

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: P564016

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564016
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-LD4-4STD-35-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13061.0 lumens
Efficiency: N/A
Efficacy: 98.1 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

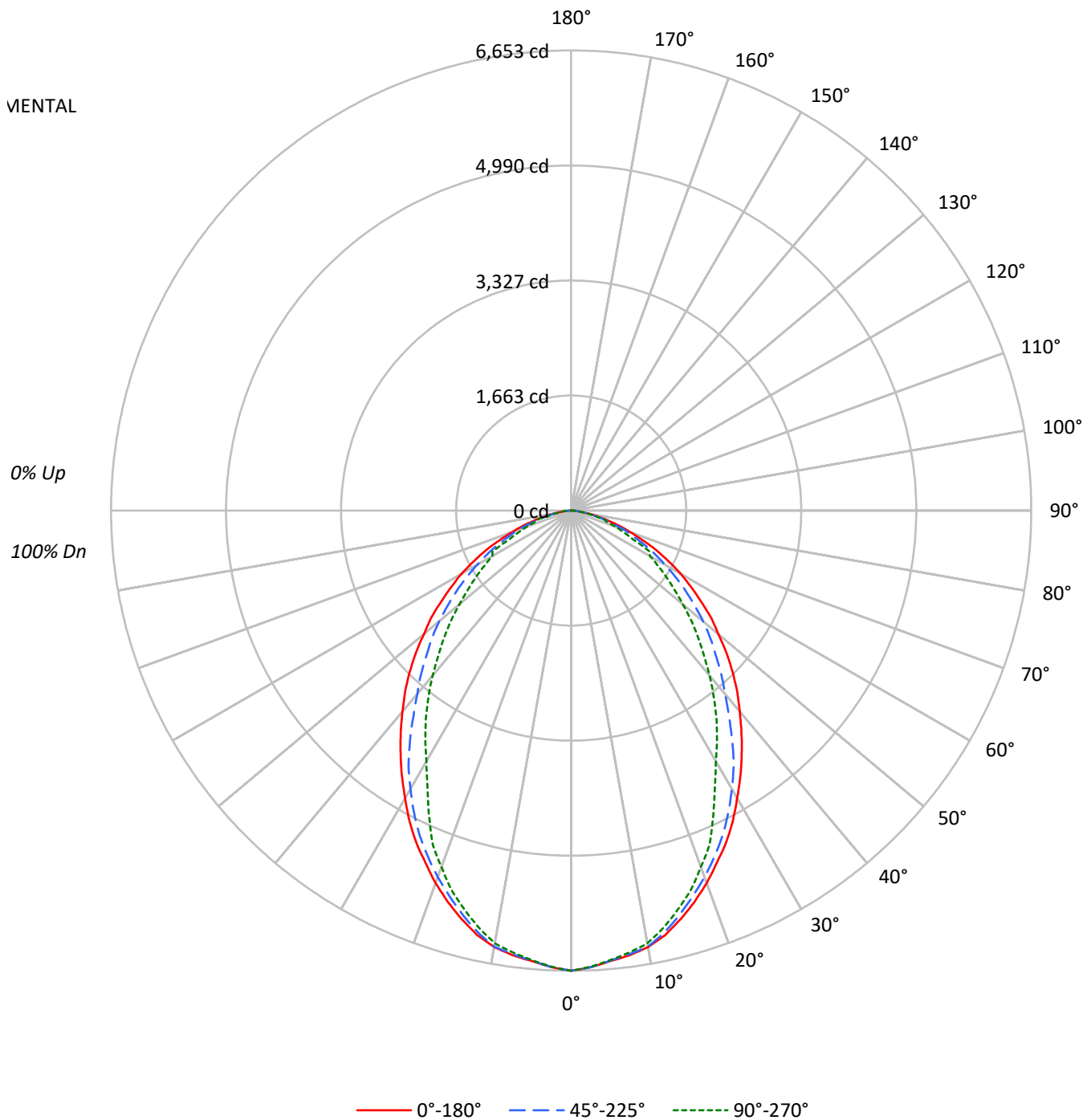
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8952	8952	8952
5°	8830	8820	8809
10°	8754	8743	8680
15°	8517	8432	8314
20°	8205	8072	7852
25°	7867	7696	7217
30°	7457	7218	6501
35°	7062	6671	6014
40°	6660	6079	5471
45°	6279	5620	4947
50°	5812	5216	4411
55°	5377	4727	3951
60°	4926	4222	3539
65°	4334	3698	3134
70°	3570	3238	2662
75°	2839	2479	2599
80°	1907	1788	1669
85°	1187	1425	1663

