

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: P562481

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562481
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-24-4-LD4-2HI-35-UNV-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9573.0 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

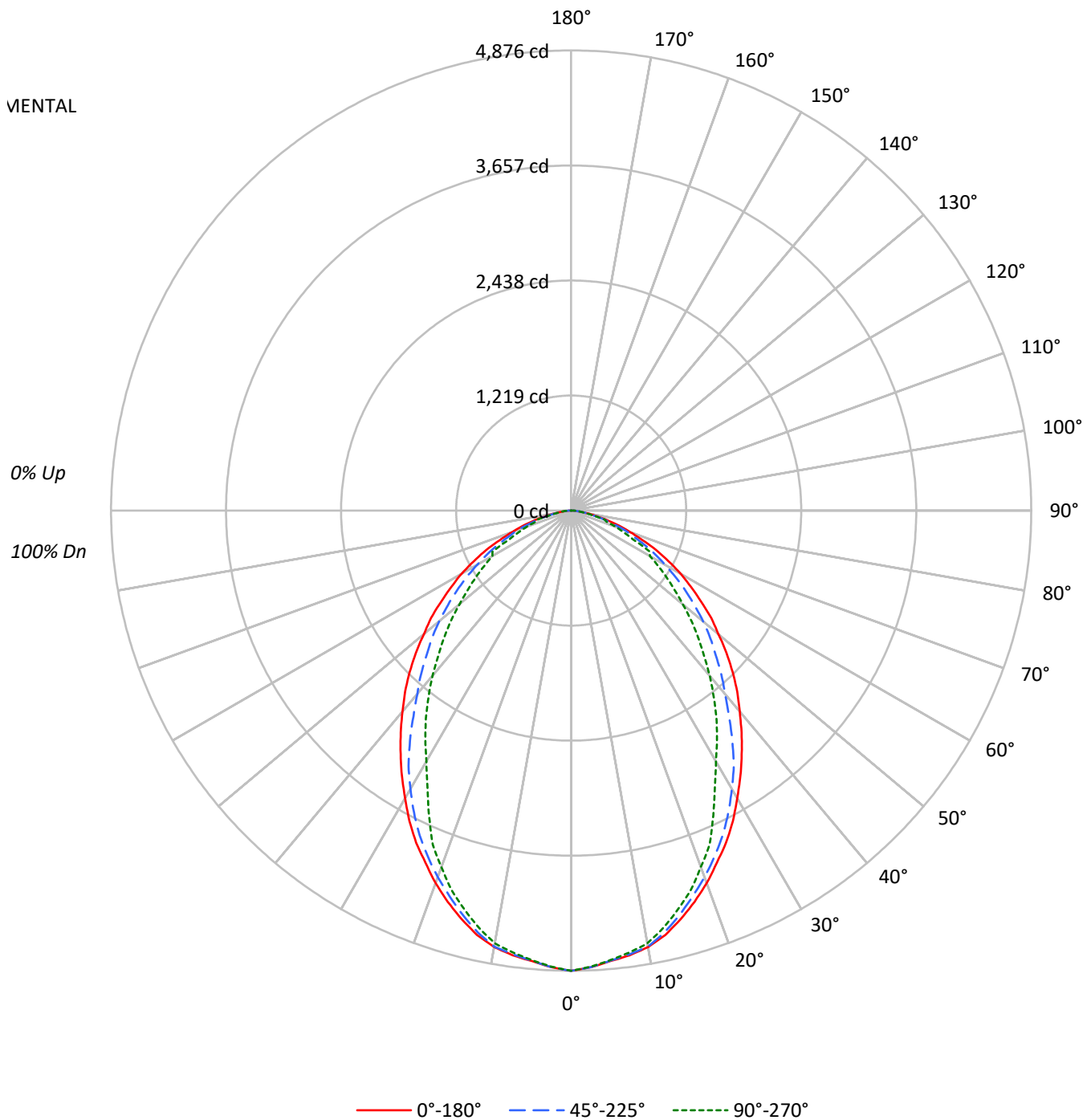
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6561	6561	6561
5°	6472	6464	6457
10°	6416	6408	6362
15°	6243	6180	6094
20°	6014	5917	5755
25°	5766	5641	5289
30°	5465	5290	4765
35°	5176	4889	4408
40°	4881	4456	4010
45°	4602	4119	3626
50°	4260	3823	3233
55°	3941	3465	2896
60°	3610	3095	2594
65°	3177	2710	2297
70°	2617	2373	1952
75°	2081	1817	1905
80°	1398	1310	1223
85°	871	1044	1218

