

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: P563060

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563060
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-LD4-3HI-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: 11644.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

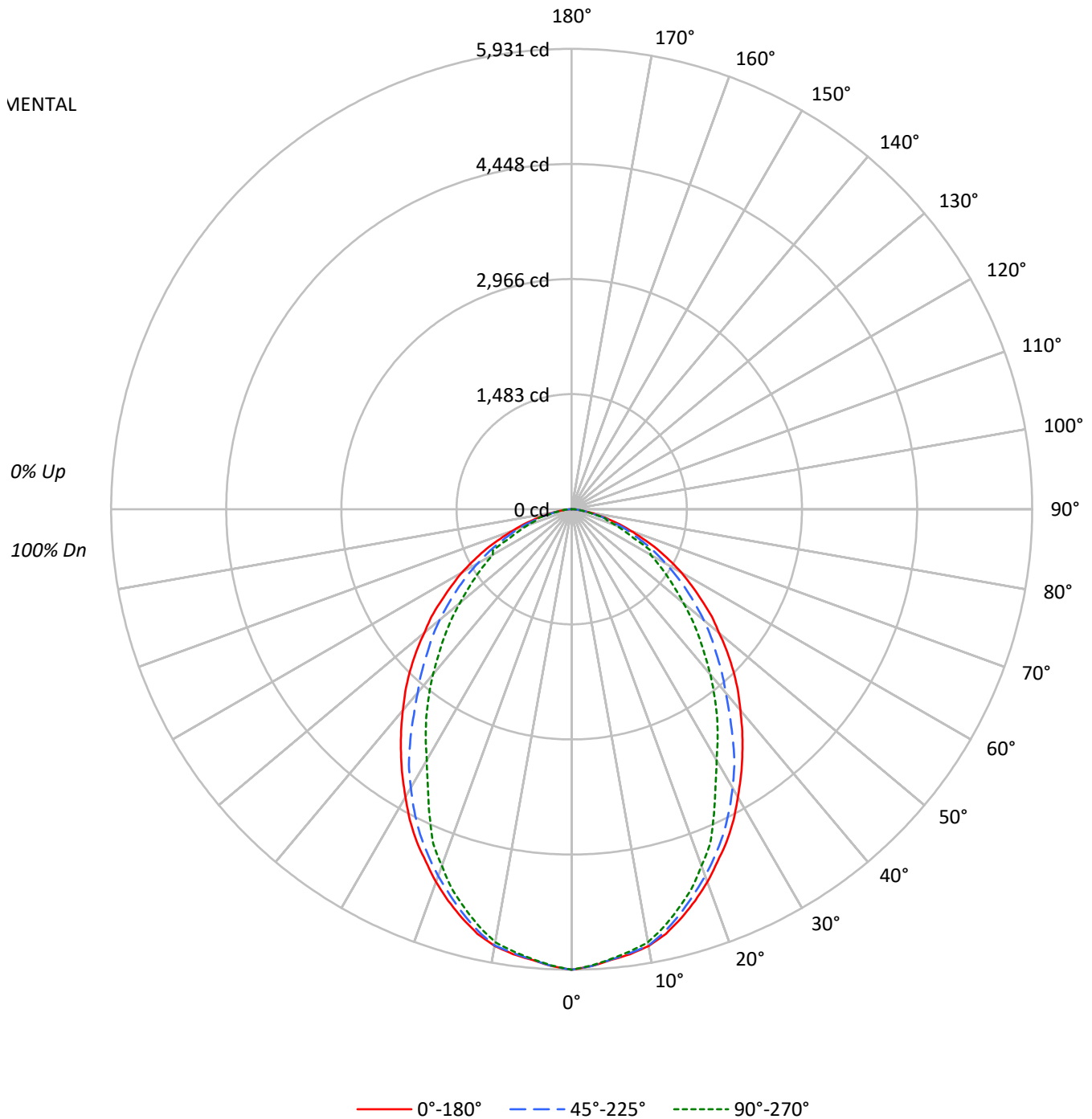
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7981	7981	7981
5°	7872	7863	7854
10°	7804	7794	7738
15°	7593	7517	7412
20°	7315	7197	7000
25°	7014	6861	6434
30°	6648	6435	5795
35°	6296	5947	5361
40°	5938	5420	4878
45°	5597	5010	4410
50°	5182	4650	3933
55°	4793	4214	3523
60°	4392	3764	3155
65°	3864	3296	2794
70°	3183	2886	2374
75°	2531	2210	2317
80°	1700	1594	1488
85°	1059	1271	1482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5597 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	552.1	4.7
10°-20°	1515.3	13.0
20°-30°	2097.8	18.0
30°-40°	2236.8	19.2
40°-50°	2040.6	17.5
50°-60°	1598.7	13.7
60°-70°	1041.9	8.9
70°-80°	461.6	4.0
80°-90°	99.1	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°	4165.2	35.8
0°-40°	6402.0	55.0
0°-60°	10041.3	86.2
0°-90°	11644.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11644.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5931	5931	5931	5931	5931	
5°	5828	5822	5822	5815	5815	553
15°	5451	5451	5396	5342	5321	1533
25°	4724	4697	4622	4457	4334	2169
35°	3833	3806	3620	3346	3264	2396
45°	2942	2880	2633	2414	2318	2266
55°	2043	1982	1796	1584	1502	1833
65°	1214	1145	1035	1056	878	1196
75°	487	453	425	405	446	522
