

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: P559708

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559708
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-LD4-1HI-40-UNV-82-96-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1464.0 lumens
Efficiency: N/A
Efficacy: 67.8 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

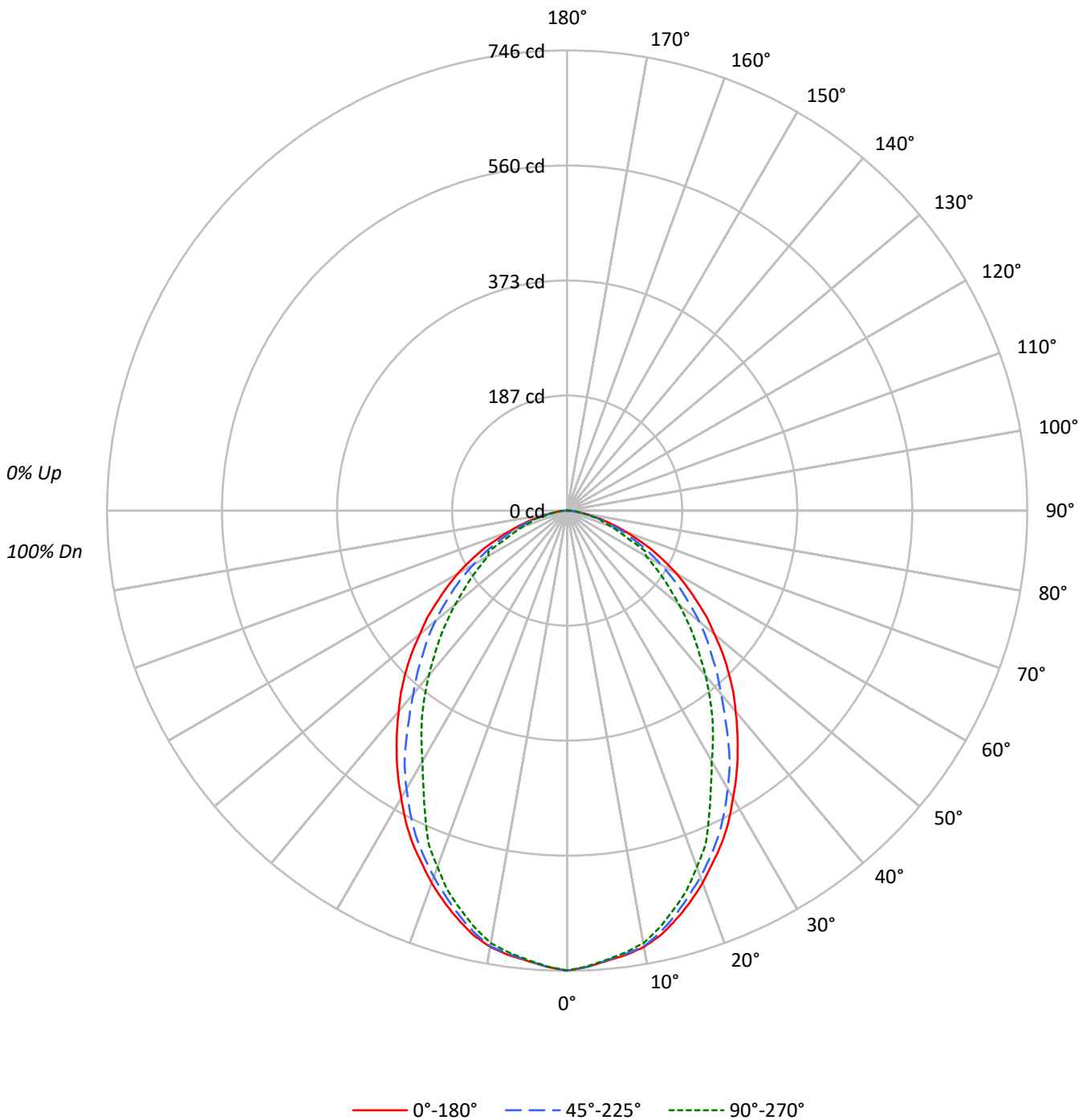
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4013	4013	4013
5°	3959	3954	3950
10°	3925	3920	3892
15°	3819	3780	3728
20°	3679	3619	3521
25°	3527	3451	3236
30°	3343	3236	2915
35°	3166	2991	2696
40°	2986	2726	2453
45°	2815	2520	2218
50°	2606	2339	1978
55°	2411	2120	1772
60°	2209	1893	1587
65°	1943	1658	1406
70°	1600	1451	1194
75°	1273	1112	1164
80°	855	803	747
85°	531	636	747

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2815 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.4	4.7
10°-20°	190.5	13.0
20°-30°	263.8	18.0
30°-40°	281.2	19.2
40°-50°	256.6	17.5
50°-60°	201.0	13.7
60°-70°	131.0	8.9
70°-80°	58.0	4.0
80°-90°	12.5	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°	523.7	35.8
0°-40°	804.9	55.0
0°-60°	1262.5	86.2
0°-90°	1464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1464.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	733	732	732	731	731	70
15°	685	685	678	672	669	193
25°	594	591	581	560	545	273
35°	482	478	455	421	410	301
45°	370	362	331	304	291	285
55°	257	249	226	199	189	230
65°	153	144	130	133	110	150
75°	61	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	745.7	745.7	745.7	745.7	745.7
2.5°	740.6	740.6	740.6	739.7	739.7
5°	732.8	731.9	731.9	731.1	731.1
7.5°	726.8	725.9	725.1	724.2	722.5
10°	718.2	718.2	717.3	713.0	712.1
12.5°	704.4	703.5	700.0	694.0	692.3
15°	685.4	685.4	678.5	671.6	669.0
17.5°	664.7	663.8	655.2	648.3	644.9
20°	642.3	640.6	631.9	620.7	614.7
22.5°	617.3	617.3	606.9	592.3	586.2
25°	594.0	590.6	581.1	560.4	544.9
27.5°	567.3	562.1	551.8	522.5	504.3
30°	538.0	535.4	520.7	482.8	469.0
32.5°	510.4	506.1	490.6	450.9	439.7
35°	481.9	478.5	455.2	420.7	410.4
37.5°	453.5	449.2	419.9	392.3	379.3
40°	425.0	419.9	388.0	363.0	349.2
42.5°	398.3	391.4	360.4	333.6	318.1
45°	369.9	362.1	331.1	303.5	291.4
47.5°	341.4	334.5	306.1	277.6	263.8
50°	311.2	305.2	279.3	250.9	236.2
52.5°	286.2	276.7	251.7	223.3	211.2
55°	256.9	249.2	225.9	199.2	188.8
57.5°	230.2	222.4	200.9	175.9	167.3
60°	205.2	194.0	175.9	154.3	147.4
62.5°	177.6	169.0	153.5	135.4	144.0
65°	152.6	144.0	130.2	132.8	110.4
67.5°	125.0	120.7	108.6	96.6	93.1
70°	101.7	96.6	92.2	79.3	75.9
72.5°	81.0	75.9	69.8	62.9	60.3
75°	61.2	56.9	53.5	50.9	56.0
77.5°	42.2	40.5	37.9	35.3	34.5
80°	27.6	26.7	25.9	25.0	24.1
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.6	9.5	10.3	11.2	12.1
87.5°	5.2	5.2	6.0	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)