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4602 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	453.9	4.7
10°-20°	1245.7	13.0
20°-30°	1724.7	18.0
30°-40°	1839.0	19.2
40°-50°	1677.7	17.5
50°-60°	1314.3	13.7
60°-70°	856.6	8.9
70°-80°	379.5	4.0
80°-90°	81.5	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°	3424.3	35.8
0°-40°	5263.3	55.0
0°-60°	8255.4	86.2
0°-90°	9573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4876	4876	4876	4876	4876	
5°	4792	4786	4786	4780	4780	455
15°	4482	4482	4437	4392	4375	1260
25°	3884	3862	3800	3664	3563	1783
35°	3151	3129	2977	2751	2683	1970
45°	2418	2368	2165	1984	1905	1863
55°	1680	1629	1477	1302	1235	1507
65°	998	941	851	868	722	983
75°	400	372	350	333	366	429
85°	56	62	68	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4876.4	4876.4	4876.4	4876.4	4876.4
2.5°	4842.5	4842.5	4842.5	4836.9	4836.9
5°	4791.8	4786.2	4786.2	4780.5	4780.5
7.5°	4752.3	4746.7	4741.1	4735.4	4724.1
10°	4696.0	4696.0	4690.3	4662.1	4656.5
12.5°	4605.8	4600.1	4577.6	4538.1	4526.8
15°	4481.7	4481.7	4436.6	4391.5	4374.6
17.5°	4346.4	4340.8	4284.4	4239.3	4216.8
20°	4199.9	4188.6	4132.2	4058.9	4019.5
22.5°	4036.4	4036.4	3968.7	3872.9	3833.4
25°	3884.2	3861.6	3799.6	3664.3	3562.8
27.5°	3709.4	3675.6	3607.9	3416.3	3297.9
30°	3517.7	3500.8	3405.0	3156.9	3066.8
32.5°	3337.3	3309.2	3207.7	2948.4	2875.1
35°	3151.3	3128.8	2976.6	2751.1	2683.4
37.5°	2965.3	2937.1	2745.4	2565.0	2480.5
40°	2779.2	2745.4	2536.8	2373.3	2283.2
42.5°	2604.5	2559.4	2356.4	2181.7	2080.2
45°	2418.4	2367.7	2164.8	1984.4	1905.4
47.5°	2232.4	2187.3	2001.3	1815.2	1725.0
50°	2035.1	1995.6	1826.5	1640.5	1544.6
52.5°	1871.6	1809.6	1646.1	1460.1	1381.2
55°	1679.9	1629.2	1477.0	1302.2	1234.6
57.5°	1505.2	1454.5	1313.5	1150.0	1093.7
60°	1341.7	1268.4	1150.0	1009.1	964.0
62.5°	1161.3	1104.9	1003.5	885.1	941.4
65°	997.8	941.4	851.2	868.2	721.6
67.5°	817.4	789.2	710.3	631.4	608.8
70°	665.2	631.4	603.2	518.6	496.1
72.5°	529.9	496.1	456.6	411.5	394.6
75°	400.3	372.1	349.5	332.6	366.4
77.5°	276.2	265.0	248.0	231.1	225.5
80°	180.4	174.8	169.1	163.5	157.8
82.5°	107.1	107.1	107.1	107.1	107.1
85°	56.4	62.0	67.6	73.3	78.9
87.5°	33.8	33.8	39.5	45.1	50.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)