85°	69	75	82	89	96	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5931.3	5931.3	5931.3	5931.3	5931.3
2.5°	5890.2	5890.2	5890.2	5883.3	5883.3
5°	5828.4	5821.6	5821.6	5814.7	5814.7
7.5°	5780.4	5773.6	5766.7	5759.9	5746.2
10°	5711.9	5711.9	5705.0	5670.7	5663.9
12.5°	5602.2	5595.3	5567.9	5519.9	5506.2
15°	5451.3	5451.3	5396.5	5341.6	5321.0
17.5°	5286.7	5279.9	5211.3	5156.5	5129.0
20°	5108.5	5094.7	5026.2	4937.0	4889.0
22.5°	4909.6	4909.6	4827.3	4710.8	4662.8
25°	4724.5	4697.0	4621.6	4457.0	4333.6
27.5°	4511.9	4470.8	4388.5	4155.3	4011.3
30°	4278.8	4258.2	4141.6	3839.9	3730.2
32.5°	4059.3	4025.1	3901.6	3586.2	3497.1
35°	3833.1	3805.6	3620.5	3346.2	3263.9
37.5°	3606.8	3572.5	3339.4	3119.9	3017.1
40°	3380.5	3339.4	3085.6	2886.8	2777.1
42.5°	3167.9	3113.1	2866.2	2653.7	2530.2
45°	2941.6	2879.9	2633.1	2413.7	2317.7
47.5°	2715.4	2660.5	2434.2	2208.0	2098.2
50°	2475.4	2427.4	2221.7	1995.4	1878.8
52.5°	2276.5	2201.1	2002.2	1776.0	1680.0
55°	2043.4	1981.7	1796.5	1584.0	1501.7
57.5°	1830.8	1769.1	1597.7	1398.8	1330.3
60°	1632.0	1542.8	1398.8	1227.4	1172.5
62.5°	1412.5	1344.0	1220.5	1076.5	1145.1
65°	1213.7	1145.1	1035.4	1056.0	877.7
67.5°	994.3	960.0	864.0	768.0	740.6
70°	809.1	768.0	733.7	630.8	603.4
72.5°	644.6	603.4	555.4	500.6	480.0
75°	486.8	452.6	425.1	404.6	445.7
77.5°	336.0	322.3	301.7	281.1	274.3
80°	219.4	212.6	205.7	198.9	192.0
82.5°	130.3	130.3	130.3	130.3	130.3
85°	68.6	75.4	82.3	89.1	96.0
87.5°	41.1	41.1	48.0	54.9	61.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)