

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: P564020

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564020
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-LD4-4STD-35-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12657.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

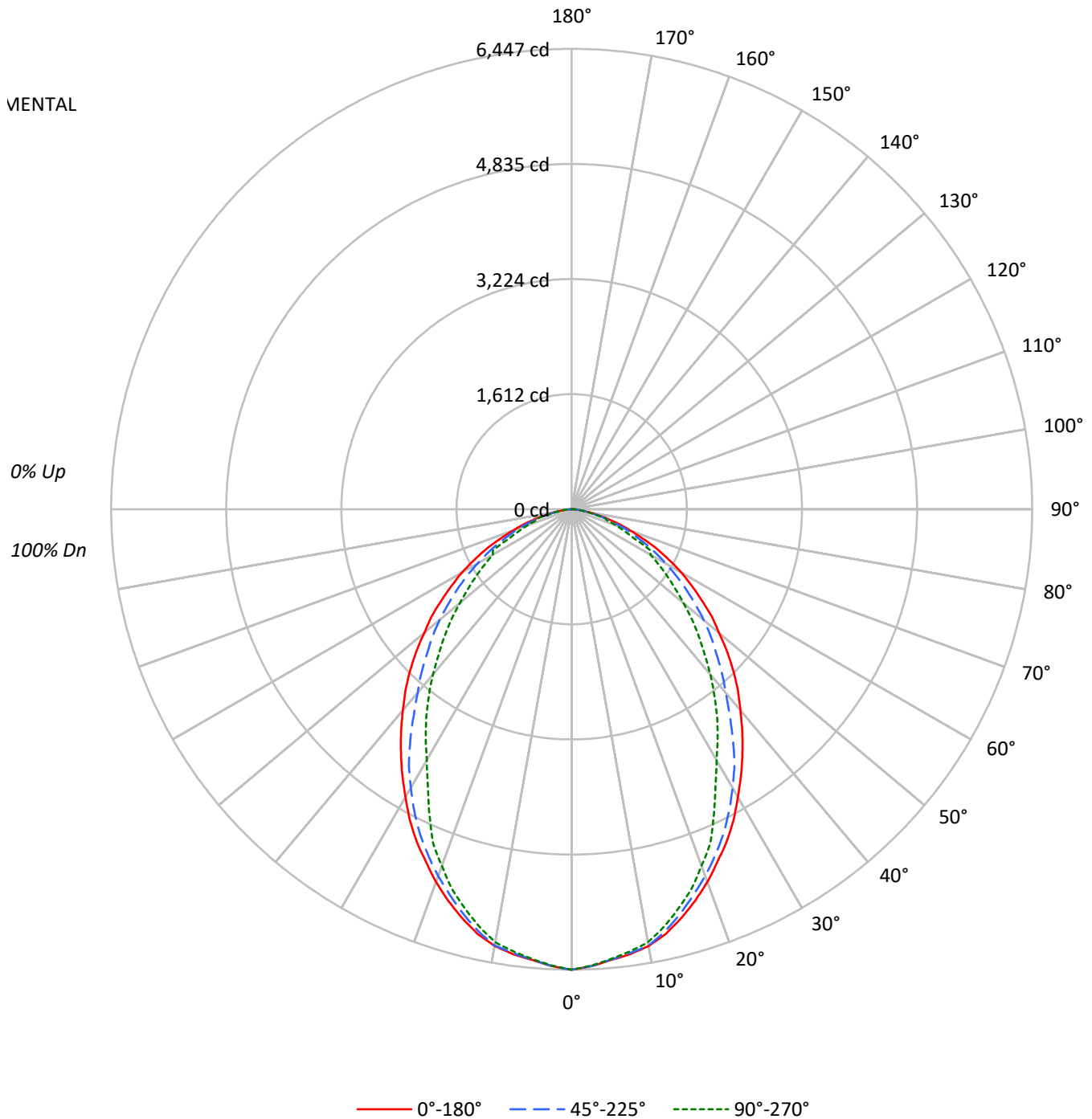
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8675	8675	8675
5°	8557	8547	8537
10°	8483	8472	8411
15°	8254	8171	8057
20°	7951	7823	7609
25°	7624	7458	6993
30°	7226	6994	6300
35°	6844	6464	5828
40°	6454	5891	5302
45°	6084	5446	4794
50°	5632	5055	4275
55°	5210	4581	3829
60°	4774	4092	3430
65°	4200	3583	3038
70°	3460	3137	2580
75°	2751	2402	2519
80°	1848	1733	1617
85°	1150	1380	1610

