

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: P560256

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560256  
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-LD4-2HI-40-UNV-81-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

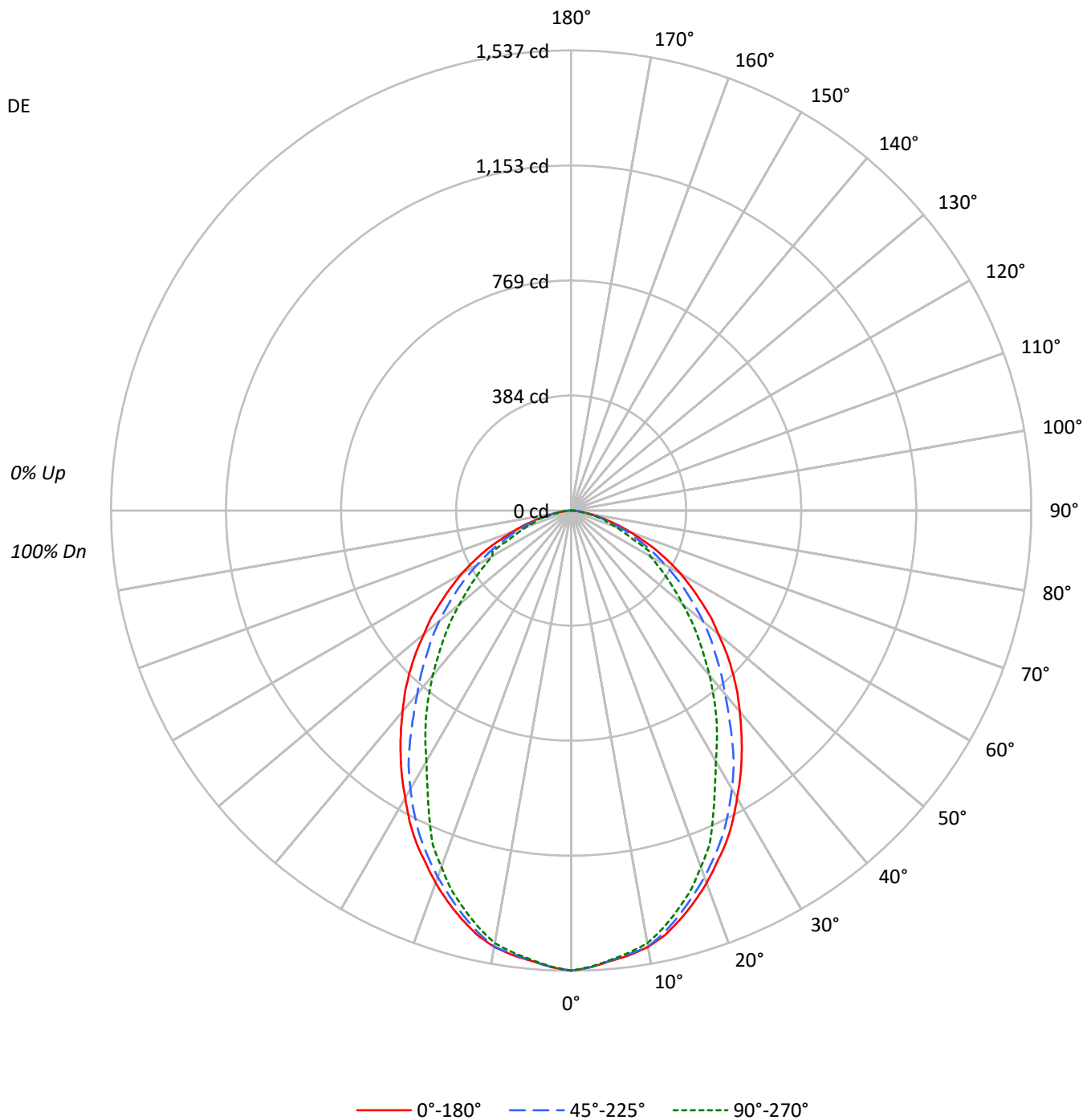
Lumens per Lamp: N/A  
Luminaire Lumens: 3017.0 lumens  
Efficiency: N/A  
Efficacy: 69.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8271	8271	8271
5°	8159	8149	8139
10°	8088	8078	8020
15°	7870	7791	7682
20°	7581	7459	7255
25°	7269	7111	6668
30°	6889	6669	6006
35°	6525	6163	5556
40°	6154	5617	5056
45°	5801	5192	4571
50°	5370	4819	4076
55°	4967	4368	3651
60°	4551	3901	3270
65°	4005	3417	2896
70°	3298	2991	2460
75°	2622	2292	2402
80°	1764	1652	1540
85°	1099	1315	1538

