

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: P560707

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-81-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560707  
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-50-UNV-81-85-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

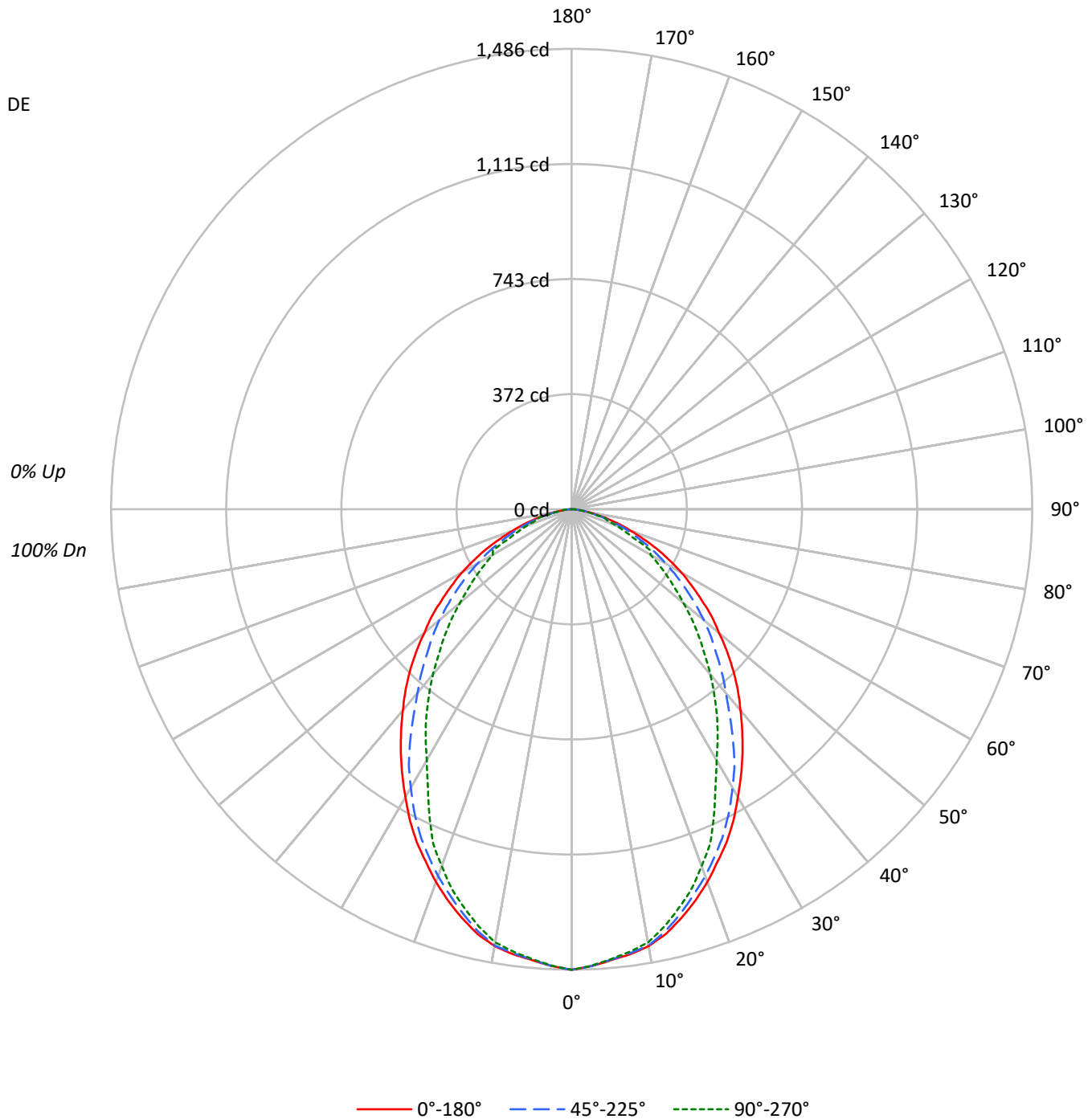
Lumens per Lamp: N/A  
Luminaire Lumens: 2918.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

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

	0°	45°	90°
0°	8000	8000	8000
5°	7891	7882	7873
10°	7823	7813	7757
15°	7612	7535	7430
20°	7332	7214	7017
25°	7031	6878	6449
30°	6664	6450	5809
35°	6311	5961	5374
40°	5952	5433	4889
45°	5611	5023	4421
50°	5194	4662	3942
55°	4805	4224	3531
60°	4402	3773	3162
65°	3874	3305	2802
70°	3191	2894	2379
75°	2537	2215	2323
80°	1705	1599	1491
85°	1062	1272	1488

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5611 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.4	4.7
10°-20°	379.7	13.0
20°-30°	525.7	18.0
30°-40°	560.6	19.2
40°-50°	511.4	17.5
50°-60°	400.6	13.7
60°-70°	261.1	8.9
70°-80°	115.7	4.0
80°-90°	24.8	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°	1043.8	35.8
0°-40°	1604.4	55.0
0°-60°	2516.4	86.2
0°-90°	2918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2918.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1461	1459	1459	1457	1457	139
15°	1366	1366	1352	1339	1334	384
25°	1184	1177	1158	1117	1086	544
35°	961	954	907	839	818	601
45°	737	722	660	605	581	568
55°	512	497	450	397	376	459
65°	304	287	260	265	220	300
75°	122	113	106	101	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1476.1	1476.1	1476.1	1474.4	1474.4
5°	1460.6	1458.9	1458.9	1457.2	1457.2
7.5°	1448.6	1446.9	1445.1	1443.4	1440.0
10°	1431.4	1431.4	1429.7	1421.1	1419.4
12.5°	1403.9	1402.2	1395.3	1383.3	1379.9
15°	1366.1	1366.1	1352.4	1338.6	1333.5
17.5°	1324.9	1323.1	1306.0	1292.2	1285.3
20°	1280.2	1276.7	1259.6	1237.2	1225.2
22.5°	1230.4	1230.4	1209.7	1180.5	1168.5
25°	1184.0	1177.1	1158.2	1116.9	1086.0
27.5°	1130.7	1120.4	1099.8	1041.3	1005.2
30°	1072.3	1067.1	1037.9	962.3	934.8
32.5°	1017.3	1008.7	977.8	898.7	876.4
35°	960.6	953.7	907.3	838.6	817.9
37.5°	903.9	895.3	836.8	781.9	756.1
40°	847.2	836.8	773.3	723.4	695.9
42.5°	793.9	780.1	718.3	665.0	634.1
45°	737.2	721.7	659.9	604.9	580.8
47.5°	680.5	666.7	610.0	553.3	525.8
50°	620.3	608.3	556.8	500.0	470.8
52.5°	570.5	551.6	501.8	445.1	421.0
55°	512.1	496.6	450.2	396.9	376.3
57.5°	458.8	443.3	400.4	350.5	333.4
60°	409.0	386.6	350.5	307.6	293.8
62.5°	354.0	336.8	305.9	269.8	287.0
65°	304.2	287.0	259.5	264.6	220.0
67.5°	249.2	240.6	216.5	192.5	185.6
70°	202.8	192.5	183.9	158.1	151.2
72.5°	161.5	151.2	139.2	125.4	120.3
75°	122.0	113.4	106.5	101.4	111.7
77.5°	84.2	80.8	75.6	70.5	68.7
80°	55.0	53.3	51.6	49.8	48.1
82.5°	32.6	32.6	32.6	32.6	32.6
85°	17.2	18.9	20.6	22.3	24.1
87.5°	10.3	10.3	12.0	13.7	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)