

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: P563319

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563319
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-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8279.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

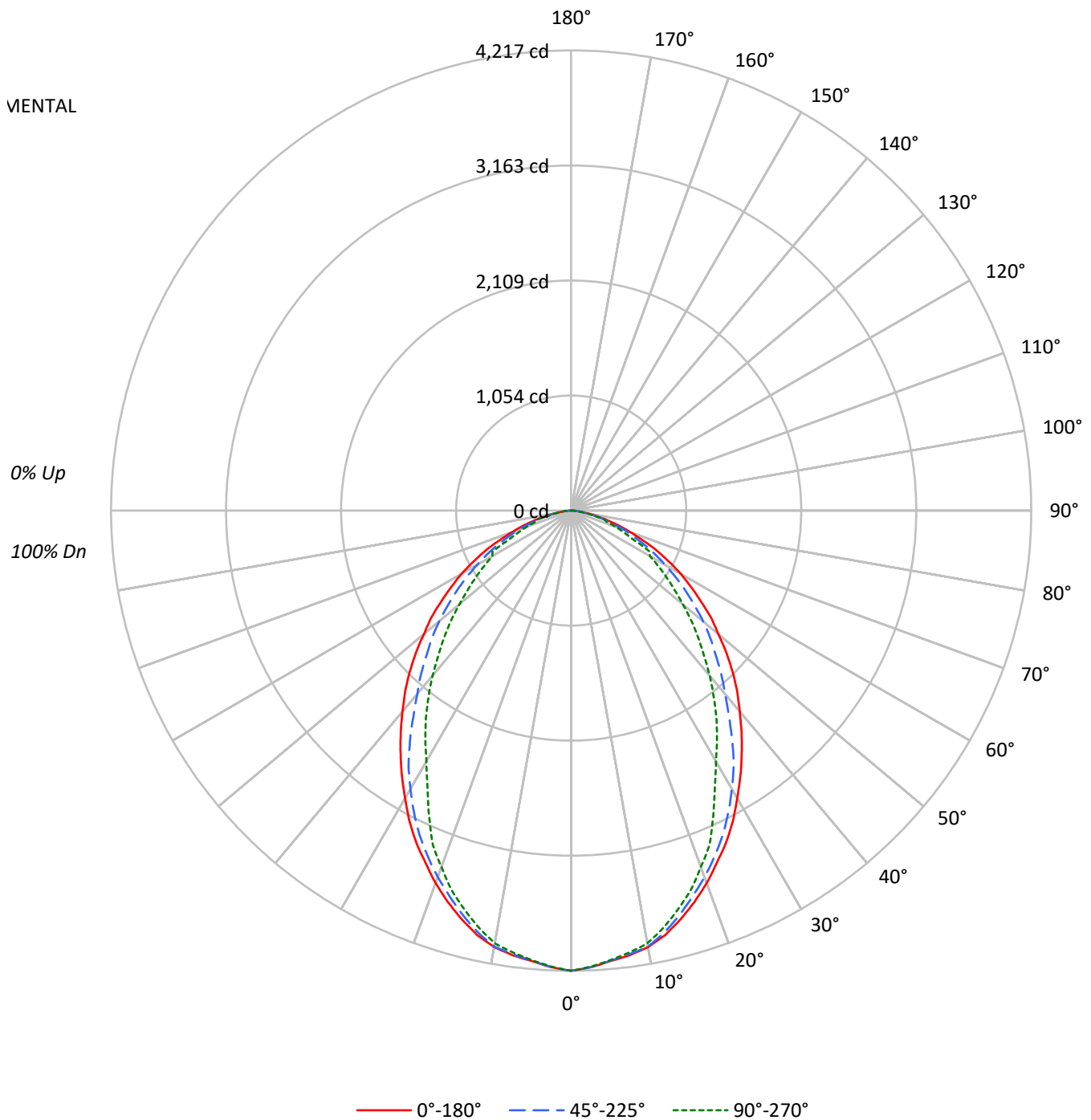
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5674	5674	5674
5°	5597	5591	5584
10°	5549	5542	5502
15°	5399	5345	5270
20°	5201	5117	4977
25°	4987	4878	4574
30°	4726	4575	4121
35°	4476	4228	3812
40°	4222	3853	3468
45°	3980	3562	3136
50°	3684	3306	2796
55°	3408	2997	2505
60°	3122	2676	2243
65°	2747	2344	1987
70°	2263	2052	1688
75°	1800	1572	1647
80°	1209	1134	1058
85°	753	903	1054

