

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: P560713

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-81-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560713  
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-50-UNV-81-88-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

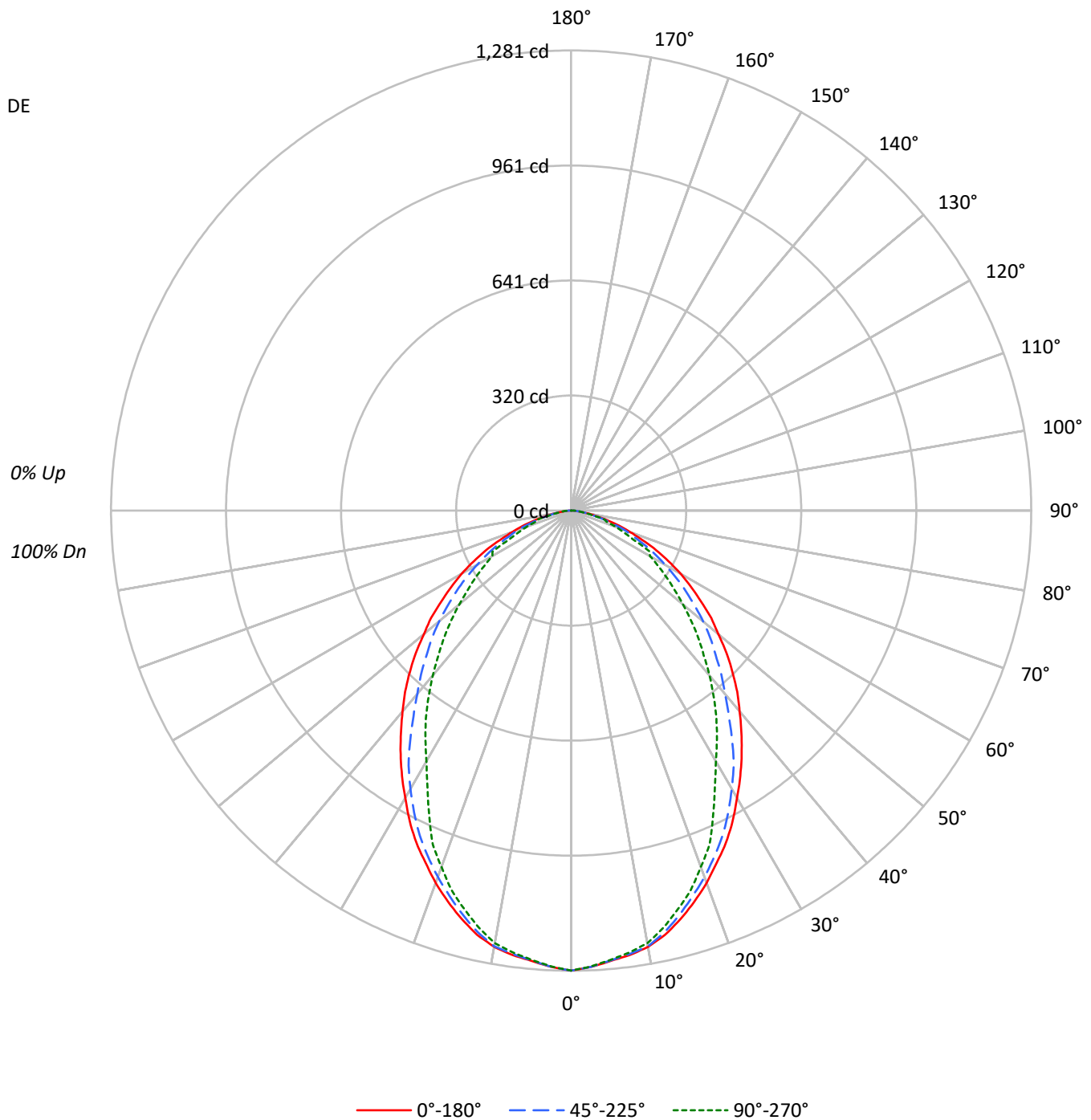
Lumens per Lamp: N/A  
Luminaire Lumens: 2514.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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				
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°	6892	6892	6892
5°	6799	6790	6782
10°	6739	6731	6683
15°	6558	6492	6401
20°	6317	6215	6046
25°	6057	5925	5556
30°	5741	5557	5005
35°	5437	5136	4630
40°	5128	4680	4213
45°	4834	4327	3809
50°	4474	4016	3396
55°	4140	3640	3042
60°	3792	3251	2725
65°	3337	2846	2413
70°	2749	2493	2050
75°	2185	1909	2000
80°	1469	1376	1286
85°	914	1099	1278

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4834 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.2	4.7
10°-20°	327.2	13.0
20°-30°	452.9	18.0
30°-40°	482.9	19.2
40°-50°	440.6	17.5
50°-60°	345.2	13.7
60°-70°	225.0	8.9
70°-80°	99.7	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°	899.3	35.8
0°-40°	1382.2	55.0
0°-60°	2168.0	86.2
0°-90°	2514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2514.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1258	1257	1257	1255	1255	119
15°	1177	1177	1165	1153	1149	331
25°	1020	1014	998	962	936	468
35°	828	822	782	722	705	517
45°	635	622	568	521	500	489
55°	441	428	388	342	324	396
65°	262	247	224	228	190	258
75°	105	98	92	87	96	113
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°	1280.6	1280.6	1280.6	1280.6	1280.6
2.5°	1271.7	1271.7	1271.7	1270.2	1270.2
5°	1258.4	1256.9	1256.9	1255.4	1255.4
7.5°	1248.0	1246.5	1245.1	1243.6	1240.6
10°	1233.2	1233.2	1231.7	1224.3	1222.9
12.5°	1209.5	1208.1	1202.1	1191.8	1188.8
15°	1177.0	1177.0	1165.1	1153.3	1148.8
17.5°	1141.4	1140.0	1125.1	1113.3	1107.4
20°	1102.9	1100.0	1085.2	1065.9	1055.6
22.5°	1060.0	1060.0	1042.2	1017.1	1006.7
25°	1020.0	1014.1	997.8	962.3	935.7
27.5°	974.1	965.3	947.5	897.2	866.1
30°	923.8	919.4	894.2	829.1	805.4
32.5°	876.4	869.0	842.4	774.3	755.0
35°	827.6	821.7	781.7	722.5	704.7
37.5°	778.7	771.3	721.0	673.6	651.4
40°	729.9	721.0	666.2	623.3	599.6
42.5°	684.0	672.1	618.8	572.9	546.3
45°	635.1	621.8	568.5	521.1	500.4
47.5°	586.3	574.4	525.6	476.7	453.0
50°	534.4	524.1	479.7	430.8	405.6
52.5°	491.5	475.2	432.3	383.4	362.7
55°	441.2	427.9	387.9	342.0	324.2
57.5°	395.3	382.0	344.9	302.0	287.2
60°	352.3	333.1	302.0	265.0	253.2
62.5°	305.0	290.2	263.5	232.4	247.2
65°	262.0	247.2	223.5	228.0	189.5
67.5°	214.7	207.3	186.5	165.8	159.9
70°	174.7	165.8	158.4	136.2	130.3
72.5°	139.2	130.3	119.9	108.1	103.6
75°	105.1	97.7	91.8	87.3	96.2
77.5°	72.5	69.6	65.1	60.7	59.2
80°	47.4	45.9	44.4	42.9	41.5
82.5°	28.1	28.1	28.1	28.1	28.1
85°	14.8	16.3	17.8	19.2	20.7
87.5°	8.9	8.9	10.4	11.8	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)