

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: P560472

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560472
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-82-88-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1518.0 lumens
Efficiency: N/A
Efficacy: 64.9 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

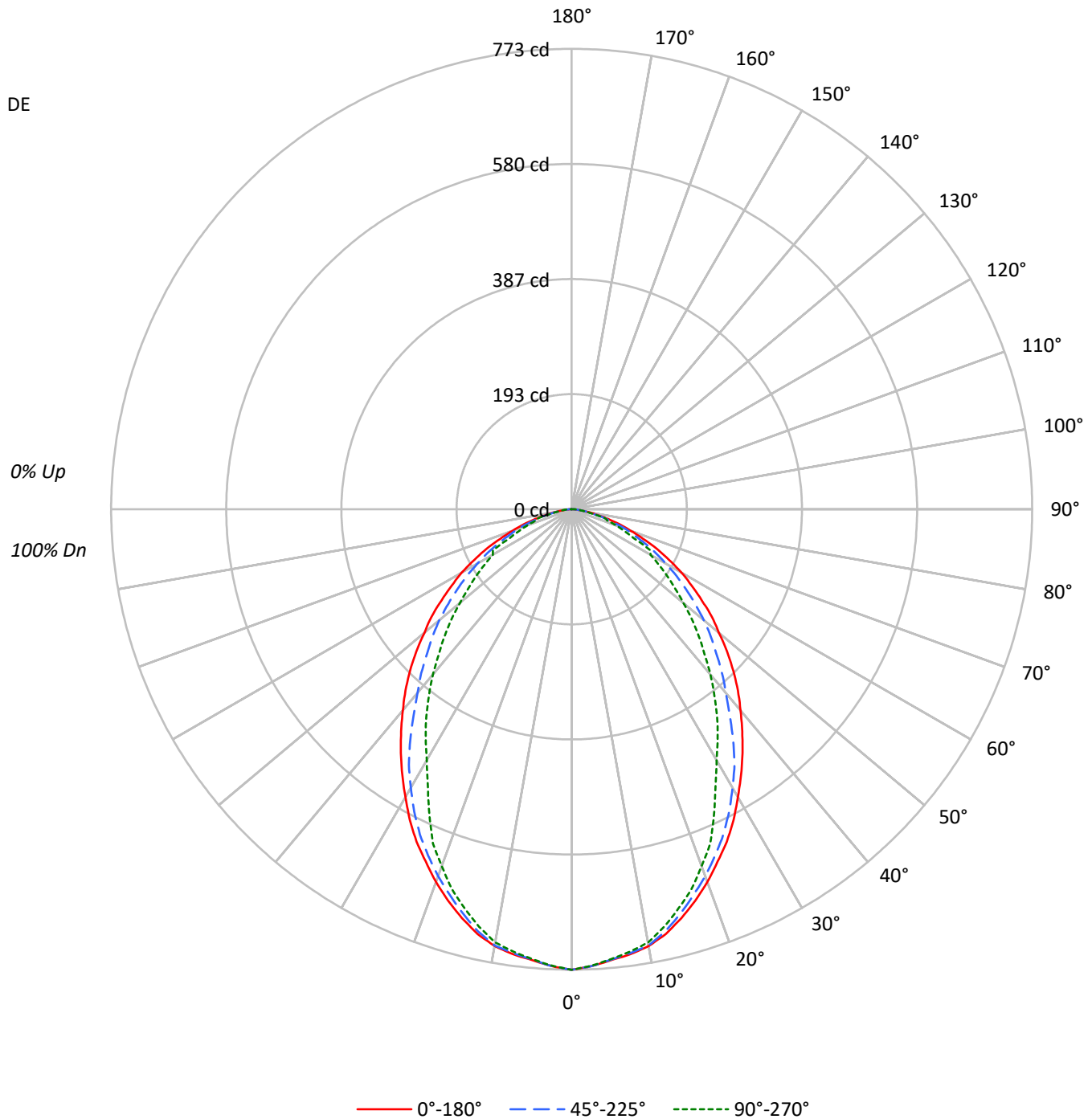
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4161	4161	4161
5°	4105	4100	4096
10°	4069	4064	4035
15°	3960	3920	3865
20°	3814	3753	3651
25°	3657	3578	3355
30°	3466	3355	3022
35°	3283	3101	2796
40°	3096	2826	2543
45°	2919	2613	2299
50°	2702	2425	2051
55°	2500	2198	1837
60°	2291	1963	1646
65°	2015	1719	1457
70°	1660	1506	1238
75°	1320	1152	1208
80°	886	831	775
85°	550	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2919 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	4.7
10°-20°	197.5	13.0
20°-30°	273.5	18.0
30°-40°	291.6	19.2
40°-50°	266.0	17.5
50°-60°	208.4	13.7
60°-70°	135.8	8.9
70°-80°	60.2	4.0
80°-90°	12.9	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°	543.0	35.8
0°-40°	834.6	55.0
0°-60°	1309.0	86.2
0°-90°	1518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	760	759	759	758	758	72
15°	711	711	704	696	694	200
25°	616	612	602	581	565	283
35°	500	496	472	436	426	312
45°	384	376	343	315	302	295
55°	266	258	234	206	196	239
65°	158	149	135	138	114	156
75°	64	59	55	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	773.2	773.2	773.2	773.2	773.2
2.5°	767.9	767.9	767.9	767.0	767.0
5°	759.8	758.9	758.9	758.1	758.1
7.5°	753.6	752.7	751.8	750.9	749.1
10°	744.6	744.6	743.7	739.3	738.4
12.5°	730.3	729.4	725.9	719.6	717.8
15°	710.7	710.7	703.5	696.4	693.7
17.5°	689.2	688.3	679.4	672.2	668.7
20°	666.0	664.2	655.3	643.6	637.4
22.5°	640.1	640.1	629.3	614.1	607.9
25°	615.9	612.3	602.5	581.1	565.0
27.5°	588.2	582.8	572.1	541.7	522.9
30°	557.8	555.1	539.9	500.6	486.3
32.5°	529.2	524.7	508.6	467.5	455.9
35°	499.7	496.1	472.0	436.2	425.5
37.5°	470.2	465.7	435.3	406.7	393.3
40°	440.7	435.3	402.3	376.3	362.0
42.5°	413.0	405.8	373.7	346.0	329.9
45°	383.5	375.5	343.3	314.7	302.1
47.5°	354.0	346.8	317.3	287.8	273.5
50°	322.7	316.5	289.6	260.1	244.9
52.5°	296.8	287.0	261.0	231.5	219.0
55°	266.4	258.3	234.2	206.5	195.8
57.5°	238.7	230.6	208.3	182.4	173.4
60°	212.8	201.1	182.4	160.0	152.9
62.5°	184.1	175.2	159.1	140.3	149.3
65°	158.2	149.3	135.0	137.7	114.4
67.5°	129.6	125.2	112.6	100.1	96.5
70°	105.5	100.1	95.7	82.2	78.7
72.5°	84.0	78.7	72.4	65.3	62.6
75°	63.5	59.0	55.4	52.7	58.1
77.5°	43.8	42.0	39.3	36.7	35.8
80°	28.6	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.3	7.2	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)