

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: P590085

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590085
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1STD-40-UNV-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1833.0 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

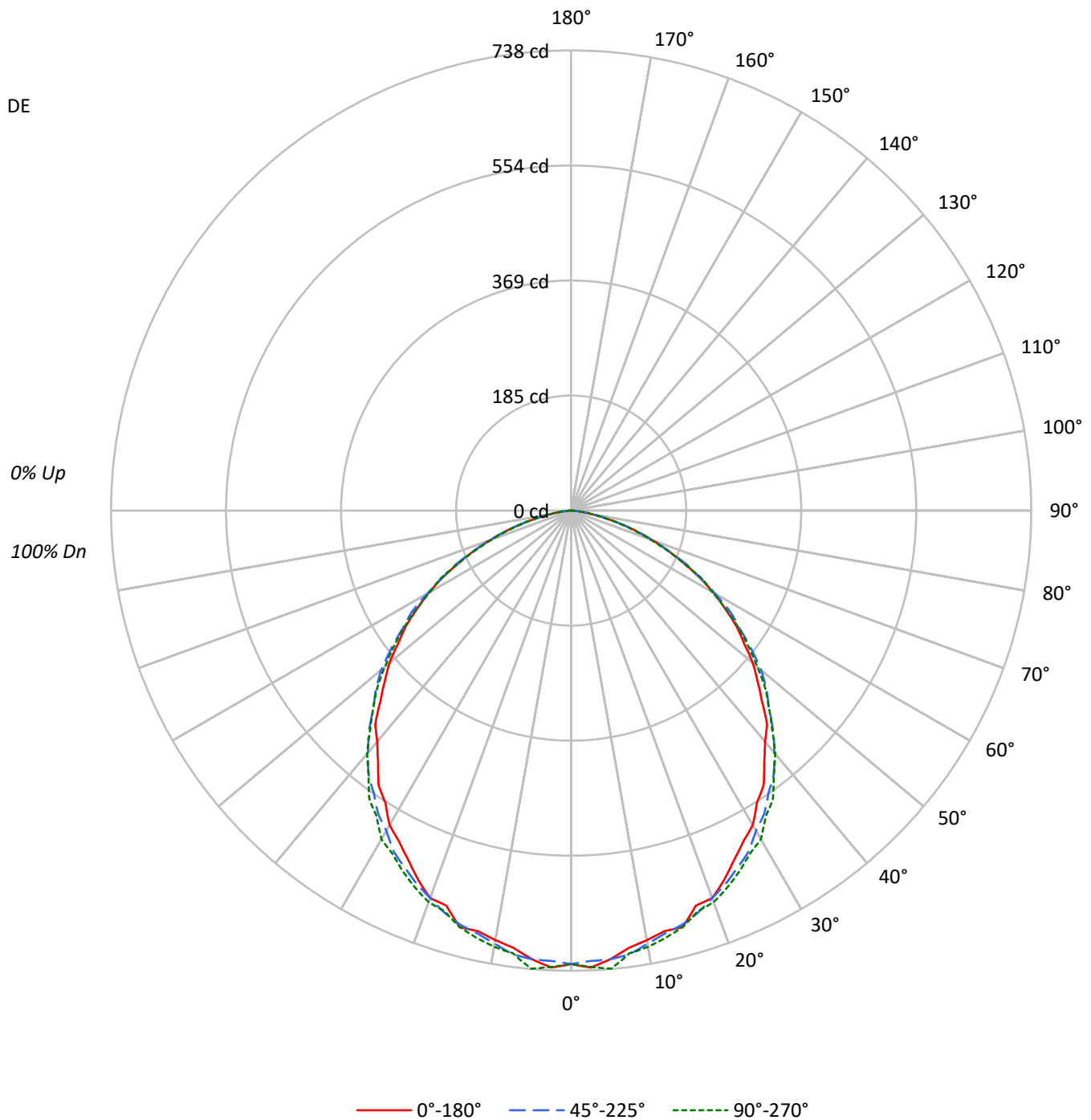
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1957	1957	1957
5°	1951	1951	1992
10°	1911	1928	1941
15°	1926	1916	1926
20°	1894	1894	1914
25°	1836	1876	1896
30°	1810	1842	1891
35°	1768	1814	1855
40°	1699	1781	1788
45°	1647	1706	1709
50°	1593	1665	1634
55°	1518	1548	1536
60°	1420	1434	1408
65°	1266	1298	1257
70°	1086	1090	1060
75°	860	858	824
80°	576	561	538
85°	312	309	290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1750 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	3.7
10°-20°	193.9	10.6
20°-30°	290.5	15.8
30°-40°	344.3	18.8
40°-50°	344.9	18.8
50°-60°	292.8	16.0
60°-70°	197.4	10.8
70°-80°	86.7	4.7
80°-90°	14.1	0.8
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°	552.8	30.2
0°-40°	897.1	48.9
0°-60°	1534.8	83.7
0°-90°	1833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	722	720	722	720	738	68
15°	691	683	688	691	692	193
25°	618	622	632	640	639	286
35°	538	540	552	565	565	334
45°	433	441	448	460	449	335
55°	324	321	330	328	328	288
65°	199	196	204	196	197	198
75°	83	81	82	77	79	89
85°	10	10	10	10	9	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	727.3	727.3	727.3	727.3	727.3
2.5°	733.6	728.0	722.9	728.9	732.5
5°	722.1	720.4	722.4	720.2	737.6
7.5°	707.3	713.8	717.5	715.2	716.2
10°	699.4	697.1	705.5	711.3	710.5
12.5°	690.9	694.3	694.8	701.1	701.7
15°	691.4	683.4	687.7	691.2	691.5
17.5°	664.6	673.2	676.1	684.3	674.1
20°	661.3	655.0	661.3	669.6	668.3
22.5°	641.1	634.0	647.6	655.0	654.5
25°	618.2	621.6	631.7	640.0	638.6
27.5°	598.1	602.0	616.5	627.8	620.5
30°	582.6	580.6	592.8	603.0	608.6
32.5°	554.9	562.0	576.3	586.3	581.0
35°	538.1	539.7	552.2	564.9	564.6
37.5°	508.7	516.1	533.7	537.2	533.9
40°	483.6	491.0	506.9	510.7	509.1
42.5°	465.1	466.4	480.0	484.5	477.4
45°	432.9	441.0	448.3	459.8	449.0
47.5°	405.5	409.2	425.0	428.1	422.4
50°	380.6	381.9	397.8	393.9	390.2
52.5°	349.3	354.9	363.8	363.0	358.6
55°	323.6	321.4	329.9	327.6	327.5
57.5°	292.7	296.5	303.4	299.8	294.1
60°	263.8	263.9	266.4	262.4	261.6
62.5°	231.6	232.7	233.3	228.3	236.4
65°	198.8	196.2	203.9	196.1	197.4
67.5°	168.7	170.0	169.2	164.3	166.2
70°	138.0	139.7	138.5	133.0	134.7
72.5°	110.1	108.0	109.3	102.4	105.5
75°	82.7	81.0	82.5	76.7	79.3
77.5°	56.3	57.7	56.7	53.6	55.4
80°	37.2	36.2	36.2	34.4	34.7
82.5°	21.7	20.7	20.4	19.8	20.7
85°	10.1	9.9	10.0	9.8	9.4
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)