

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: P562243

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562243  
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-24-4-LD4-1LO-50-UNV-81-85-EDD  
Description: 2X4 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: -

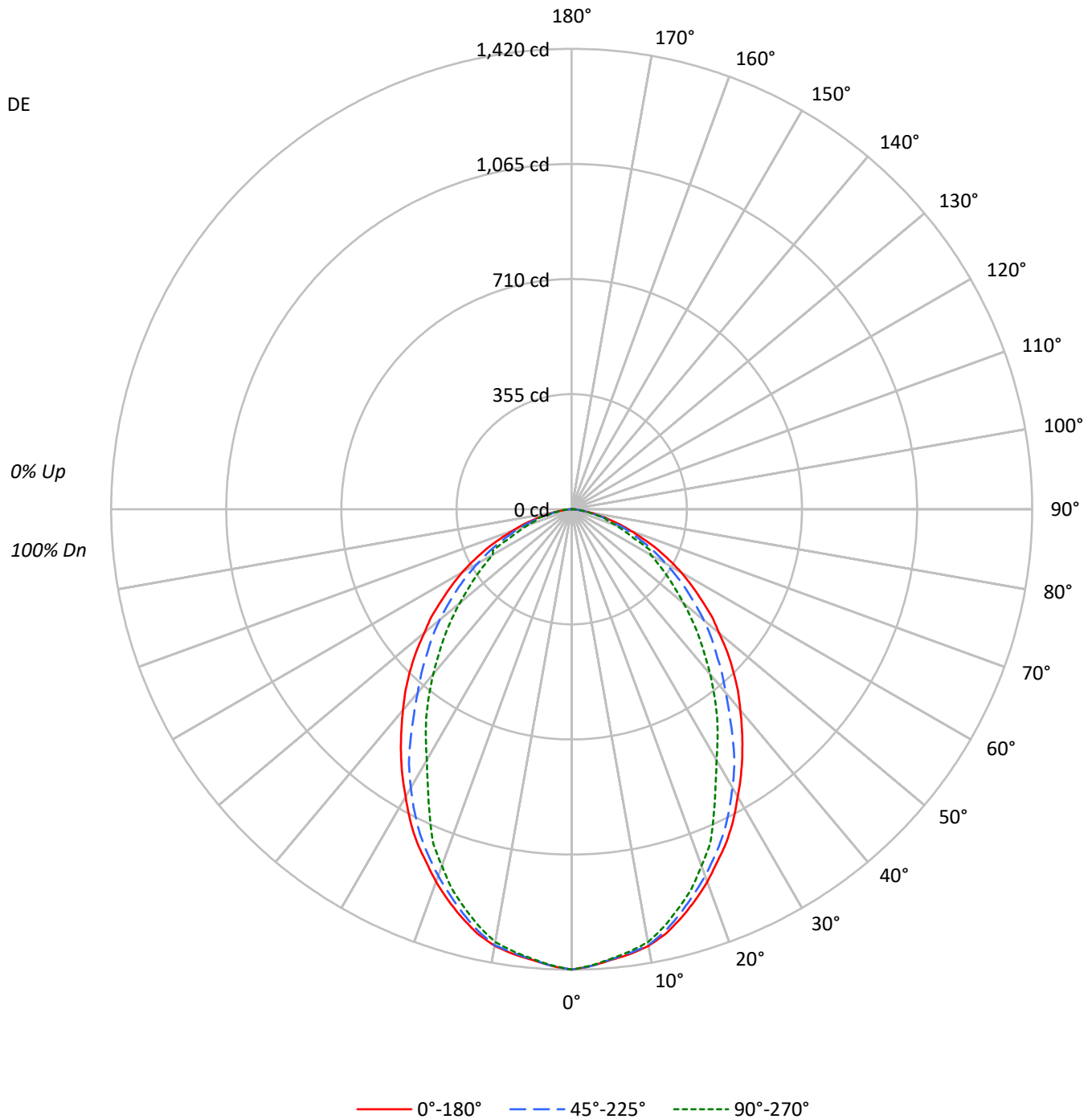
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2787.0 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
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													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°	1910	1910	1910
5°	1884	1882	1880
10°	1868	1866	1852
15°	1818	1799	1774
20°	1751	1723	1676
25°	1679	1642	1540
30°	1591	1540	1387
35°	1507	1423	1283
40°	1421	1297	1167
45°	1340	1199	1055
50°	1240	1113	941
55°	1147	1009	843
60°	1051	901	755
65°	925	789	669
70°	762	691	568
75°	606	529	555
80°	407	381	356
85°	253	304	355

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1340 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.2	4.7
10°-20°	362.7	13.0
20°-30°	502.1	18.0
30°-40°	535.4	19.2
40°-50°	488.4	17.5
50°-60°	382.6	13.7
60°-70°	249.4	8.9
70°-80°	110.5	4.0
80°-90°	23.7	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°	996.9	35.8
0°-40°	1532.3	55.0
0°-60°	2403.4	86.2
0°-90°	2787.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1395	1393	1393	1392	1392	132
15°	1305	1305	1292	1278	1274	367
25°	1131	1124	1106	1067	1037	519
35°	917	911	867	801	781	574
45°	704	689	630	578	555	542
55°	489	474	430	379	359	439
65°	290	274	248	253	210	286
75°	116	108	102	97	107	125
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1419.7	1419.7	1419.7	1419.7	1419.7
2.5°	1409.8	1409.8	1409.8	1408.2	1408.2
5°	1395.0	1393.4	1393.4	1391.8	1391.8
7.5°	1383.6	1381.9	1380.3	1378.6	1375.3
10°	1367.1	1367.1	1365.5	1357.3	1355.7
12.5°	1340.9	1339.2	1332.7	1321.2	1317.9
15°	1304.8	1304.8	1291.6	1278.5	1273.6
17.5°	1265.4	1263.7	1247.3	1234.2	1227.6
20°	1222.7	1219.4	1203.0	1181.7	1170.2
22.5°	1175.1	1175.1	1155.4	1127.5	1116.0
25°	1130.8	1124.2	1106.2	1066.8	1037.3
27.5°	1079.9	1070.1	1050.4	994.6	960.1
30°	1024.1	1019.2	991.3	919.1	892.8
32.5°	971.6	963.4	933.9	858.4	837.0
35°	917.4	910.9	866.6	800.9	781.2
37.5°	863.3	855.1	799.3	746.8	722.1
40°	809.1	799.3	738.6	691.0	664.7
42.5°	758.2	745.1	686.0	635.2	605.6
45°	704.1	689.3	630.2	577.7	554.7
47.5°	649.9	636.8	582.6	528.5	502.2
50°	592.5	581.0	531.8	477.6	449.7
52.5°	544.9	526.8	479.2	425.1	402.1
55°	489.1	474.3	430.0	379.1	359.4
57.5°	438.2	423.4	382.4	334.8	318.4
60°	390.6	369.3	334.8	293.8	280.6
62.5°	338.1	321.7	292.1	257.7	274.1
65°	290.5	274.1	247.8	252.7	210.1
67.5°	238.0	229.8	206.8	183.8	177.3
70°	193.7	183.8	175.6	151.0	144.4
72.5°	154.3	144.4	132.9	119.8	114.9
75°	116.5	108.3	101.8	96.8	106.7
77.5°	80.4	77.1	72.2	67.3	65.6
80°	52.5	50.9	49.2	47.6	46.0
82.5°	31.2	31.2	31.2	31.2	31.2
85°	16.4	18.1	19.7	21.3	23.0
87.5°	9.8	9.8	11.5	13.1	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)