

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: P564088

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564088
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-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11185.0 lumens
Efficiency: N/A
Efficacy: 84.0 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

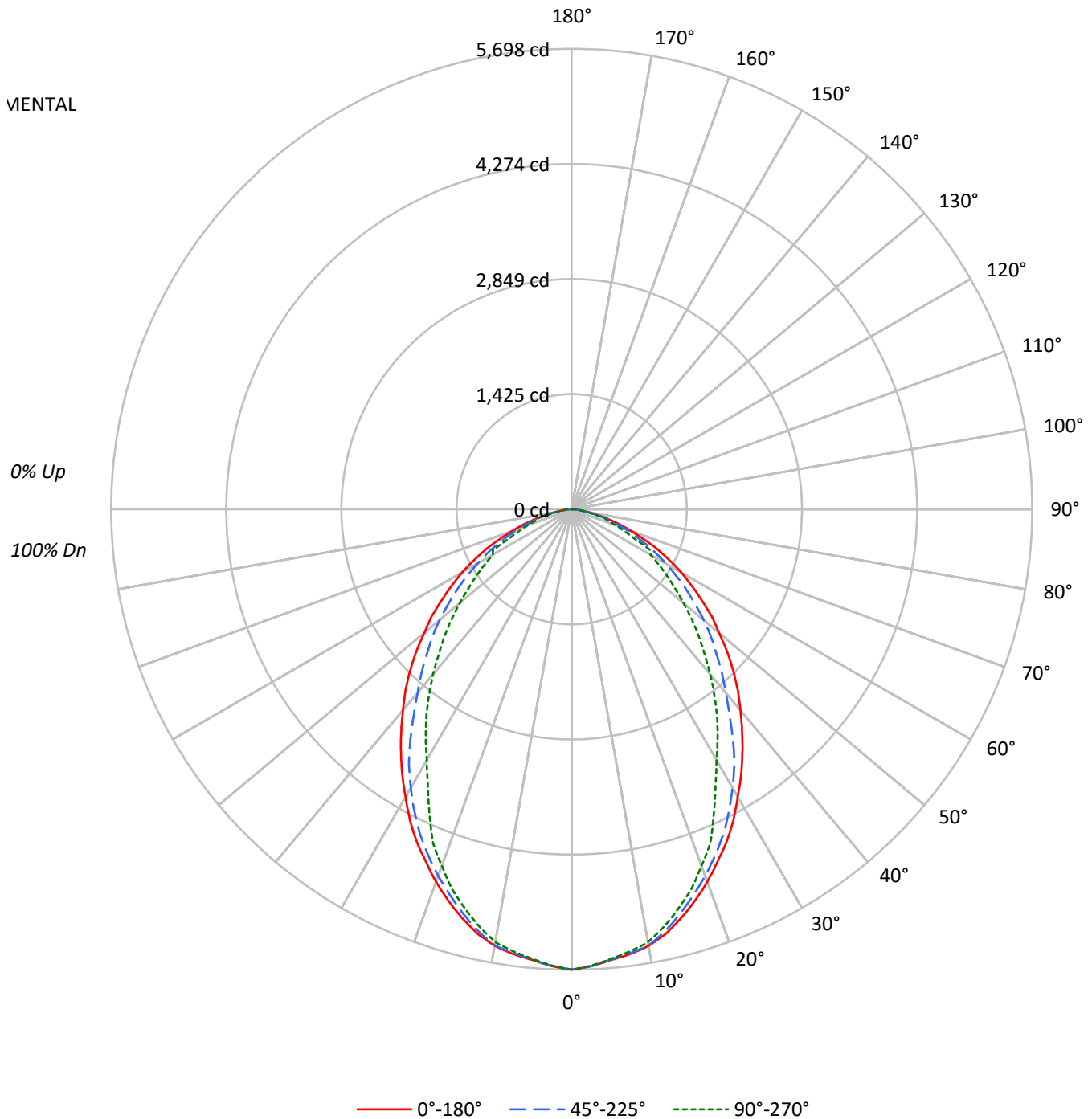
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													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°	7666	7666	7666
5°	7562	7553	7544
10°	7496	7487	7433
15°	7294	7221	7120
20°	7026	6913	6724
25°	6737	6591	6180
30°	6386	6181	5567
35°	6048	5712	5150
40°	5703	5206	4685
45°	5377	4813	4236
50°	4977	4467	3778
55°	4604	4048	3384
60°	4218	3616	3031
65°	3712	3167	2684
70°	3057	2773	2280
75°	2431	2123	2226
80°	1633	1531	1429
85°	1017	1220	1423

