

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: P564147

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564147
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-50-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15715.0 lumens
Efficiency: N/A
Efficacy: 118.0 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

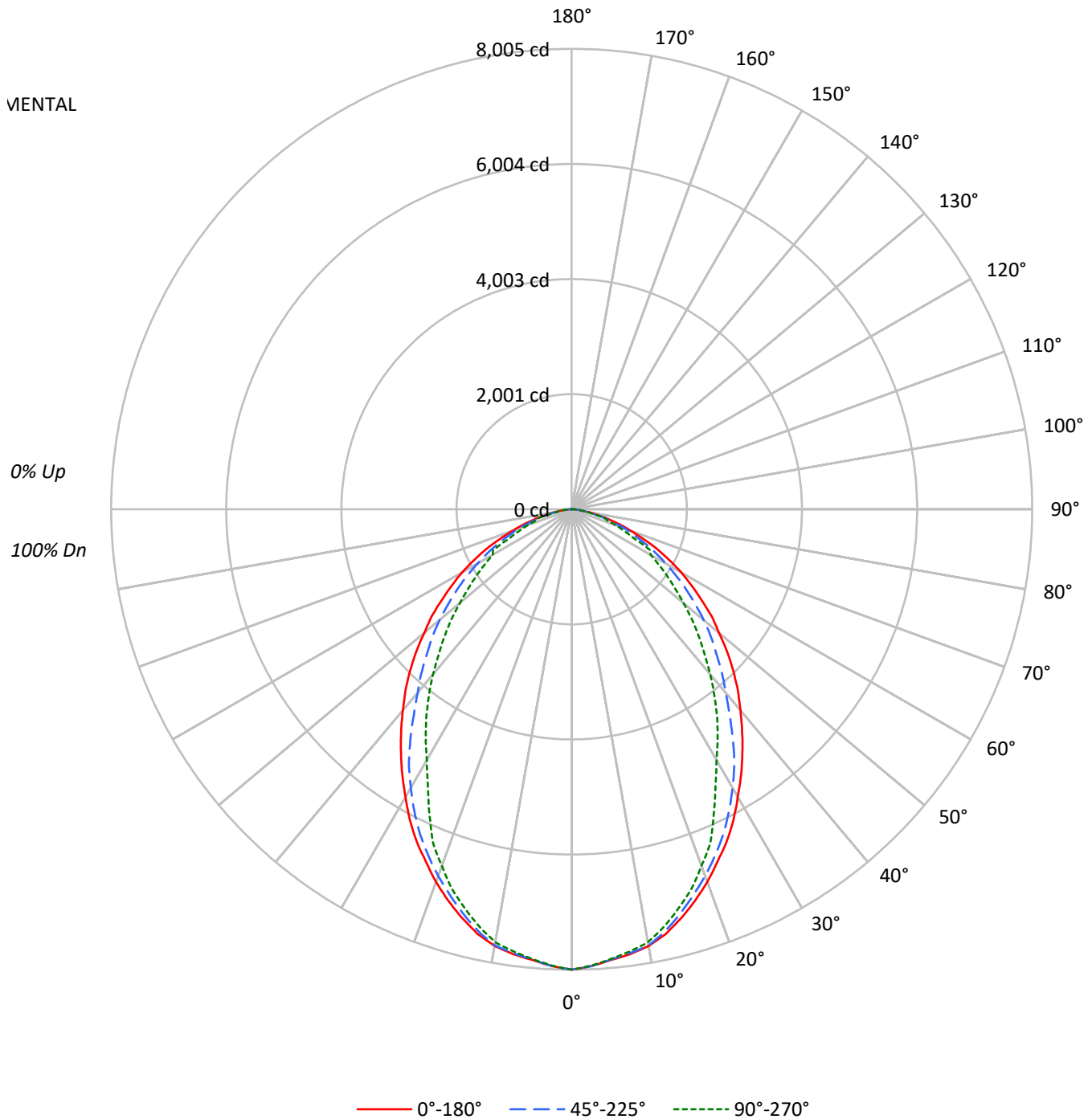
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10771	10771	10771
5°	10624	10612	10599
10°	10532	10520	10444
15°	10248	10145	10003
20°	9872	9713	9448
25°	9466	9260	8683
30°	8972	8684	7822
35°	8497	8026	7236
40°	8013	7315	6583
45°	7554	6762	5952
50°	6993	6276	5308
55°	6469	5688	4754
60°	5927	5080	4258
65°	5215	4449	3771
70°	4296	3895	3204
75°	3416	2983	3127
80°	2294	2151	2008
85°	1428	1715	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7554 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	745.2	4.7
10°-20°	2045.0	13.0
20°-30°	2831.2	18.0
30°-40°	3018.9	19.2
40°-50°	2754.1	17.5
50°-60°	2157.6	13.7
60°-70°	1406.2	8.9
70°-80°	623.0	4.0
80°-90°	133.8	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°	5621.4	35.8
0°-40°	8640.3	55.0
0°-60°	13552.0	86.2
0°-90°	15715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15715.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8005	8005	8005	8005	8005	
5°	7866	7857	7857	7848	7848	747
15°	7357	7357	7283	7209	7181	2068
25°	6376	6339	6237	6015	5849	2927
35°	5173	5136	4886	4516	4405	3234
45°	3970	3887	3554	3258	3128	3058
55°	2758	2674	2425	2138	2027	2474
65°	1638	1546	1397	1425	1185	1614
