

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: P563363

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563363
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-40-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8672.0 lumens
Efficiency: N/A
Efficacy: 123.5 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

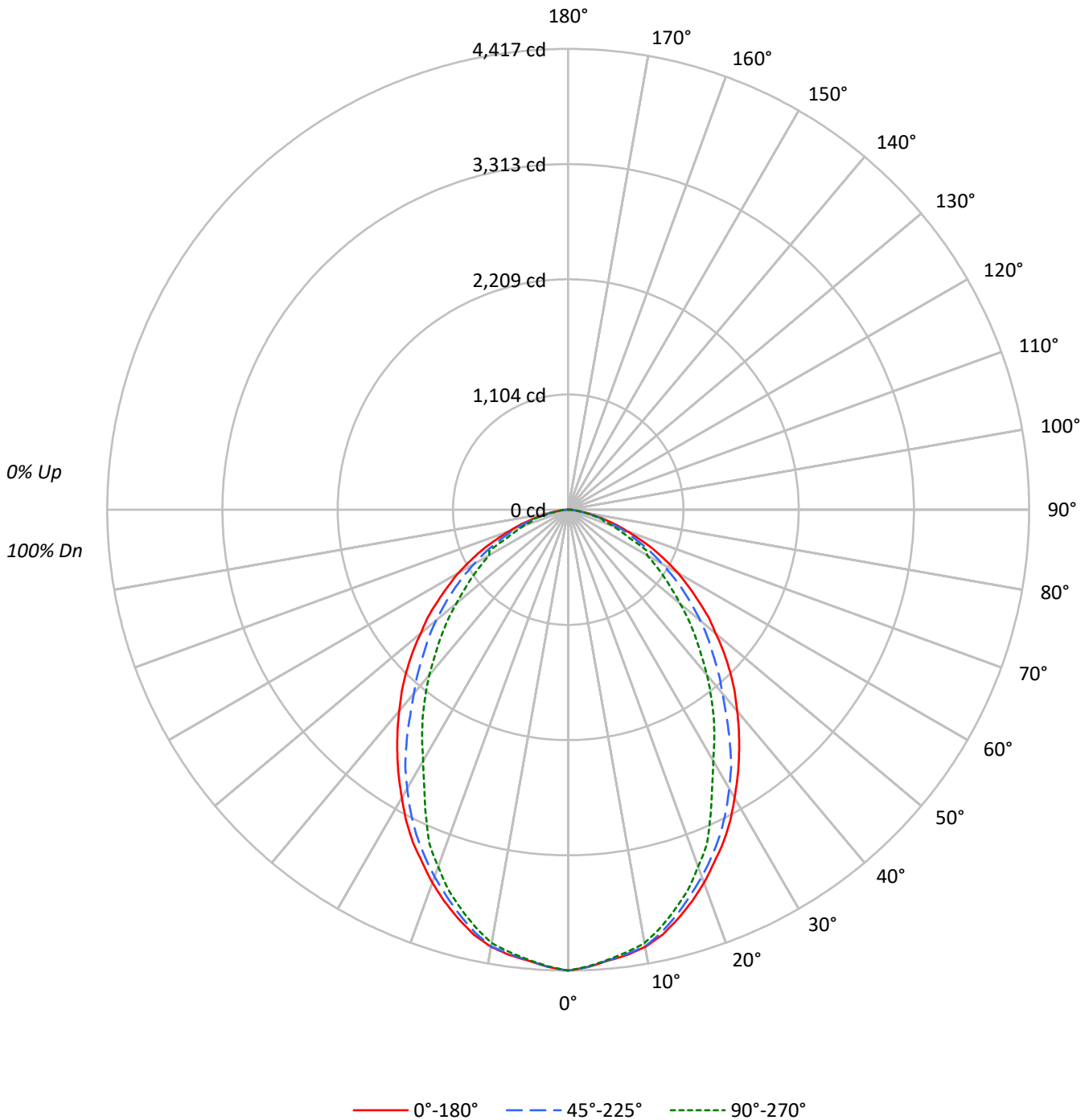
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5944	5944	5944
5°	5863	5856	5849
10°	5812	5805	5763
15°	5655	5598	5520
20°	5448	5360	5214
25°	5224	5110	4791
30°	4951	4792	4316
35°	4689	4429	3993
40°	4422	4036	3633
45°	4169	3731	3284
50°	3859	3463	2929
55°	3570	3139	2624
60°	3271	2803	2350
65°	2878	2455	2081
70°	2371	2150	1768
75°	1885	1646	1725
80°	1266	1187	1108
85°	789	946	1104