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5377 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.4	4.7
10°-20°	1455.5	13.0
20°-30°	2015.1	18.0
30°-40°	2148.7	19.2
40°-50°	1960.2	17.5
50°-60°	1535.7	13.7
60°-70°	1000.9	8.9
70°-80°	443.4	4.0
80°-90°	95.2	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°	4001.0	35.8
0°-40°	6149.6	55.0
0°-60°	9645.5	86.2
0°-90°	11185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11185.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5698	5698	5698	5698	5698	
5°	5599	5592	5592	5586	5586	531
15°	5236	5236	5184	5131	5111	1472
25°	4538	4512	4439	4281	4163	2083
35°	3682	3656	3478	3214	3135	2302
45°	2826	2766	2529	2318	2226	2177
55°	1963	1904	1726	1522	1442	1761
65°	1166	1100	995	1014	843	1149
75°	468	435	408	389	428	501
85°	66	72	79	86	92	91
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5697.5	5697.5	5697.5	5697.5	5697.5
2.5°	5658.0	5658.0	5658.0	5651.4	5651.4
5°	5598.7	5592.1	5592.1	5585.5	5585.5
7.5°	5552.6	5546.0	5539.4	5532.8	5519.6
10°	5486.7	5486.7	5480.1	5447.2	5440.6
12.5°	5381.3	5374.7	5348.4	5302.3	5289.1
15°	5236.4	5236.4	5183.7	5131.0	5111.3
17.5°	5078.3	5071.8	5005.9	4953.2	4926.8
20°	4907.1	4893.9	4828.0	4742.4	4696.3
22.5°	4716.1	4716.1	4637.0	4525.1	4479.0
25°	4538.2	4511.9	4439.4	4281.4	4162.8
27.5°	4334.0	4294.5	4215.5	3991.5	3853.2
30°	4110.1	4090.3	3978.4	3688.5	3583.2
32.5°	3899.3	3866.4	3747.8	3444.8	3359.2
35°	3682.0	3655.6	3477.8	3214.3	3135.3
37.5°	3464.6	3431.7	3207.7	2996.9	2898.1
40°	3247.2	3207.7	2964.0	2773.0	2667.6
42.5°	3043.1	2990.4	2753.2	2549.1	2430.5
45°	2825.7	2766.4	2529.3	2318.5	2226.3
47.5°	2608.3	2555.6	2338.3	2120.9	2015.5
50°	2377.8	2331.7	2134.1	1916.7	1804.8
52.5°	2186.8	2114.3	1923.3	1706.0	1613.7
55°	1962.8	1903.6	1725.7	1521.5	1442.5
57.5°	1758.6	1699.4	1534.7	1343.7	1277.8
60°	1567.6	1482.0	1343.7	1179.0	1126.3
62.5°	1356.9	1291.0	1172.4	1034.1	1100.0
65°	1165.8	1100.0	994.6	1014.4	843.1
67.5°	955.1	922.1	829.9	737.7	711.4
70°	777.2	737.7	704.8	606.0	579.6
72.5°	619.1	579.6	533.5	480.8	461.1
75°	467.7	434.7	408.4	388.6	428.1
77.5°	322.7	309.6	289.8	270.1	263.5
80°	210.8	204.2	197.6	191.0	184.4
82.5°	125.1	125.1	125.1	125.1	125.1
85°	65.9	72.5	79.0	85.6	92.2
87.5°	39.5	39.5	46.1	52.7	59.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)