

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: P560610

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-93-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560610  
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-93-85-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

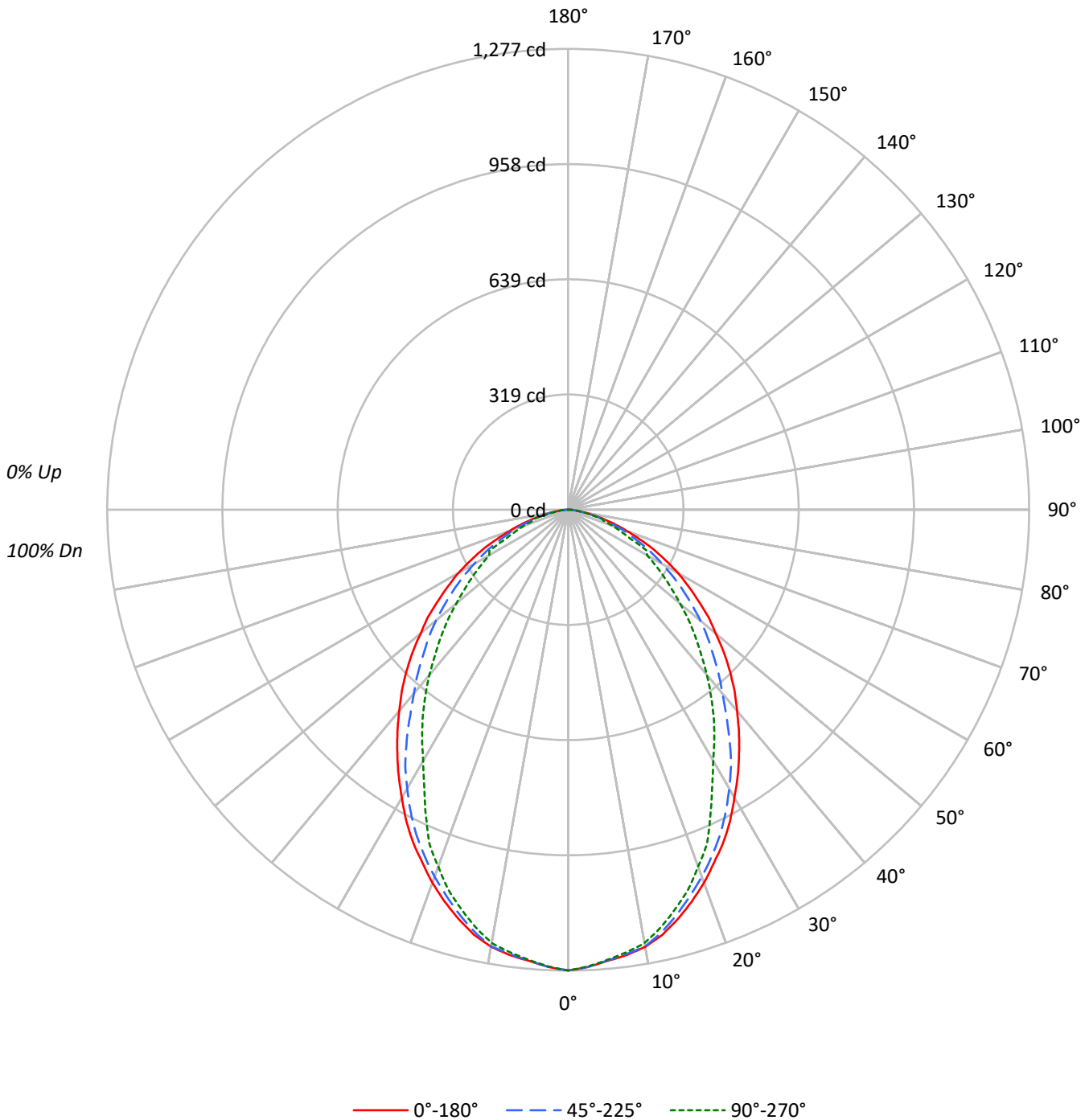
Lumens per Lamp: N/A  
Luminaire Lumens: 2507.0 lumens  
Efficiency: N/A  
Efficacy: 75.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6873	6873	6873
5°	6780	6772	6763
10°	6721	6713	6665
15°	6540	6474	6383
20°	6300	6198	6029
25°	6040	5909	5540
30°	5725	5542	4991
35°	5422	5121	4617
40°	5113	4668	4201
45°	4820	4315	3798
50°	4463	4005	3387
55°	4128	3629	3034
60°	3782	3242	2718
65°	3328	2839	2407
70°	2741	2486	2044
75°	2179	1903	1996
80°	1463	1373	1280
85°	914	1093	1278