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4169 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	411.2	4.7
10°-20°	1128.5	13.0
20°-30°	1562.3	18.0
30°-40°	1665.9	19.2
40°-50°	1519.8	17.5
50°-60°	1190.6	13.7
60°-70°	776.0	8.9
70°-80°	343.8	4.0
80°-90°	73.8	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°	3102.0	35.8
0°-40°	4768.0	55.0
0°-60°	7478.4	86.2
0°-90°	8672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8672.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4417	4417	4417	4417	4417	
5°	4341	4336	4336	4331	4331	412
15°	4060	4060	4019	3978	3963	1141
25°	3519	3498	3442	3319	3228	1615
35°	2855	2834	2696	2492	2431	1785
45°	2191	2145	1961	1798	1726	1688
55°	1522	1476	1338	1180	1118	1365
65°	904	853	771	786	654	891
75°	363	337	317	301	332	389
85°	51	56	61	66	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4417.4	4417.4	4417.4	4417.4	4417.4
2.5°	4386.8	4386.8	4386.8	4381.7	4381.7
5°	4340.8	4335.7	4335.7	4330.6	4330.6
7.5°	4305.1	4299.9	4294.8	4289.7	4279.5
10°	4254.0	4254.0	4248.9	4223.3	4218.2
12.5°	4172.3	4167.2	4146.7	4111.0	4100.8
15°	4059.9	4059.9	4019.1	3978.2	3962.9
17.5°	3937.4	3932.3	3881.2	3840.3	3819.9
20°	3804.6	3794.4	3743.3	3676.9	3641.2
22.5°	3656.5	3656.5	3595.2	3508.4	3472.6
25°	3518.6	3498.2	3442.0	3319.4	3227.5
27.5°	3360.3	3329.6	3268.4	3094.7	2987.5
30°	3186.7	3171.3	3084.5	2859.8	2778.1
32.5°	3023.2	2997.7	2905.8	2670.9	2604.5
35°	2854.7	2834.3	2696.4	2492.1	2430.8
37.5°	2686.2	2660.7	2487.0	2323.6	2247.0
40°	2517.7	2487.0	2298.1	2150.0	2068.3
42.5°	2359.4	2318.5	2134.7	1976.3	1884.4
45°	2190.8	2144.9	1961.0	1797.6	1726.1
47.5°	2022.3	1981.4	1812.9	1644.4	1562.7
50°	1843.6	1807.8	1654.6	1486.1	1399.3
52.5°	1695.5	1639.3	1491.2	1322.7	1251.2
55°	1521.8	1475.9	1338.0	1179.7	1118.4
57.5°	1363.5	1317.6	1189.9	1041.8	990.7
60°	1215.4	1149.0	1041.8	914.1	873.3
62.5°	1052.0	1000.9	909.0	801.8	852.8
65°	903.9	852.8	771.1	786.5	653.7
67.5°	740.5	715.0	643.5	572.0	551.5
70°	602.6	572.0	546.4	469.8	449.4
72.5°	480.0	449.4	413.7	372.8	357.5
75°	362.6	337.1	316.6	301.3	331.9
77.5°	250.2	240.0	224.7	209.4	204.3
80°	163.4	158.3	153.2	148.1	143.0
82.5°	97.0	97.0	97.0	97.0	97.0
85°	51.1	56.2	61.3	66.4	71.5
87.5°	30.6	30.6	35.7	40.9	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)