

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: P563708

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563708
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-LD4-4HI-40-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16106.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

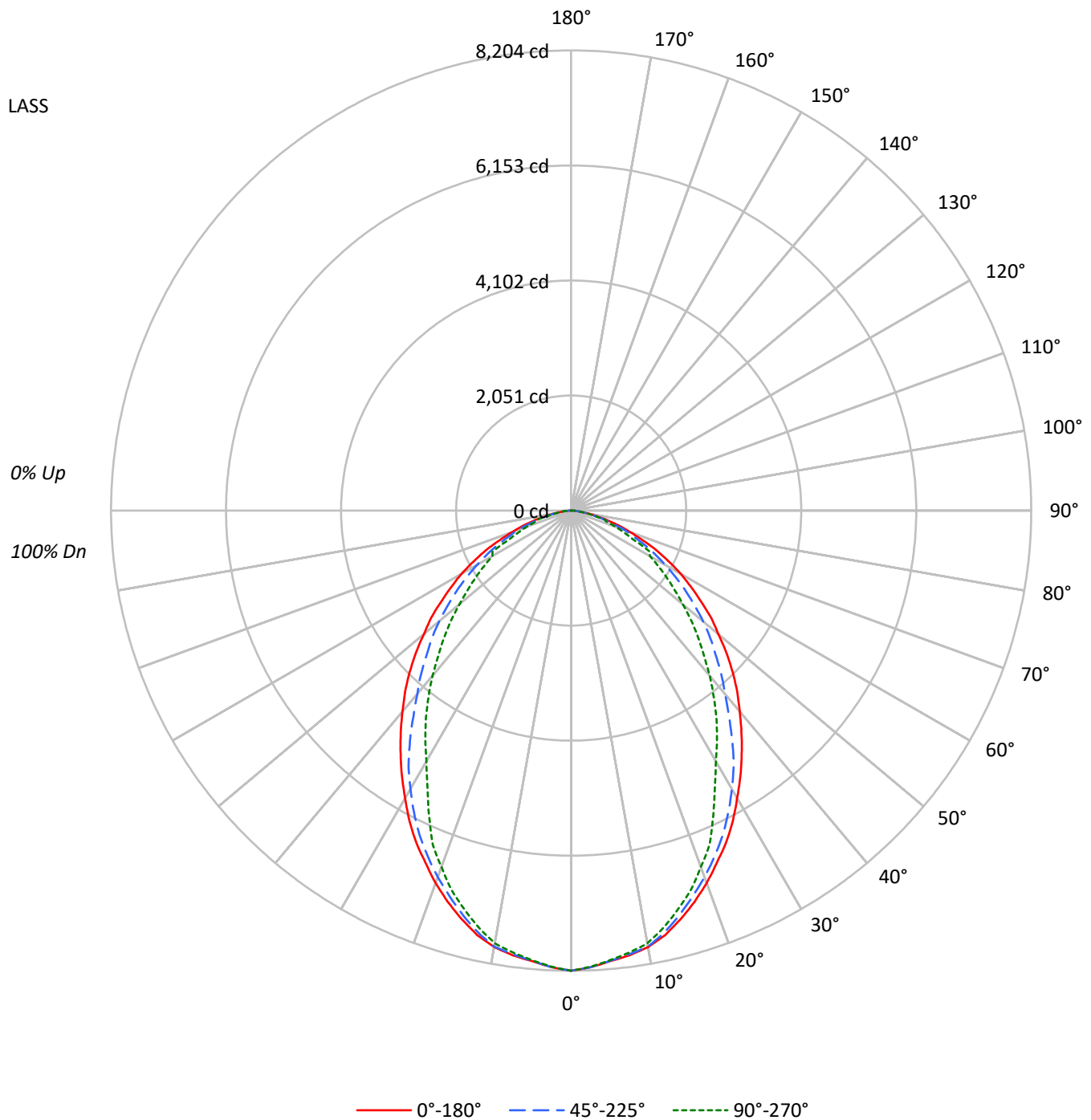
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	11039	11039	11039
5°	10889	10876	10863
10°	10794	10781	10704
15°	10503	10398	10252
20°	10117	9954	9683
25°	9702	9490	8899
30°	9195	8900	8016
35°	8709	8226	7416
40°	8213	7497	6747
45°	7742	6930	6100
50°	7167	6432	5440
55°	6630	5829	4872
60°	6074	5207	4364
65°	5345	4560	3865
70°	4403	3993	3283
75°	3501	3057	3205
80°	2352	2204	2058
85°	1463	1757	2050

