

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: P560470

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560470
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-LD4-2LO-40-UNV-82-87-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

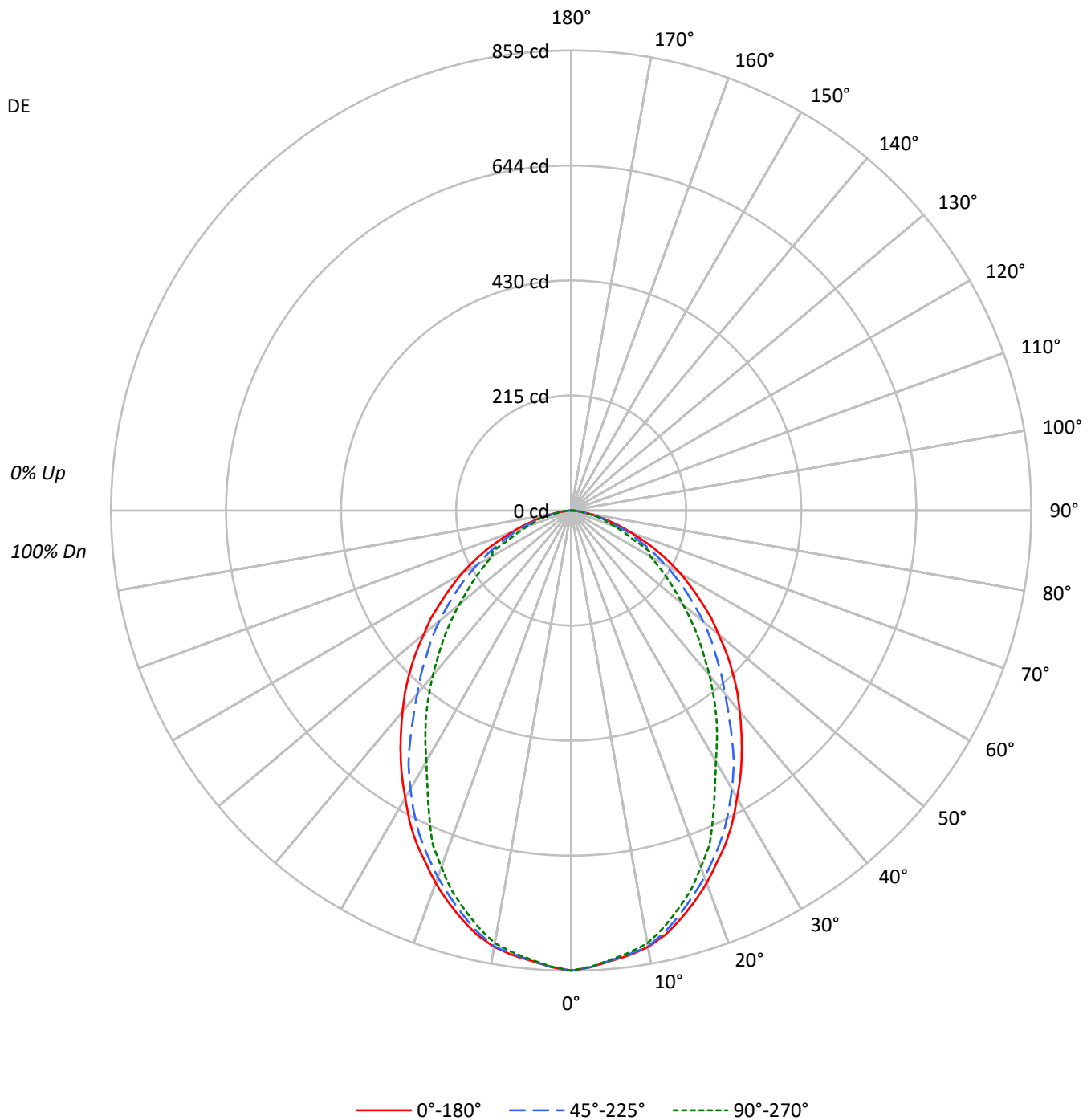
Lumens per Lamp: N/A
Luminaire Lumens: 1686.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4622	4622	4622
5°	4559	4554	4548
10°	4520	4515	4482
15°	4398	4354	4293
20°	4237	4168	4054
25°	4062	3974	3726
30°	3850	3727	3356
35°	3646	3444	3105
40°	3439	3139	2825
45°	3242	2902	2554
50°	3001	2694	2277
55°	2776	2441	2040
60°	2544	2180	1828
65°	2238	1909	1619
70°	1844	1671	1375
75°	1466	1281	1341
80°	986	924	862
85°	611	735	858

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3242 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.9	4.7
10°-20°	219.4	13.0
20°-30°	303.7	18.0
30°-40°	323.9	19.2
40°-50°	295.5	17.5
50°-60°	231.5	13.7
60°-70°	150.9	8.9
70°-80°	66.8	4.0
80°-90°	14.4	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°	603.1	35.8
0°-40°	927.0	55.0
0°-60°	1453.9	86.2
0°-90°	1686.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1686.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	859	859	859	859	859	
5°	844	843	843	842	842	80
15°	789	789	781	773	770	222
25°	684	680	669	645	628	314
35°	555	551	524	484	473	347
45°	426	417	381	350	336	328
55°	296	287	260	229	217	265
65°	176	166	150	153	127	173
75°	70	66	62	59	64	76
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	858.8	858.8	858.8	858.8	858.8
2.5°	852.9	852.9	852.9	851.9	851.9
5°	843.9	842.9	842.9	841.9	841.9
7.5°	837.0	836.0	835.0	834.0	832.0
10°	827.1	827.1	826.1	821.1	820.1
12.5°	811.2	810.2	806.2	799.3	797.3
15°	789.3	789.3	781.4	773.4	770.5
17.5°	765.5	764.5	754.6	746.6	742.7
20°	739.7	737.7	727.8	714.9	707.9
22.5°	710.9	710.9	699.0	682.1	675.1
25°	684.1	680.1	669.2	645.4	627.5
27.5°	653.3	647.3	635.4	601.7	580.8
30°	619.5	616.6	599.7	556.0	540.1
32.5°	587.8	582.8	564.9	519.3	506.4
35°	555.0	551.0	524.2	484.5	472.6
37.5°	522.2	517.3	483.5	451.8	436.9
40°	489.5	483.5	446.8	418.0	402.1
42.5°	458.7	450.8	415.0	384.2	366.4
45°	425.9	417.0	381.3	349.5	335.6
47.5°	393.2	385.2	352.5	319.7	303.8
50°	358.4	351.5	321.7	288.9	272.0
52.5°	329.6	318.7	289.9	257.2	243.3
55°	295.9	286.9	260.1	229.4	217.4
57.5°	265.1	256.2	231.3	202.5	192.6
60°	236.3	223.4	202.5	177.7	169.8
62.5°	204.5	194.6	176.7	155.9	165.8
65°	175.7	165.8	149.9	152.9	127.1
67.5°	144.0	139.0	125.1	111.2	107.2
70°	117.2	111.2	106.2	91.3	87.4
72.5°	93.3	87.4	80.4	72.5	69.5
75°	70.5	65.5	61.6	58.6	64.5
77.5°	48.7	46.7	43.7	40.7	39.7
80°	31.8	30.8	29.8	28.8	27.8
82.5°	18.9	18.9	18.9	18.9	18.9
85°	9.9	10.9	11.9	12.9	13.9
87.5°	6.0	6.0	7.0	7.9	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)