

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: P562218

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562218  
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-40-UNV-93-94-EDD-90  
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

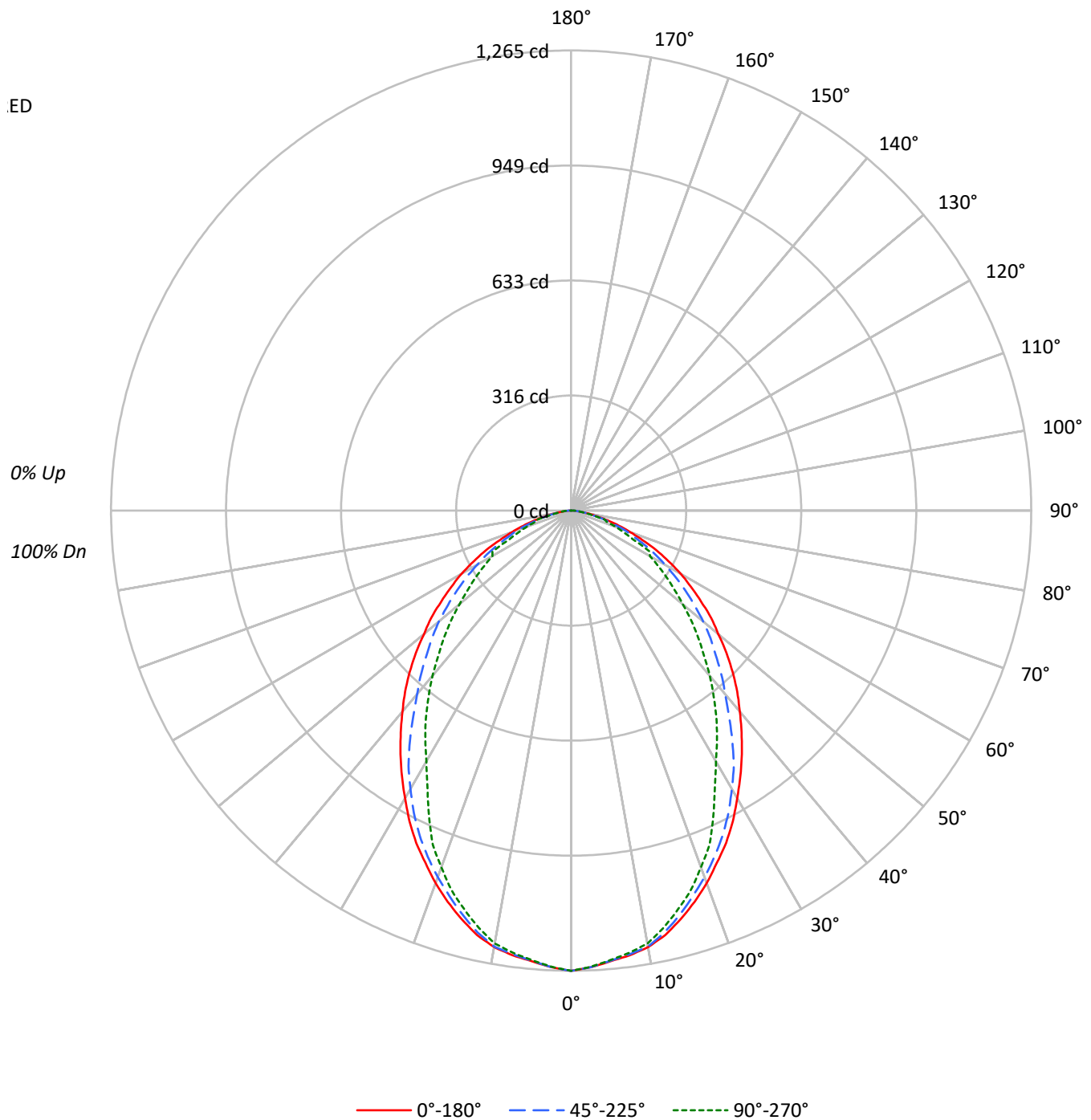
Lumens per Lamp: N/A  
Luminaire Lumens: 2484.0 lumens  
Efficiency: N/A  
Efficacy: 106.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	1702	1702	1702
5°	1679	1677	1675
10°	1665	1663	1651
15°	1620	1604	1581
20°	1560	1535	1493
25°	1496	1464	1372
30°	1418	1373	1236
35°	1343	1269	1144
40°	1267	1156	1040
45°	1194	1069	941
50°	1105	992	839
55°	1023	899	752
60°	937	803	673
65°	824	703	596
70°	679	616	506
75°	540	472	494
80°	363	340	318
85°	225	272	316

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1194 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	4.7
10°-20°	323.2	13.0
20°-30°	447.5	18.0
30°-40°	477.2	19.2
40°-50°	435.3	17.5
50°-60°	341.0	13.7
60°-70°	222.3	8.9
70°-80°	98.5	4.0
80°-90°	21.1	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°	888.5	35.8
0°-40°	1365.7	55.0
0°-60°	2142.1	86.2
0°-90°	2484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2484.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1265	1265	1265	1265	1265	
5°	1243	1242	1242	1240	1240	118
15°	1163	1163	1151	1140	1135	327
25°	1008	1002	986	951	924	463
35°	818	812	772	714	696	511
45°	628	614	562	515	494	483
55°	436	423	383	338	320	391
65°	259	244	221	225	187	255
75°	104	96	91	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1265.3	1265.3	1265.3	1265.3	1265.3
2.5°	1256.5	1256.5	1256.5	1255.1	1255.1
5°	1243.4	1241.9	1241.9	1240.4	1240.4
7.5°	1233.1	1231.7	1230.2	1228.7	1225.8
10°	1218.5	1218.5	1217.0	1209.7	1208.3
12.5°	1195.1	1193.6	1187.8	1177.5	1174.6
15°	1162.9	1162.9	1151.2	1139.5	1135.1
17.5°	1127.8	1126.4	1111.7	1100.0	1094.2
20°	1089.8	1086.9	1072.2	1053.2	1043.0
22.5°	1047.4	1047.4	1029.8	1004.9	994.7
25°	1007.9	1002.0	985.9	950.8	924.5
27.5°	962.5	953.7	936.2	886.5	855.7
30°	912.8	908.4	883.5	819.2	795.8
32.5°	866.0	858.7	832.3	765.0	746.0
35°	817.7	811.9	772.4	713.8	696.3
37.5°	769.4	762.1	712.4	665.6	643.6
40°	721.2	712.4	658.3	615.8	592.4
42.5°	675.8	664.1	611.4	566.1	539.8
45°	627.5	614.4	561.7	514.9	494.4
47.5°	579.3	567.6	519.3	471.0	447.6
50°	528.1	517.8	473.9	425.7	400.8
52.5°	485.6	469.6	427.1	378.9	358.4
55°	435.9	422.7	383.3	337.9	320.4
57.5°	390.6	377.4	340.8	298.4	283.8
60°	348.1	329.1	298.4	261.8	250.1
62.5°	301.3	286.7	260.4	229.7	244.3
65°	258.9	244.3	220.9	225.3	187.2
67.5°	212.1	204.8	184.3	163.8	158.0
70°	172.6	163.8	156.5	134.6	128.7
72.5°	137.5	128.7	118.5	106.8	102.4
75°	103.9	96.5	90.7	86.3	95.1
77.5°	71.7	68.8	64.4	60.0	58.5
80°	46.8	45.3	43.9	42.4	41.0
82.5°	27.8	27.8	27.8	27.8	27.8
85°	14.6	16.1	17.6	19.0	20.5
87.5°	8.8	8.8	10.2	11.7	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)