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7742 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	763.7	4.7
10°-20°	2095.9	13.0
20°-30°	2901.6	18.0
30°-40°	3094.0	19.2
40°-50°	2822.6	17.5
50°-60°	2211.3	13.7
60°-70°	1441.2	8.9
70°-80°	638.5	4.0
80°-90°	137.1	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°	5761.3	35.8
0°-40°	8855.2	55.0
0°-60°	13889.2	86.2
0°-90°	16106.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16106.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8204	8204	8204	8204	8204	
5°	8062	8052	8052	8043	8043	765
15°	7540	7540	7464	7388	7360	2120
25°	6535	6497	6393	6165	5994	3000
35°	5302	5264	5008	4628	4515	3315
45°	4069	3984	3642	3339	3206	3134
55°	2826	2741	2485	2191	2077	2535
65°	1679	1584	1432	1461	1214	1654
75°	673	626	588	560	616	722
85°	95	104	114	123	133	132
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8204.2	8204.2	8204.2	8204.2	8204.2
2.5°	8147.3	8147.3	8147.3	8137.8	8137.8
5°	8061.9	8052.4	8052.4	8042.9	8042.9
7.5°	7995.5	7986.0	7976.6	7967.1	7948.1
10°	7900.7	7900.7	7891.2	7843.8	7834.3
12.5°	7748.9	7739.4	7701.5	7635.1	7616.1
15°	7540.3	7540.3	7464.4	7388.5	7360.1
17.5°	7312.6	7303.1	7208.3	7132.4	7094.5
20°	7066.0	7047.1	6952.2	6828.9	6762.5
22.5°	6791.0	6791.0	6677.2	6515.9	6449.5
25°	6534.9	6497.0	6392.6	6165.0	5994.3
27.5°	6240.9	6184.0	6070.1	5747.7	5548.5
30°	5918.4	5889.9	5728.7	5311.4	5159.6
32.5°	5614.9	5567.5	5396.7	4960.4	4837.1
35°	5301.9	5264.0	5007.9	4628.5	4514.7
37.5°	4988.9	4941.5	4619.0	4315.5	4173.2
40°	4675.9	4619.0	4268.1	3993.0	3841.3
42.5°	4381.9	4306.0	3964.6	3670.5	3499.8
45°	4068.9	3983.5	3642.1	3338.6	3205.8
47.5°	3755.9	3680.0	3367.0	3054.0	2902.3
50°	3423.9	3357.5	3073.0	2760.0	2598.8
52.5°	3148.9	3044.6	2769.5	2456.5	2323.7
55°	2826.4	2741.1	2485.0	2190.9	2077.1
57.5°	2532.4	2447.0	2209.9	1934.9	1840.0
60°	2257.3	2134.0	1934.9	1697.7	1621.9
62.5°	1953.8	1859.0	1688.3	1489.1	1583.9
65°	1678.8	1583.9	1432.2	1460.6	1214.0
67.5°	1375.3	1327.8	1195.1	1062.3	1024.3
70°	1119.2	1062.3	1014.9	872.6	834.6
72.5°	891.6	834.6	768.3	692.4	663.9
75°	673.4	626.0	588.0	559.6	616.5
77.5°	464.7	445.8	417.3	388.9	379.4
80°	303.5	294.0	284.5	275.1	265.6
82.5°	180.2	180.2	180.2	180.2	180.2
85°	94.8	104.3	113.8	123.3	132.8
87.5°	56.9	56.9	66.4	75.9	85.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)