

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: P560579

Luminaire Tested: FSR-12-2-LD4-2STD-35-UNV-81-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560579  
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-81-85-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

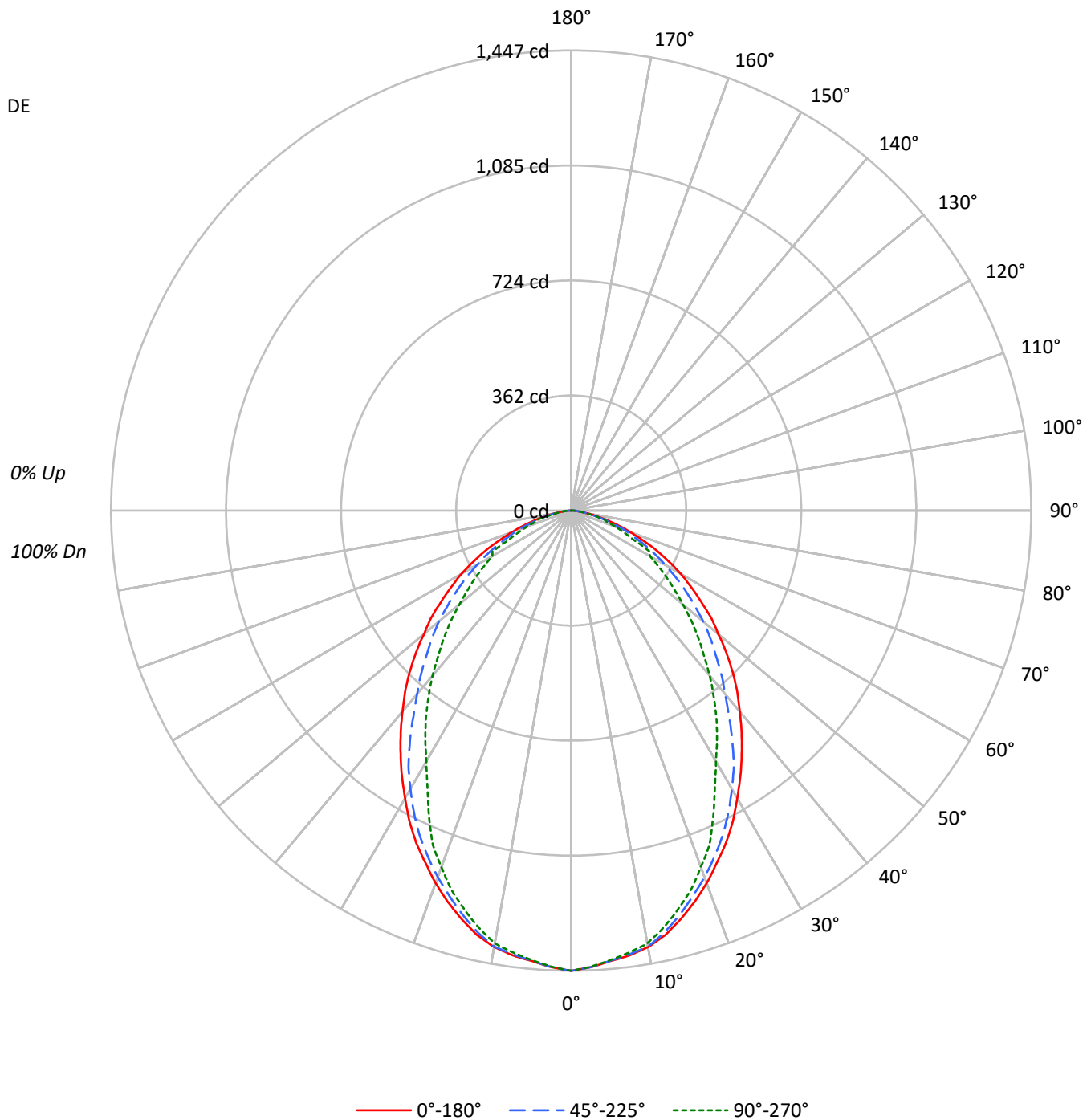
Lumens per Lamp: N/A  
Luminaire Lumens: 2841.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7789	7789	7789
5°	7683	7674	7665
10°	7616	7607	7552
15°	7411	7336	7234
20°	7139	7023	6832
25°	6845	6696	6279
30°	6488	6280	5656
35°	6144	5804	5232
40°	5795	5290	4761
45°	5463	4889	4304
50°	5057	4539	3838
55°	4678	4113	3438
60°	4286	3674	3080
65°	3771	3217	2727
70°	3106	2817	2316
75°	2470	2156	2260
80°	1658	1556	1450
85°	1031	1241	1445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5463 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.7	4.7
10°-20°	369.7	13.0
20°-30°	511.8	18.0
30°-40°	545.8	19.2
40°-50°	497.9	17.5
50°-60°	390.1	13.7
60°-70°	254.2	8.9
70°-80°	112.6	4.0
80°-90°	24.2	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°	1016.3	35.8
0°-40°	1562.0	55.0
0°-60°	2450.0	86.2
0°-90°	2841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2841.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1447	1447	1447	1447	1447	
5°	1422	1420	1420	1419	1419	135
15°	1330	1330	1317	1303	1298	374
25°	1153	1146	1128	1088	1057	529
35°	935	928	883	816	796	585
45°	718	703	642	589	566	553
55°	499	484	438	386	366	447
