

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: P563429

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563429
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-LD4-3LO-50-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8719.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

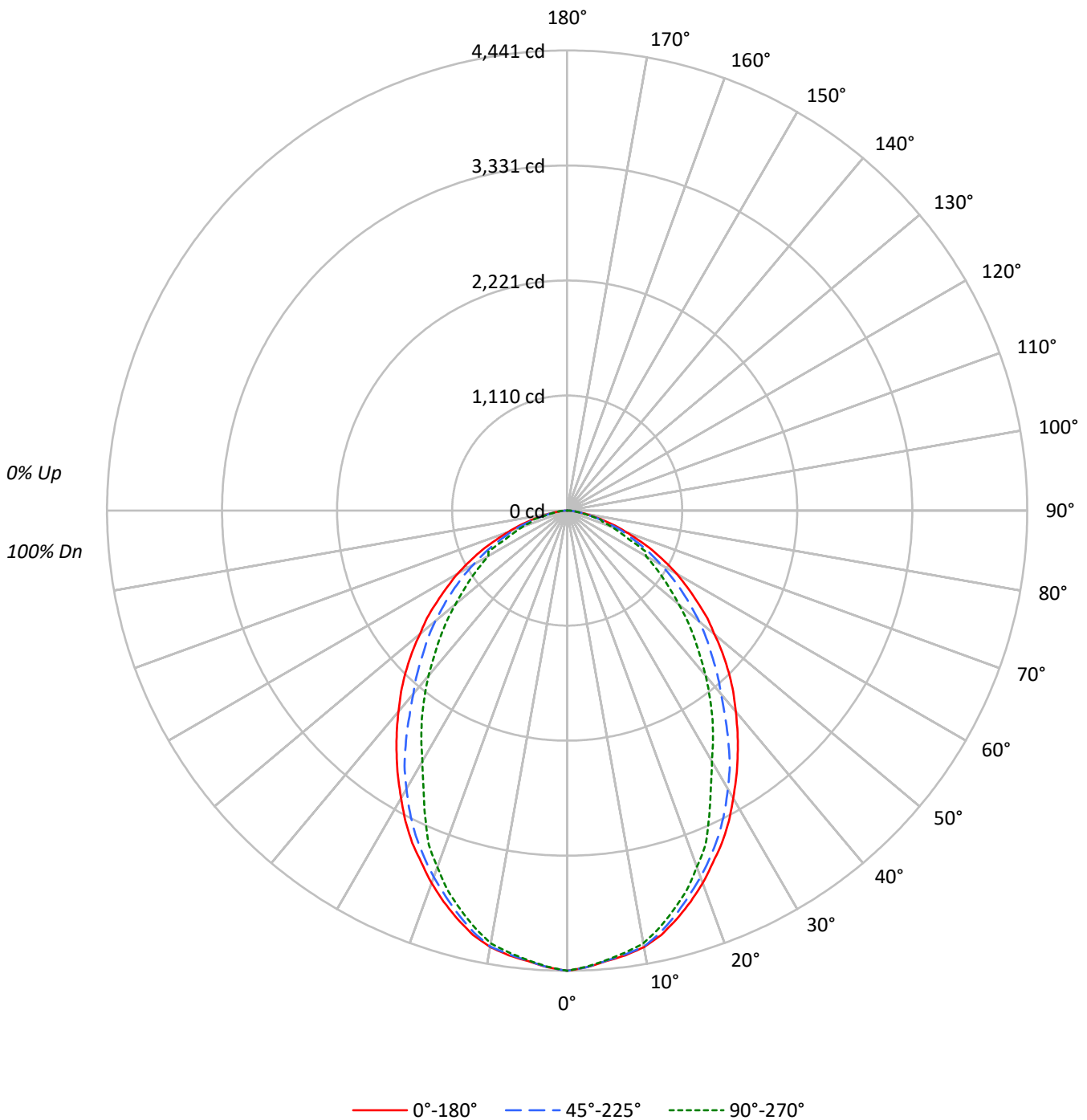
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	5976	5976	5976
5°	5895	5888	5881
10°	5843	5836	5794
15°	5686	5629	5550
20°	5477	5389	5242
25°	5252	5138	4817
30°	4978	4818	4340
35°	4714	4453	4014
40°	4446	4058	3652
45°	4191	3752	3302
50°	3880	3482	2945
55°	3589	3156	2638
60°	3288	2819	2363
65°	2893	2468	2092
70°	2384	2161	1777
75°	1895	1655	1735
80°	1273	1193	1114
85°	792	951	1110

