

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: P563421

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563421
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8278.0 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

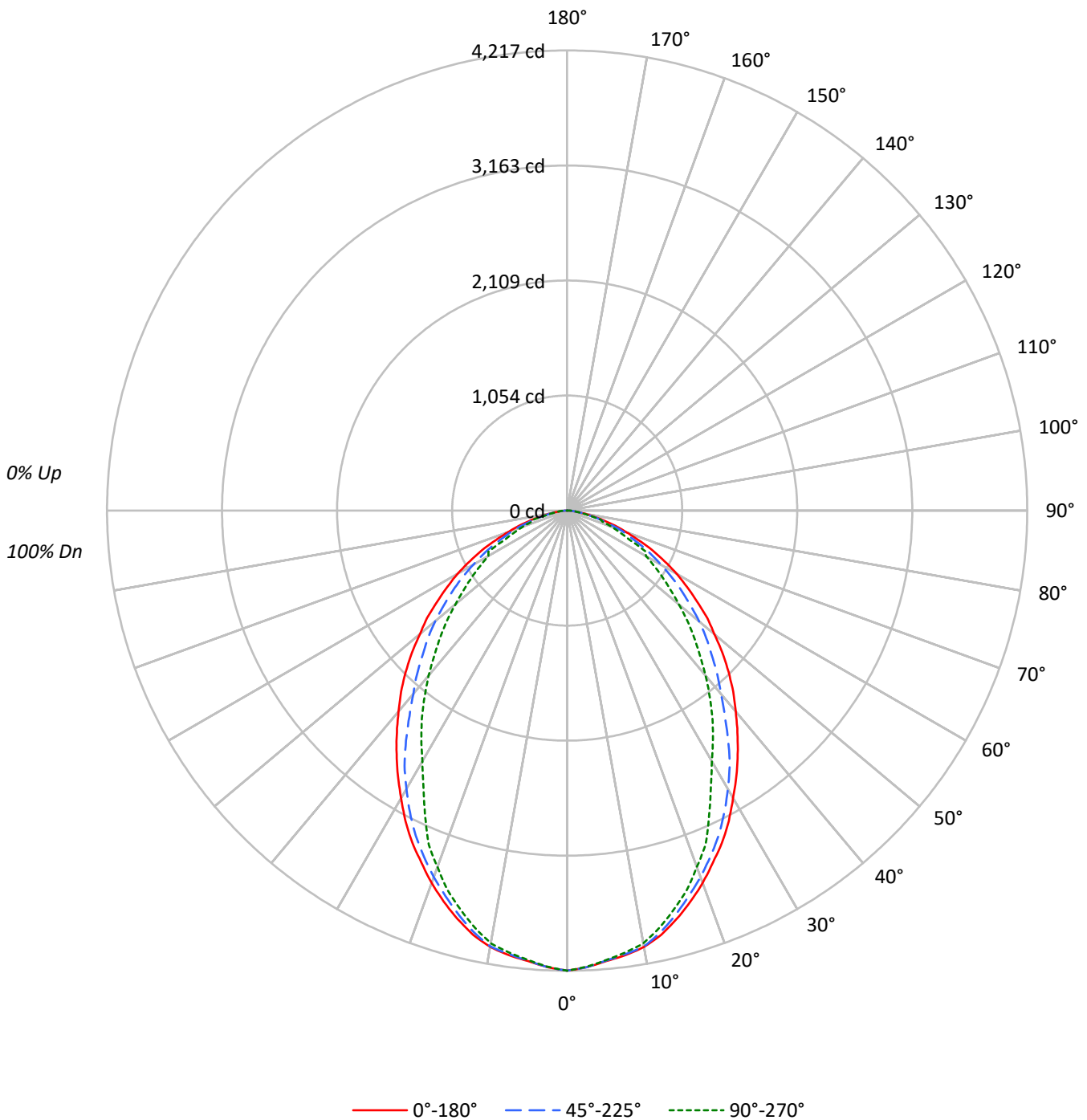
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5674	5674	5674
5°	5596	5590	5583
10°	5548	5541	5501
15°	5398	5344	5269
20°	5200	5116	4977
25°	4986	4878	4574
30°	4726	4575	4120
35°	4476	4228	3811
40°	4221	3853	3468
45°	3979	3562	3135
50°	3684	3306	2796
55°	3408	2996	2504
60°	3122	2676	2243
65°	2747	2344	1987
70°	2263	2052	1688
75°	1799	1571	1647
80°	1209	1133	1058
85°	752	903	1053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3979 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.5	4.7
10°-20°	1077.2	13.0
20°-30°	1491.4	18.0
30°-40°	1590.2	19.2
40°-50°	1450.7	17.5
50°-60°	1136.5	13.7
60°-70°	740.7	8.9
70°-80°	328.2	4.0
80°-90°	70.4	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°	2961.1	35.8
0°-40°	4551.3	55.0
0°-60°	7138.6	86.2
0°-90°	8278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8278.0	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	3836	3798	3783	1090
25°	3359	3339	3286	3169	3081	1542
35°	2725	2706	2574	2379	2320	1704
45°	2091	2047	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°	4216.7	4216.7	4216.7	4216.7	4216.7
2.5°	4187.5	4187.5	4187.5	4182.6	4182.6
5°	4143.6	4138.7	4138.7	4133.8	4133.8
7.5°	4109.5	4104.6	4099.7	4094.8	4085.1
10°	4060.7	4060.7	4055.8	4031.5	4026.6
12.5°	3982.7	3977.8	3958.3	3924.2	3914.5
15°	3875.5	3875.5	3836.5	3797.5	3782.8
17.5°	3758.5	3753.6	3704.8	3665.9	3646.4
20°	3631.7	3622.0	3573.2	3509.9	3475.7
22.5°	3490.4	3490.4	3431.9	3349.0	3314.9
25°	3358.7	3339.2	3285.6	3168.6	3080.9
27.5°	3207.6	3178.4	3119.9	2954.1	2851.8
30°	3041.9	3027.3	2944.4	2729.9	2651.9
32.5°	2885.9	2861.5	2773.8	2549.5	2486.1
35°	2725.0	2705.5	2573.9	2378.9	2320.4
37.5°	2564.1	2539.8	2374.0	2218.0	2144.9
40°	2403.3	2374.0	2193.7	2052.3	1974.3
42.5°	2252.2	2213.2	2037.7	1886.5	1798.8
45°	2091.3	2047.4	1871.9	1715.9	1647.7
47.5°	1930.4	1891.4	1730.6	1569.7	1491.7
50°	1759.8	1725.7	1579.4	1418.6	1335.7
52.5°	1618.4	1564.8	1423.4	1262.6	1194.3
55°	1452.7	1408.8	1277.2	1126.1	1067.6
57.5°	1301.6	1257.7	1135.8	994.5	945.7
60°	1160.2	1096.8	994.5	872.6	833.6
62.5°	1004.2	955.5	867.7	765.3	814.1
65°	862.8	814.1	736.1	750.7	624.0
67.5°	706.8	682.5	614.2	546.0	526.5
70°	575.2	546.0	521.6	448.5	429.0
72.5°	458.2	429.0	394.9	355.9	341.2
75°	346.1	321.7	302.2	287.6	316.9
77.5°	238.9	229.1	214.5	199.9	195.0
80°	156.0	151.1	146.2	141.4	136.5
82.5°	92.6	92.6	92.6	92.6	92.6
85°	48.7	53.6	58.5	63.4	68.2
87.5°	29.2	29.2	34.1	39.0	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)