

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: P560601

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560601  
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-LD4-2STD-35-UNV-82-88-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

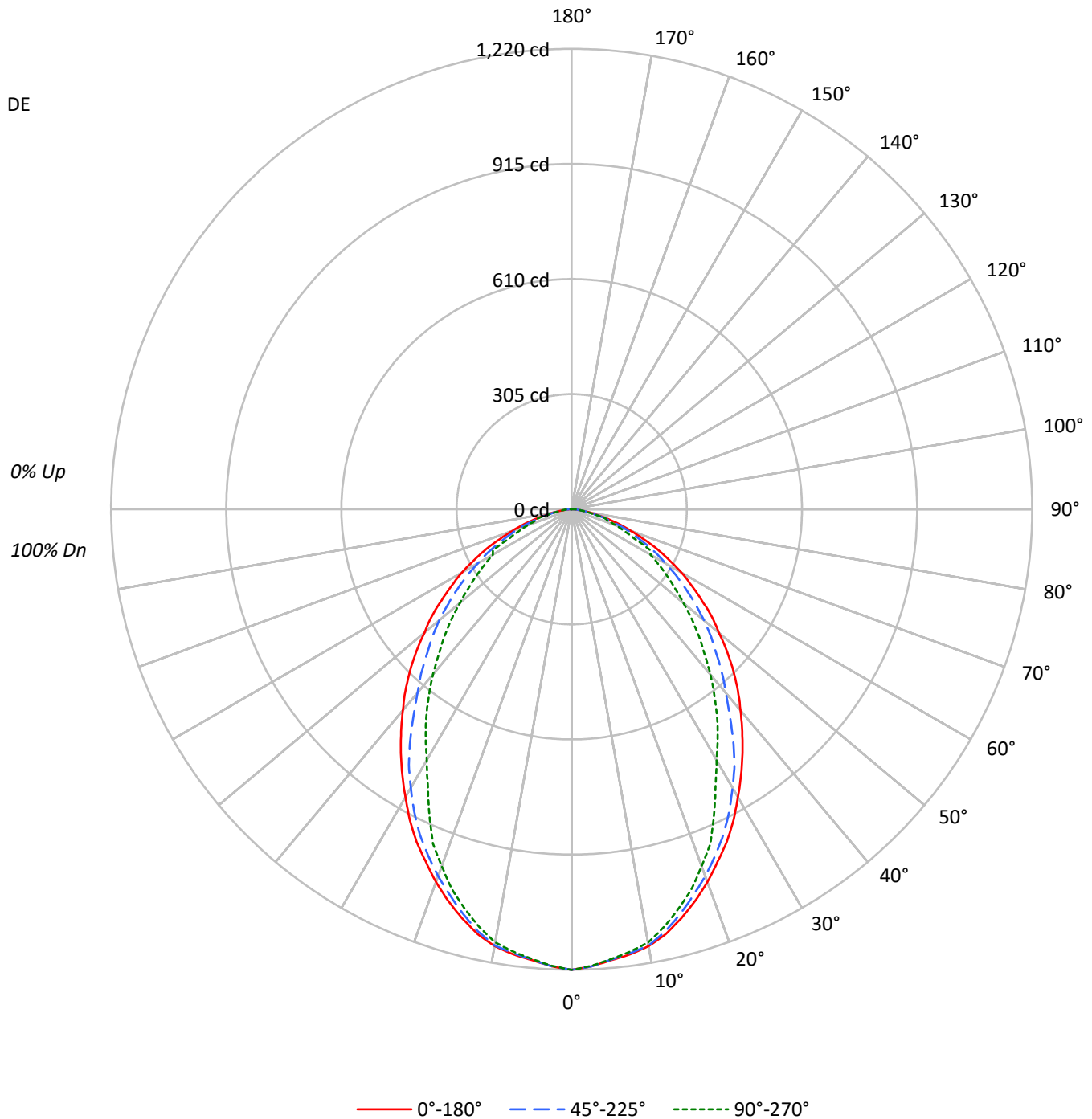
Lumens per Lamp: N/A  
Luminaire Lumens: 2396.0 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6569	6569	6569
5°	6479	6472	6464
10°	6423	6415	6369
15°	6250	6187	6101
20°	6021	5923	5762
25°	5773	5647	5295
30°	5471	5296	4770
35°	5182	4895	4413
40°	4887	4461	4014
45°	4607	4124	3630
50°	4265	3828	3237
55°	3946	3469	2899
60°	3615	3098	2597
65°	3180	2714	2300
70°	2620	2376	1954
75°	2084	1820	1907
80°	1401	1311	1224
85°	871	1044	1223

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4607 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.6	4.7
10°-20°	311.8	13.0
20°-30°	431.7	18.0
30°-40°	460.3	19.2
40°-50°	419.9	17.5
50°-60°	329.0	13.7
60°-70°	214.4	8.9
70°-80°	95.0	4.0
80°-90°	20.4	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°	857.1	35.8
0°-40°	1317.3	55.0
0°-60°	2066.2	86.2
0°-90°	2396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2396.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1220	1220	1220	1220	1220	
5°	1199	1198	1198	1196	1196	114
15°	1122	1122	1110	1099	1095	315
25°	972	966	951	917	892	446
35°	789	783	745	689	672	493
45°	605	593	542	497	477	466
55°	420	408	370	326	309	377
65°	250	236	213	217	181	246
75°	100	93	88	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1220.5	1220.5	1220.5	1220.5	1220.5
2.5°	1212.0	1212.0	1212.0	1210.6	1210.6
5°	1199.3	1197.9	1197.9	1196.5	1196.5
7.5°	1189.4	1188.0	1186.6	1185.2	1182.4
10°	1175.3	1175.3	1173.9	1166.9	1165.5
12.5°	1152.8	1151.4	1145.7	1135.8	1133.0
15°	1121.7	1121.7	1110.4	1099.1	1094.9
17.5°	1087.9	1086.4	1072.3	1061.1	1055.4
20°	1051.2	1048.4	1034.2	1015.9	1006.0
22.5°	1010.3	1010.3	993.3	969.3	959.5
25°	972.2	966.5	951.0	917.1	891.7
27.5°	928.4	920.0	903.0	855.0	825.4
30°	880.4	876.2	852.2	790.1	767.6
32.5°	835.3	828.2	802.8	737.9	719.6
35°	788.7	783.1	745.0	688.6	671.6
37.5°	742.2	735.1	687.1	642.0	620.8
40°	695.6	687.1	634.9	594.0	571.4
42.5°	651.9	640.6	589.8	546.0	520.6
45°	605.3	592.6	541.8	496.7	476.9
47.5°	558.7	547.5	500.9	454.3	431.8
50°	509.4	499.5	457.2	410.6	386.6
52.5°	468.4	452.9	412.0	365.4	345.7
55°	420.5	407.8	369.7	325.9	309.0
57.5°	376.7	364.0	328.8	287.8	273.7
60°	335.8	317.5	287.8	252.6	241.3
62.5°	290.7	276.6	251.2	221.5	235.6
65°	249.7	235.6	213.1	217.3	180.6
67.5°	204.6	197.5	177.8	158.0	152.4
70°	166.5	158.0	151.0	129.8	124.2
72.5°	132.6	124.2	114.3	103.0	98.8
75°	100.2	93.1	87.5	83.2	91.7
77.5°	69.1	66.3	62.1	57.8	56.4
80°	45.2	43.7	42.3	40.9	39.5
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.3	19.8
87.5°	8.5	8.5	9.9	11.3	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)