

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: P561017

Luminaire Tested: FSR-12-4-LD4-1LO-40-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561017
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-12-4-LD4-1LO-40-UNV-80-88-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

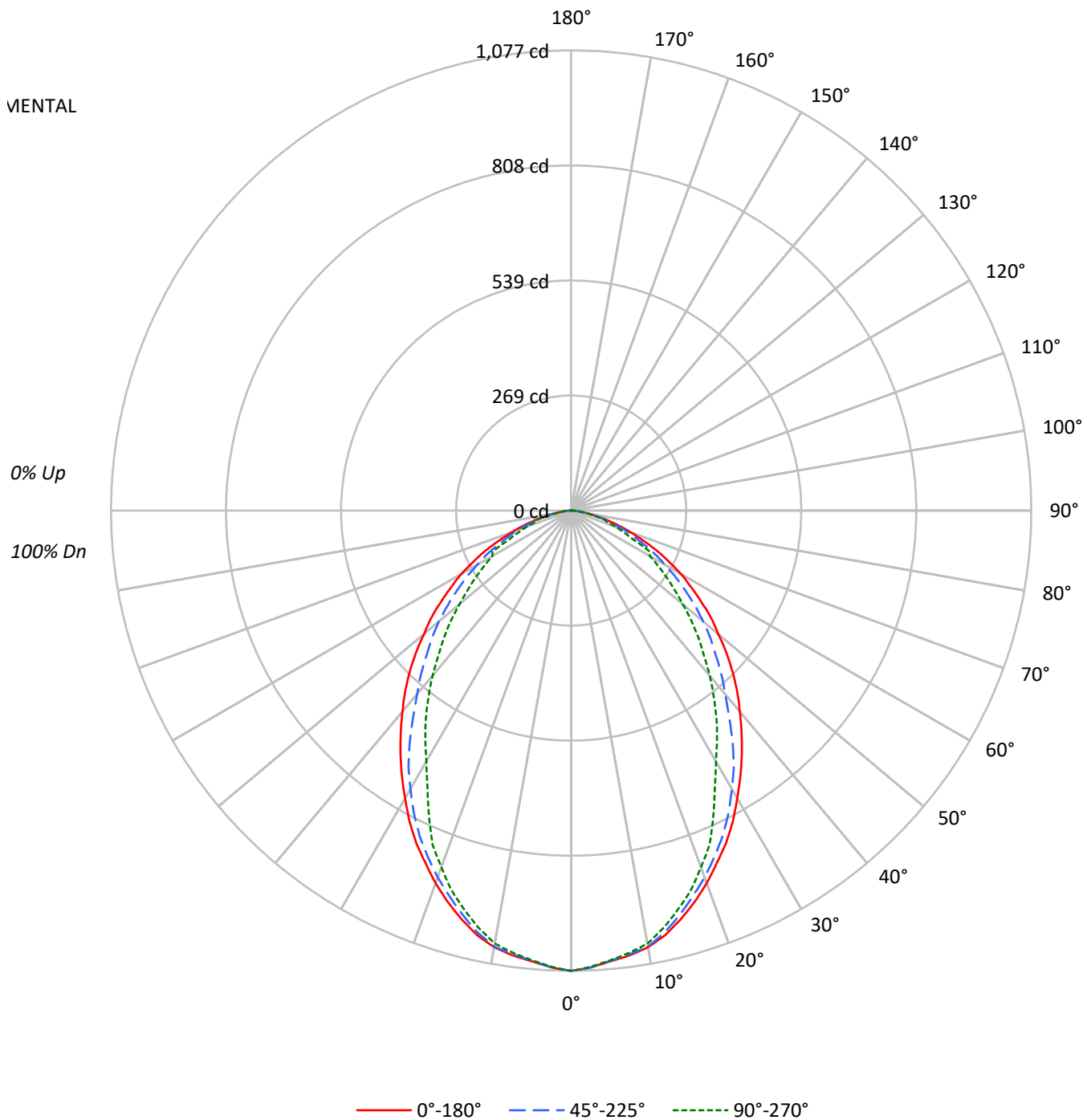
Lumens per Lamp: N/A
Luminaire Lumens: 2115.0 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	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°	2899	2899	2899
5°	2860	2856	2853
10°	2835	2832	2811
15°	2759	2731	2693
20°	2657	2614	2543
25°	2548	2493	2337
30°	2415	2338	2105
35°	2287	2160	1948
40°	2157	1969	1772
45°	2033	1820	1602
50°	1882	1689	1429
55°	1742	1531	1280
60°	1595	1368	1146
65°	1404	1198	1015
70°	1157	1049	862
75°	919	803	842
80°	618	580	541
85°	386	460	537

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2033 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.3	4.7
10°-20°	275.2	13.0
20°-30°	381.0	18.0
30°-40°	406.3	19.2
40°-50°	370.7	17.5
50°-60°	290.4	13.7
60°-70°	189.3	8.9
70°-80°	83.9	4.0
80°-90°	18.0	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°	756.6	35.8
0°-40°	1162.9	55.0
0°-60°	1823.9	86.2
0°-90°	2115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2115.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	1059	1057	1057	1056	1056	100
15°	990	990	980	970	966	278
25°	858	853	840	810	787	394
35°	696	691	658	608	593	435
45°	534	523	478	438	421	412
55°	371	360	326	288	273	333
65°	220	208	188	192	159	217
75°	88	82	77	74	81	95
85°	12	14	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1077.4	1077.4	1077.4	1077.4	1077.4
2.5°	1069.9	1069.9	1069.9	1068.6	1068.6
5°	1058.7	1057.4	1057.4	1056.2	1056.2
7.5°	1050.0	1048.7	1047.5	1046.2	1043.7
10°	1037.5	1037.5	1036.3	1030.0	1028.8
12.5°	1017.6	1016.3	1011.3	1002.6	1000.1
15°	990.2	990.2	980.2	970.2	966.5
17.5°	960.3	959.0	946.6	936.6	931.6
20°	927.9	925.4	912.9	896.8	888.0
22.5°	891.8	891.8	876.8	855.7	846.9
25°	858.1	853.2	839.5	809.6	787.2
27.5°	819.5	812.1	797.1	754.8	728.6
30°	777.2	773.5	752.3	697.5	677.5
32.5°	737.3	731.1	708.7	651.4	635.2
35°	696.2	691.2	657.6	607.8	592.9
37.5°	655.1	648.9	606.6	566.7	548.0
40°	614.0	606.6	560.5	524.4	504.4
42.5°	575.4	565.5	520.6	482.0	459.6
45°	534.3	523.1	478.3	438.4	421.0
47.5°	493.2	483.3	442.2	401.0	381.1
50°	449.6	440.9	403.5	362.4	341.3
52.5°	413.5	399.8	363.7	322.6	305.1
55°	371.2	359.9	326.3	287.7	272.8
57.5°	332.5	321.3	290.2	254.1	241.6
60°	296.4	280.2	254.1	222.9	213.0
62.5°	256.6	244.1	221.7	195.5	208.0
65°	220.5	208.0	188.1	191.8	159.4
67.5°	180.6	174.4	156.9	139.5	134.5
70°	147.0	139.5	133.3	114.6	109.6
72.5°	117.1	109.6	100.9	90.9	87.2
75°	88.4	82.2	77.2	73.5	81.0
77.5°	61.0	58.5	54.8	51.1	49.8
80°	39.9	38.6	37.4	36.1	34.9
82.5°	23.7	23.7	23.7	23.7	23.7
85°	12.5	13.7	14.9	16.2	17.4
87.5°	7.5	7.5	8.7	10.0	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)