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4191 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	413.4	4.7
10°-20°	1134.6	13.0
20°-30°	1570.8	18.0
30°-40°	1674.9	19.2
40°-50°	1528.0	17.5
50°-60°	1197.1	13.7
60°-70°	780.2	8.9
70°-80°	345.7	4.0
80°-90°	74.2	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°	3118.9	35.8
0°-40°	4793.8	55.0
0°-60°	7518.9	86.2
0°-90°	8719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4441	4441	4441	4441	4441	
5°	4364	4359	4359	4354	4354	414
15°	4082	4082	4041	4000	3984	1148
25°	3538	3517	3461	3337	3245	1624
35°	2870	2850	2711	2506	2444	1794
45°	2203	2156	1972	1807	1736	1697
55°	1530	1484	1345	1186	1124	1372
65°	909	858	775	791	657	896
75°	364	339	318	303	334	391
85°	51	56	62	67	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4441.3	4441.3	4441.3	4441.3	4441.3
2.5°	4410.5	4410.5	4410.5	4405.4	4405.4
5°	4364.3	4359.2	4359.2	4354.1	4354.1
7.5°	4328.4	4323.2	4318.1	4313.0	4302.7
10°	4277.0	4277.0	4271.9	4246.2	4241.1
12.5°	4194.9	4189.8	4169.2	4133.3	4123.0
15°	4081.9	4081.9	4040.9	3999.8	3984.4
17.5°	3958.7	3953.6	3902.2	3861.1	3840.6
20°	3825.2	3814.9	3763.6	3696.8	3660.9
22.5°	3676.3	3676.3	3614.7	3527.4	3491.5
25°	3537.7	3517.1	3460.7	3337.4	3245.0
27.5°	3378.5	3347.7	3286.1	3111.5	3003.7
30°	3203.9	3188.5	3101.2	2875.3	2793.2
32.5°	3039.6	3014.0	2921.5	2685.3	2618.6
35°	2870.2	2849.6	2711.0	2505.6	2444.0
37.5°	2700.7	2675.1	2500.5	2336.2	2259.2
40°	2531.3	2500.5	2310.5	2161.6	2079.5
42.5°	2372.1	2331.1	2146.2	1987.1	1894.6
45°	2202.7	2156.5	1971.6	1807.3	1735.5
47.5°	2033.3	1992.2	1822.7	1653.3	1571.2
50°	1853.6	1817.6	1663.6	1494.1	1406.9
52.5°	1704.7	1648.2	1499.3	1329.8	1258.0
55°	1530.1	1483.9	1345.2	1186.1	1124.5
57.5°	1370.9	1324.7	1196.3	1047.4	996.1
60°	1222.0	1155.3	1047.4	919.1	878.0
62.5°	1057.7	1006.4	913.9	806.1	857.5
65°	908.8	857.5	775.3	790.7	657.2
67.5°	744.5	718.8	646.9	575.1	554.5
70°	605.9	575.1	549.4	472.4	451.8
72.5°	482.6	451.8	415.9	374.8	359.4
75°	364.5	338.9	318.3	302.9	333.7
77.5°	251.6	241.3	225.9	210.5	205.4
80°	164.3	159.2	154.0	148.9	143.8
82.5°	97.6	97.6	97.6	97.6	97.6
85°	51.3	56.5	61.6	66.7	71.9
87.5°	30.8	30.8	35.9	41.1	46.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)