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6279 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	619.3	4.7
10°-20°	1699.7	13.0
20°-30°	2353.1	18.0
30°-40°	2509.0	19.2
40°-50°	2289.0	17.5
50°-60°	1793.2	13.7
60°-70°	1168.7	8.9
70°-80°	517.8	4.0
80°-90°	111.2	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°	4672.0	35.8
0°-40°	7181.1	55.0
0°-60°	11263.3	86.2
0°-90°	13061.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13061.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6653	6653	6653	6653	6653	
5°	6538	6530	6530	6522	6522	621
15°	6115	6115	6053	5992	5969	1719
25°	5299	5269	5184	4999	4861	2433
35°	4300	4269	4061	3753	3661	2688
45°	3300	3230	2954	2707	2600	2542
55°	2292	2223	2015	1777	1684	2056
65°	1361	1284	1161	1184	984	1342
75°	546	508	477	454	500	585
85°	77	85	92	100	108	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6653.1	6653.1	6653.1	6653.1	6653.1
2.5°	6607.0	6607.0	6607.0	6599.3	6599.3
5°	6537.7	6530.0	6530.0	6522.3	6522.3
7.5°	6483.9	6476.2	6468.5	6460.8	6445.4
10°	6407.0	6407.0	6399.3	6360.8	6353.1
12.5°	6283.9	6276.2	6245.5	6191.6	6176.2
15°	6114.7	6114.7	6053.2	5991.6	5968.6
17.5°	5930.1	5922.4	5845.5	5784.0	5753.2
20°	5730.1	5714.7	5637.8	5537.8	5484.0
22.5°	5507.1	5507.1	5414.8	5284.0	5230.2
25°	5299.4	5268.6	5184.0	4999.4	4861.0
27.5°	5061.0	5014.8	4922.5	4661.0	4499.5
30°	4799.5	4776.4	4645.6	4307.2	4184.1
32.5°	4553.3	4514.9	4376.4	4022.6	3922.6
35°	4299.5	4268.8	4061.1	3753.4	3661.1
37.5°	4045.7	4007.2	3745.7	3499.6	3384.2
40°	3791.9	3745.7	3461.1	3238.1	3115.0
42.5°	3553.4	3491.9	3215.0	2976.6	2838.1
45°	3299.6	3230.4	2953.5	2707.4	2599.7
47.5°	3045.8	2984.3	2730.5	2476.6	2353.6
50°	2776.6	2722.8	2492.0	2238.2	2107.5
52.5°	2553.6	2469.0	2245.9	1992.1	1884.4
55°	2292.1	2222.8	2015.2	1776.7	1684.4
57.5°	2053.6	1984.4	1792.1	1569.1	1492.1
60°	1830.6	1730.6	1569.1	1376.8	1315.2
62.5°	1584.4	1507.5	1369.1	1207.6	1284.5
65°	1361.4	1284.5	1161.4	1184.5	984.5
67.5°	1115.3	1076.8	969.1	861.4	830.7
70°	907.6	861.4	823.0	707.6	676.8
72.5°	723.0	676.8	623.0	561.5	538.4
75°	546.1	507.6	476.9	453.8	499.9
77.5°	376.9	361.5	338.4	315.3	307.7
80°	246.1	238.4	230.7	223.1	215.4
82.5°	146.1	146.1	146.1	146.1	146.1
85°	76.9	84.6	92.3	100.0	107.7
87.5°	46.1	46.1	53.8	61.5	69.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)