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5801 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.1	4.7
10°-20°	392.6	13.0
20°-30°	543.5	18.0
30°-40°	579.6	19.2
40°-50°	528.7	17.5
50°-60°	414.2	13.7
60°-70°	270.0	8.9
70°-80°	119.6	4.0
80°-90°	25.7	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°	1079.2	35.8
0°-40°	1658.8	55.0
0°-60°	2601.7	86.2
0°-90°	3017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3017.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1537	1537	1537	1537	1537	
5°	1510	1508	1508	1507	1507	143
15°	1412	1412	1398	1384	1379	397
25°	1224	1217	1198	1155	1123	562
35°	993	986	938	867	846	621
45°	762	746	682	625	600	587
55°	529	514	466	410	389	475
65°	314	297	268	274	227	310
75°	126	117	110	105	116	135
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1536.8	1536.8	1536.8	1536.8	1536.8
2.5°	1526.2	1526.2	1526.2	1524.4	1524.4
5°	1510.2	1508.4	1508.4	1506.6	1506.6
7.5°	1497.7	1496.0	1494.2	1492.4	1488.8
10°	1480.0	1480.0	1478.2	1469.3	1467.5
12.5°	1451.5	1449.8	1442.7	1430.2	1426.7
15°	1412.5	1412.5	1398.2	1384.0	1378.7
17.5°	1369.8	1368.0	1350.3	1336.1	1328.9
20°	1323.6	1320.1	1302.3	1279.2	1266.8
22.5°	1272.1	1272.1	1250.8	1220.6	1208.1
25°	1224.1	1217.0	1197.5	1154.8	1122.9
27.5°	1169.0	1158.4	1137.1	1076.7	1039.4
30°	1108.6	1103.3	1073.1	994.9	966.5
32.5°	1051.8	1042.9	1010.9	929.2	906.1
35°	993.2	986.1	938.1	867.0	845.7
37.5°	934.5	925.6	865.2	808.4	781.7
40°	875.9	865.2	799.5	748.0	719.6
42.5°	820.8	806.6	742.6	687.6	655.6
45°	762.2	746.2	682.2	625.4	600.5
47.5°	703.6	689.3	630.7	572.1	543.7
50°	641.4	628.9	575.6	517.0	486.8
52.5°	589.9	570.3	518.8	460.2	435.3
55°	529.4	513.5	465.5	410.4	389.1
57.5°	474.4	458.4	414.0	362.4	344.7
60°	422.8	399.8	362.4	318.0	303.8
62.5°	366.0	348.2	316.2	278.9	296.7
65°	314.5	296.7	268.3	273.6	227.4
67.5°	257.6	248.7	223.9	199.0	191.9
70°	209.6	199.0	190.1	163.5	156.3
72.5°	167.0	156.3	143.9	129.7	124.4
75°	126.1	117.3	110.2	104.8	115.5
77.5°	87.1	83.5	78.2	72.8	71.1
80°	56.9	55.1	53.3	51.5	49.7
82.5°	33.8	33.8	33.8	33.8	33.8
85°	17.8	19.5	21.3	23.1	24.9
87.5°	10.7	10.7	12.4	14.2	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)