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6084 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	600.2	4.7
10°-20°	1647.1	13.0
20°-30°	2280.3	18.0
30°-40°	2431.4	19.2
40°-50°	2218.2	17.5
50°-60°	1737.8	13.7
60°-70°	1132.6	8.9
70°-80°	501.8	4.0
80°-90°	107.7	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°	4527.5	35.8
0°-40°	6959.0	55.0
0°-60°	10914.9	86.2
0°-90°	12657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6447	6447	6447	6447	6447	
5°	6336	6328	6328	6321	6321	601
15°	5926	5926	5866	5806	5784	1666
25°	5136	5106	5024	4845	4711	2358
35°	4166	4137	3936	3637	3548	2605
45°	3198	3130	2862	2624	2519	2463
55°	2221	2154	1953	1722	1632	1992
65°	1319	1245	1126	1148	954	1300
75°	529	492	462	440	484	567
85°	74	82	89	97	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6447.3	6447.3	6447.3	6447.3	6447.3
2.5°	6402.6	6402.6	6402.6	6395.1	6395.1
5°	6335.5	6328.1	6328.1	6320.6	6320.6
7.5°	6283.3	6275.9	6268.4	6261.0	6246.1
10°	6208.8	6208.8	6201.3	6164.1	6156.6
12.5°	6089.5	6082.1	6052.3	6000.1	5985.2
15°	5925.6	5925.6	5865.9	5806.3	5783.9
17.5°	5746.7	5739.2	5664.7	5605.1	5575.2
20°	5552.9	5538.0	5463.4	5366.5	5314.4
22.5°	5336.7	5336.7	5247.3	5120.6	5068.4
25°	5135.5	5105.7	5023.7	4844.8	4710.6
27.5°	4904.4	4859.7	4770.3	4516.8	4360.3
30°	4651.0	4628.6	4501.9	4174.0	4054.7
32.5°	4412.5	4375.2	4241.1	3898.2	3801.3
35°	4166.5	4136.7	3935.5	3637.3	3547.9
37.5°	3920.6	3883.3	3629.9	3391.4	3279.6
40°	3674.6	3629.9	3354.1	3137.9	3018.7
42.5°	3443.5	3383.9	3115.6	2884.5	2750.4
45°	3197.6	3130.5	2862.2	2623.6	2519.3
47.5°	2951.6	2892.0	2646.0	2400.0	2280.8
50°	2690.7	2638.6	2414.9	2169.0	2042.3
52.5°	2474.6	2392.6	2176.4	1930.5	1826.1
55°	2221.2	2154.1	1952.8	1721.8	1632.3
57.5°	1990.1	1923.0	1736.7	1520.5	1446.0
60°	1773.9	1677.0	1520.5	1334.2	1274.6
62.5°	1535.4	1460.9	1326.7	1170.2	1244.7
65°	1319.3	1244.7	1125.5	1147.8	954.1
67.5°	1080.8	1043.5	939.1	834.8	805.0
70°	879.5	834.8	797.5	685.7	655.9
72.5°	700.6	655.9	603.7	544.1	521.7
75°	529.2	491.9	462.1	439.8	484.5
77.5°	365.2	350.3	328.0	305.6	298.1
80°	238.5	231.1	223.6	216.2	208.7
82.5°	141.6	141.6	141.6	141.6	141.6
85°	74.5	82.0	89.4	96.9	104.3
87.5°	44.7	44.7	52.2	59.6	67.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)