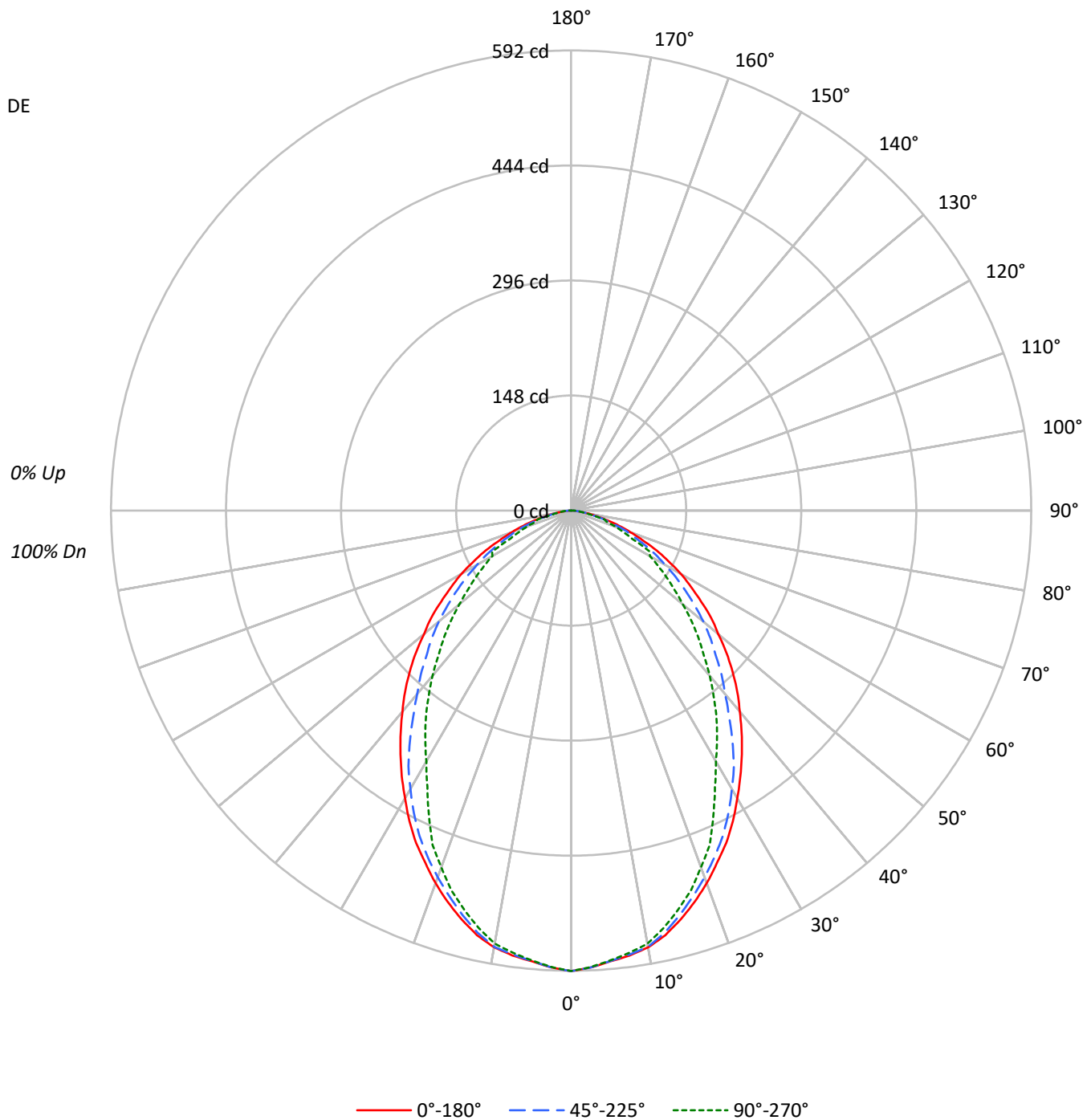
Lumens per Lamp: N/A  
Luminaire Lumens: 1163.0 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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				
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°	3188	3188	3188
5°	3145	3142	3138
10°	3118	3114	3092
15°	3034	3003	2961
20°	2922	2875	2797
25°	2802	2741	2570
30°	2656	2571	2316
35°	2515	2376	2142
40°	2372	2165	1949
45°	2236	2002	1762
50°	2070	1858	1572
55°	1915	1683	1407
60°	1755	1504	1260
65°	1543	1317	1117
70°	1271	1153	949
75°	1011	884	925
80°	679	635	595
85°	420	506	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2236 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	4.7
10°-20°	151.3	13.0
20°-30°	209.5	18.0
30°-40°	223.4	19.2
40°-50°	203.8	17.5
50°-60°	159.7	13.7
60°-70°	104.1	8.9
70°-80°	46.1	4.0
80°-90°	9.9	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°	416.0	35.8
0°-40°	639.4	55.0
0°-60°	1002.9	86.2
0°-90°	1163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1163.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	582	582	582	581	581	55
15°	544	544	539	534	532	153
25°	472	469	462	445	433	217
35°	383	380	362	334	326	239
45°	294	288	263	241	232	226
55°	204	198	179	158	150	183
65°	121	114	103	106	88	119
75°	49	45	42	40	44	52
85°	7	8	8	9	10	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	592.4	592.4	592.4	592.4	592.4
2.5°	588.3	588.3	588.3	587.6	587.6
5°	582.1	581.5	581.5	580.8	580.8
7.5°	577.3	576.7	576.0	575.3	573.9
10°	570.5	570.5	569.8	566.4	565.7
12.5°	559.5	558.9	556.1	551.3	550.0
15°	544.5	544.5	539.0	533.5	531.5
17.5°	528.0	527.4	520.5	515.0	512.3
20°	510.2	508.9	502.0	493.1	488.3
22.5°	490.4	490.4	482.2	470.5	465.7
25°	471.9	469.1	461.6	445.2	432.8
27.5°	450.6	446.5	438.3	415.0	400.7
30°	427.4	425.3	413.7	383.5	372.6
32.5°	405.4	402.0	389.7	358.2	349.3
35°	382.8	380.1	361.6	334.2	326.0
37.5°	360.2	356.8	333.5	311.6	301.3
40°	337.6	333.5	308.2	288.3	277.4
42.5°	316.4	310.9	286.3	265.0	252.7
45°	293.8	287.6	263.0	241.1	231.5
47.5°	271.2	265.7	243.1	220.5	209.6
50°	247.2	242.4	221.9	199.3	187.7
52.5°	227.4	219.8	200.0	177.4	167.8
55°	204.1	197.9	179.4	158.2	150.0
57.5°	182.9	176.7	159.6	139.7	132.9
60°	163.0	154.1	139.7	122.6	117.1
62.5°	141.1	134.2	121.9	107.5	114.4
65°	121.2	114.4	103.4	105.5	87.7
67.5°	99.3	95.9	86.3	76.7	74.0
70°	80.8	76.7	73.3	63.0	60.3
72.5°	64.4	60.3	55.5	50.0	47.9
75°	48.6	45.2	42.5	40.4	44.5
77.5°	33.6	32.2	30.1	28.1	27.4
80°	21.9	21.2	20.5	19.9	19.2
82.5°	13.0	13.0	13.0	13.0	13.0
85°	6.8	7.5	8.2	8.9	9.6
87.5°	4.1	4.1	4.8	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)