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3980 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.6	4.7
10°-20°	1077.4	13.0
20°-30°	1491.5	18.0
30°-40°	1590.4	19.2
40°-50°	1450.9	17.5
50°-60°	1136.7	13.7
60°-70°	740.8	8.9
70°-80°	328.2	4.0
80°-90°	70.5	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°	2961.5	35.8
0°-40°	4551.9	55.0
0°-60°	7139.5	86.2
0°-90°	8279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4217	4217	4217	4217	4217	
5°	4144	4139	4139	4134	4134	393
15°	3876	3876	3837	3798	3783	1090
25°	3359	3340	3286	3169	3081	1542
35°	2725	2706	2574	2379	2321	1704
45°	2092	2048	1872	1716	1648	1611
55°	1453	1409	1277	1126	1068	1303
65°	863	814	736	751	624	850
75°	346	322	302	288	317	371
85°	49	54	58	63	68	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4217.2	4217.2	4217.2	4217.2	4217.2
2.5°	4188.0	4188.0	4188.0	4183.1	4183.1
5°	4144.1	4139.2	4139.2	4134.3	4134.3
7.5°	4110.0	4105.1	4100.2	4095.3	4085.6
10°	4061.2	4061.2	4056.3	4031.9	4027.1
12.5°	3983.2	3978.3	3958.8	3924.7	3914.9
15°	3875.9	3875.9	3836.9	3797.9	3783.3
17.5°	3758.9	3754.0	3705.3	3666.3	3646.8
20°	3632.2	3622.4	3573.7	3510.3	3476.2
22.5°	3490.8	3490.8	3432.3	3349.4	3315.3
25°	3359.1	3339.6	3286.0	3169.0	3081.2
27.5°	3208.0	3178.8	3120.2	2954.5	2852.1
30°	3042.2	3027.6	2944.7	2730.2	2652.2
32.5°	2886.2	2861.9	2774.1	2549.8	2486.4
35°	2725.3	2705.8	2574.2	2379.2	2320.7
37.5°	2564.5	2540.1	2374.3	2218.3	2145.2
40°	2403.6	2374.3	2193.9	2052.5	1974.5
42.5°	2252.4	2213.4	2037.9	1886.8	1799.0
45°	2091.5	2047.7	1872.1	1716.1	1647.9
47.5°	1930.7	1891.7	1730.8	1569.9	1491.9
50°	1760.0	1725.9	1579.6	1418.7	1335.9
52.5°	1618.6	1565.0	1423.6	1262.7	1194.5
55°	1452.9	1409.0	1277.4	1126.2	1067.7
57.5°	1301.7	1257.9	1136.0	994.6	945.8
60°	1160.3	1097.0	994.6	872.7	833.7
62.5°	1004.3	955.6	867.8	765.4	814.2
65°	862.9	814.2	736.2	750.8	624.0
67.5°	706.9	682.6	614.3	546.0	526.5
70°	575.3	546.0	521.7	448.5	429.0
72.5°	458.3	429.0	394.9	355.9	341.3
75°	346.2	321.8	302.3	287.6	316.9
77.5°	238.9	229.1	214.5	199.9	195.0
80°	156.0	151.1	146.3	141.4	136.5
82.5°	92.6	92.6	92.6	92.6	92.6
85°	48.8	53.6	58.5	63.4	68.3
87.5°	29.3	29.3	34.1	39.0	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)