

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: P563313

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563313
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-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8829.0 lumens
Efficiency: N/A
Efficacy: 125.8 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

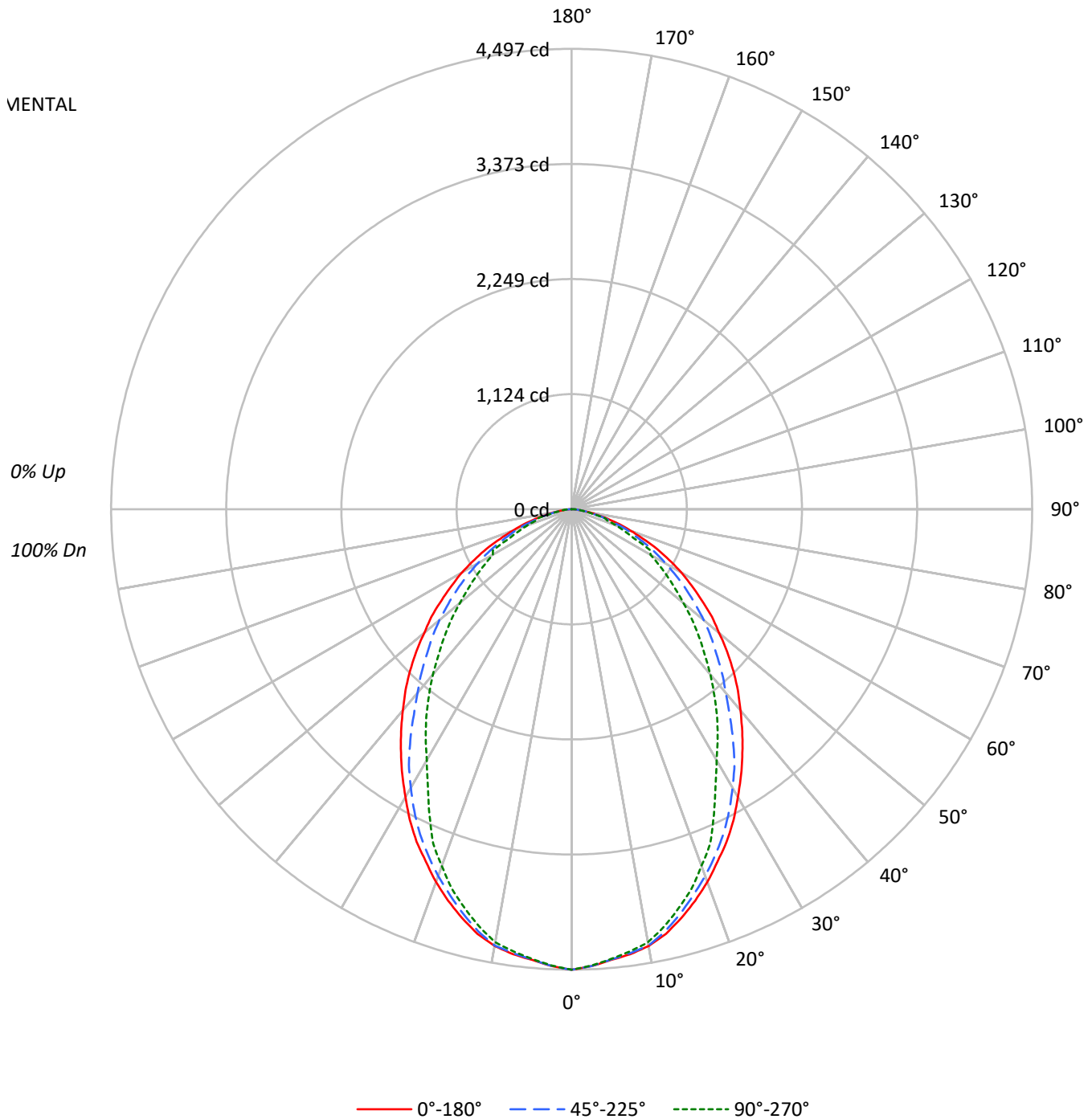
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	6051	6051	6051
5°	5969	5962	5955
10°	5917	5910	5867
15°	5758	5700	5620
20°	5546	5457	5308
25°	5318	5202	4878
30°	5040	4879	4394
35°	4774	4509	4065
40°	4502	4109	3698
45°	4244	3799	3344
50°	3929	3526	2982
55°	3635	3195	2671
60°	3330	2854	2393
65°	2930	2500	2119
70°	2413	2188	1800
75°	1919	1676	1757
80°	1289	1209	1128
85°	803	963	1124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4244 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.6	4.7
10°-20°	1148.9	13.0
20°-30°	1590.6	18.0
30°-40°	1696.1	19.2
40°-50°	1547.3	17.5
50°-60°	1212.2	13.7
60°-70°	790.1	8.9
70°-80°	350.0	4.0
80°-90°	75.2	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°	3158.2	35.8
0°-40°	4854.3	55.0
0°-60°	7613.8	86.2
0°-90°	8829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4497	4497	4497	4497	4497	
5°	4419	4414	4414	4409	4409	420
15°	4133	4133	4092	4050	4035	1162
25°	3582	3562	3504	3380	3286	1645
35°	2906	2886	2745	2537	2475	1817
45°	2230	2184	1996	1830	1757	1718
55°	1549	1503	1362	1201	1139	1390
65°	920	868	785	801	666	907
75°	369	343	322	307	338	396