75°	657	611	574	546	602	704
85°	92	102	111	120	130	128
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8005.0	8005.0	8005.0	8005.0	8005.0
2.5°	7949.5	7949.5	7949.5	7940.2	7940.2
5°	7866.2	7856.9	7856.9	7847.7	7847.7
7.5°	7801.4	7792.2	7782.9	7773.7	7755.1
10°	7708.9	7708.9	7699.6	7653.3	7644.1
12.5°	7560.8	7551.5	7514.5	7449.8	7431.2
15°	7357.2	7357.2	7283.2	7209.1	7181.4
17.5°	7135.1	7125.8	7033.3	6959.3	6922.3
20°	6894.5	6876.0	6783.4	6663.1	6598.4
22.5°	6626.1	6626.1	6515.1	6357.7	6293.0
25°	6376.2	6339.2	6237.4	6015.3	5848.7
27.5°	6089.4	6033.8	5922.8	5608.1	5413.8
30°	5774.7	5747.0	5589.6	5182.4	5034.4
32.5°	5478.6	5432.3	5265.7	4840.0	4719.7
35°	5173.2	5136.2	4886.3	4516.1	4405.1
37.5°	4867.8	4821.5	4506.9	4210.7	4071.9
40°	4562.4	4506.9	4164.5	3896.1	3748.0
42.5°	4275.5	4201.5	3868.3	3581.4	3414.9
45°	3970.1	3886.8	3553.7	3257.5	3128.0
47.5°	3664.7	3590.7	3285.3	2979.9	2831.8
50°	3340.8	3276.0	2998.4	2693.0	2535.7
52.5°	3072.4	2970.6	2702.3	2396.9	2267.3
55°	2757.8	2674.5	2424.6	2137.8	2026.7
57.5°	2470.9	2387.6	2156.3	1887.9	1795.3
60°	2202.5	2082.2	1887.9	1656.5	1582.5
62.5°	1906.4	1813.9	1647.3	1452.9	1545.5
65°	1638.0	1545.5	1397.4	1425.2	1184.6
67.5°	1341.9	1295.6	1166.0	1036.5	999.5
70°	1092.0	1036.5	990.2	851.4	814.4
72.5°	869.9	814.4	749.6	675.6	647.8
75°	657.1	610.8	573.8	546.0	601.5
77.5°	453.5	435.0	407.2	379.4	370.2
80°	296.1	286.9	277.6	268.4	259.1
82.5°	175.8	175.8	175.8	175.8	175.8
85°	92.5	101.8	111.1	120.3	129.6
87.5°	55.5	55.5	64.8	74.0	83.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)