65°	296	279	253	258	214	292
75°	119	110	104	99	109	127
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1447.2	1447.2	1447.2	1447.2	1447.2
2.5°	1437.1	1437.1	1437.1	1435.5	1435.5
5°	1422.1	1420.4	1420.4	1418.7	1418.7
7.5°	1410.4	1408.7	1407.0	1405.3	1402.0
10°	1393.6	1393.6	1392.0	1383.6	1381.9
12.5°	1366.9	1365.2	1358.5	1346.8	1343.4
15°	1330.1	1330.1	1316.7	1303.3	1298.3
17.5°	1289.9	1288.2	1271.5	1258.1	1251.4
20°	1246.4	1243.1	1226.3	1204.6	1192.9
22.5°	1197.9	1197.9	1177.8	1149.4	1137.7
25°	1152.7	1146.0	1127.6	1087.5	1057.4
27.5°	1100.9	1090.8	1070.7	1013.9	978.7
30°	1044.0	1038.9	1010.5	936.9	910.1
32.5°	990.4	982.1	952.0	875.0	853.2
35°	935.2	928.5	883.4	816.4	796.4
37.5°	880.0	871.6	814.8	761.2	736.1
40°	824.8	814.8	752.9	704.3	677.6
42.5°	772.9	759.6	699.3	647.5	617.3
45°	717.7	702.7	642.4	588.9	565.5
47.5°	662.5	649.1	593.9	538.7	511.9
50°	604.0	592.3	542.1	486.9	458.4
52.5°	555.4	537.0	488.5	433.3	409.9
55°	498.6	483.5	438.3	386.5	366.4
57.5°	446.7	431.6	389.8	341.3	324.6
60°	398.2	376.4	341.3	299.5	286.1
62.5°	344.6	327.9	297.8	262.7	279.4
65°	296.1	279.4	252.6	257.6	214.1
67.5°	242.6	234.2	210.8	187.4	180.7
70°	197.4	187.4	179.0	153.9	147.2
72.5°	157.3	147.2	135.5	122.1	117.1
75°	118.8	110.4	103.7	98.7	108.7
77.5°	82.0	78.6	73.6	68.6	66.9
80°	53.5	51.9	50.2	48.5	46.8
82.5°	31.8	31.8	31.8	31.8	31.8
85°	16.7	18.4	20.1	21.7	23.4
87.5°	10.0	10.0	11.7	13.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)