85°	52	57	62	68	73	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4497.4	4497.4	4497.4	4497.4	4497.4
2.5°	4466.2	4466.2	4466.2	4461.0	4461.0
5°	4419.4	4414.2	4414.2	4409.0	4409.0
7.5°	4383.0	4377.8	4372.6	4367.4	4357.0
10°	4331.0	4331.0	4325.8	4299.8	4294.6
12.5°	4247.8	4242.6	4221.8	4185.4	4175.0
15°	4133.4	4133.4	4091.8	4050.2	4034.6
17.5°	4008.6	4003.4	3951.5	3909.9	3889.1
20°	3873.5	3863.1	3811.1	3743.5	3707.1
22.5°	3722.7	3722.7	3660.3	3571.9	3535.5
25°	3582.3	3561.5	3504.3	3379.5	3285.9
27.5°	3421.1	3389.9	3327.5	3150.8	3041.6
30°	3244.3	3228.8	3140.4	2911.6	2828.4
32.5°	3078.0	3052.0	2958.4	2719.2	2651.6
35°	2906.4	2885.6	2745.2	2537.2	2474.9
37.5°	2734.8	2708.8	2532.0	2365.7	2287.7
40°	2563.2	2532.0	2339.7	2188.9	2105.7
42.5°	2402.1	2360.5	2173.3	2012.1	1918.5
45°	2230.5	2183.7	1996.5	1830.1	1757.4
47.5°	2058.9	2017.3	1845.7	1674.2	1591.0
50°	1876.9	1840.5	1684.6	1513.0	1424.6
52.5°	1726.2	1669.0	1518.2	1346.6	1273.8
55°	1549.4	1502.6	1362.2	1201.0	1138.6
57.5°	1388.2	1341.4	1211.4	1060.7	1008.7
60°	1237.4	1169.8	1060.7	930.7	889.1
62.5°	1071.1	1019.1	925.5	816.3	868.3
65°	920.3	868.3	785.1	800.7	665.5
67.5°	753.9	727.9	655.1	582.3	561.5
70°	613.5	582.3	556.3	478.3	457.5
72.5°	488.7	457.5	421.1	379.5	363.9
75°	369.1	343.2	322.4	306.8	338.0
77.5°	254.8	244.4	228.8	213.2	208.0
80°	166.4	161.2	156.0	150.8	145.6
82.5°	98.8	98.8	98.8	98.8	98.8
85°	52.0	57.2	62.4	67.6	72.8
87.5°	31.2	31.2	36.4	41.6	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)