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4820 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.9	4.7
10°-20°	326.2	13.0
20°-30°	451.7	18.0
30°-40°	481.6	19.2
40°-50°	439.4	17.5
50°-60°	344.2	13.7
60°-70°	224.3	8.9
70°-80°	99.4	4.0
80°-90°	21.4	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°	896.8	35.8
0°-40°	1378.4	55.0
0°-60°	2161.9	86.2
0°-90°	2507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2507.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1277	1277	1277	1277	1277	
5°	1255	1253	1253	1252	1252	119
15°	1174	1174	1162	1150	1146	330
25°	1017	1011	995	960	933	467
35°	825	819	780	720	703	516
45°	633	620	567	520	499	488
55°	440	427	387	341	323	395
65°	261	246	223	227	189	258
75°	105	97	92	87	96	112
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1277.0	1277.0	1277.0	1277.0	1277.0
2.5°	1268.2	1268.2	1268.2	1266.7	1266.7
5°	1254.9	1253.4	1253.4	1251.9	1251.9
7.5°	1244.6	1243.1	1241.6	1240.1	1237.2
10°	1229.8	1229.8	1228.3	1220.9	1219.5
12.5°	1206.2	1204.7	1198.8	1188.5	1185.5
15°	1173.7	1173.7	1161.9	1150.1	1145.6
17.5°	1138.3	1136.8	1122.0	1110.2	1104.3
20°	1099.9	1096.9	1082.2	1063.0	1052.6
22.5°	1057.1	1057.1	1039.3	1014.2	1003.9
25°	1017.2	1011.3	995.1	959.6	933.0
27.5°	971.4	962.6	944.9	894.7	863.7
30°	921.2	916.8	891.7	826.7	803.1
32.5°	874.0	866.6	840.0	772.1	752.9
35°	825.3	819.4	779.5	720.5	702.7
37.5°	776.6	769.2	719.0	671.7	649.6
40°	727.8	719.0	664.4	621.5	597.9
42.5°	682.1	670.3	617.1	571.3	544.8
45°	633.3	620.1	566.9	519.7	499.0
47.5°	584.6	572.8	524.1	475.4	451.8
50°	533.0	522.6	478.3	429.6	404.5
52.5°	490.1	473.9	431.1	382.4	361.7
55°	439.9	426.7	386.8	341.0	323.3
57.5°	394.2	380.9	344.0	301.2	286.4
60°	351.4	332.2	301.2	264.3	252.5
62.5°	304.1	289.4	262.8	231.8	246.5
65°	261.3	246.5	222.9	227.4	189.0
67.5°	214.1	206.7	186.0	165.3	159.4
70°	174.2	165.3	158.0	135.8	129.9
72.5°	138.8	129.9	119.6	107.8	103.3
75°	104.8	97.4	91.5	87.1	96.0
77.5°	72.3	69.4	65.0	60.5	59.1
80°	47.2	45.8	44.3	42.8	41.3
82.5°	28.1	28.1	28.1	28.1	28.1
85°	14.8	16.2	17.7	19.2	20.7
87.5°	8.9	8.9	10.3	11.8	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)