

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: P559872

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559872  
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-LD4-1LO-40-UNV-81-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

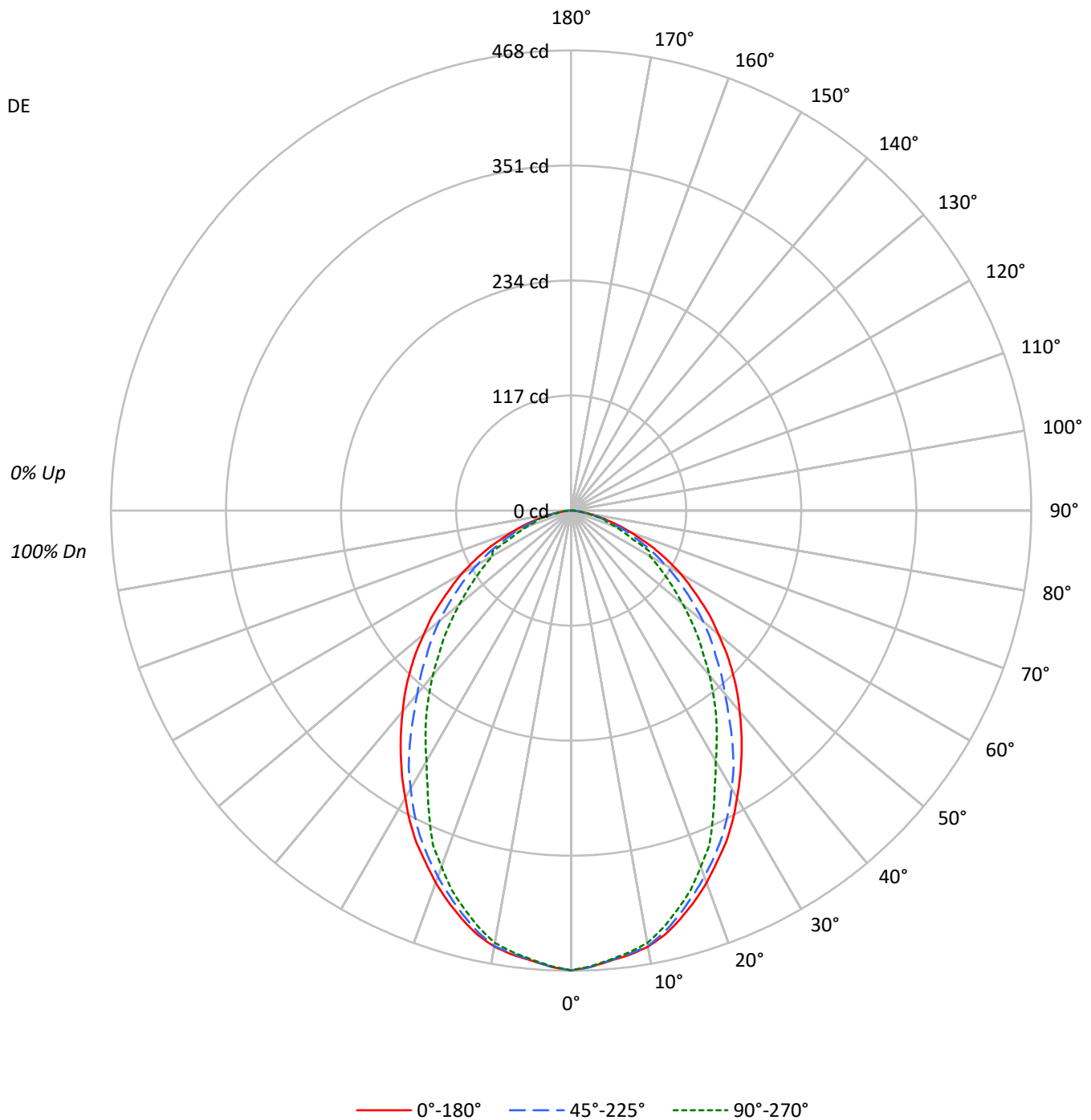
Lumens per Lamp: N/A  
Luminaire Lumens: 918.0 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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					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°	2517	2517	2517
5°	2482	2480	2477
10°	2461	2458	2440
15°	2395	2371	2337
20°	2306	2270	2207
25°	2212	2164	2029
30°	2096	2029	1828
35°	1986	1875	1691
40°	1872	1709	1538
45°	1765	1580	1391
50°	1634	1467	1240
55°	1512	1329	1111
60°	1385	1187	995
65°	1219	1039	881
70°	1004	910	749
75°	799	697	730
80°	536	502	468
85°	333	401	469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1765 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	4.7
10°-20°	119.5	13.0
20°-30°	165.4	18.0
30°-40°	176.3	19.2
40°-50°	160.9	17.5
50°-60°	126.0	13.7
60°-70°	82.1	8.9
70°-80°	36.4	4.0
80°-90°	7.8	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°	328.4	35.8
0°-40°	504.7	55.0
0°-60°	791.7	86.2
0°-90°	918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	918.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	460	459	459	458	458	44
15°	430	430	426	421	420	121
25°	372	370	364	351	342	171
35°	302	300	285	264	257	189
45°	232	227	208	190	183	179
55°	161	156	142	125	118	144
65°	96	90	82	83	69	94
75°	38	36	34	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	467.6	467.6	467.6	467.6	467.6
2.5°	464.4	464.4	464.4	463.8	463.8
5°	459.5	459.0	459.0	458.4	458.4
7.5°	455.7	455.2	454.6	454.1	453.0
10°	450.3	450.3	449.8	447.1	446.5
12.5°	441.7	441.1	439.0	435.2	434.1
15°	429.8	429.8	425.5	421.1	419.5
17.5°	416.8	416.3	410.9	406.5	404.4
20°	402.7	401.7	396.3	389.2	385.4
22.5°	387.1	387.1	380.6	371.4	367.6
25°	372.5	370.3	364.4	351.4	341.7
27.5°	355.7	352.5	346.0	327.6	316.2
30°	337.3	335.7	326.5	302.7	294.1
32.5°	320.0	317.3	307.6	282.7	275.7
35°	302.2	300.0	285.4	263.8	257.3
37.5°	284.4	281.7	263.3	246.0	237.9
40°	266.5	263.3	243.3	227.6	218.9
42.5°	249.8	245.4	226.0	209.2	199.5
45°	231.9	227.1	207.6	190.3	182.7
47.5°	214.1	209.8	191.9	174.1	165.4
50°	195.2	191.4	175.2	157.3	148.1
52.5°	179.5	173.5	157.9	140.0	132.4
55°	161.1	156.2	141.6	124.9	118.4
57.5°	144.3	139.5	126.0	110.3	104.9
60°	128.7	121.6	110.3	96.8	92.4
62.5°	111.4	106.0	96.2	84.9	90.3
65°	95.7	90.3	81.6	83.3	69.2
67.5°	78.4	75.7	68.1	60.5	58.4
70°	63.8	60.5	57.8	49.7	47.6
72.5°	50.8	47.6	43.8	39.5	37.8
75°	38.4	35.7	33.5	31.9	35.1
77.5°	26.5	25.4	23.8	22.2	21.6
80°	17.3	16.8	16.2	15.7	15.1
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	5.9	6.5	7.0	7.6
87.5°	3.2	3.2	3.8	4.3	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)