

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: P563257

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563257
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-35-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

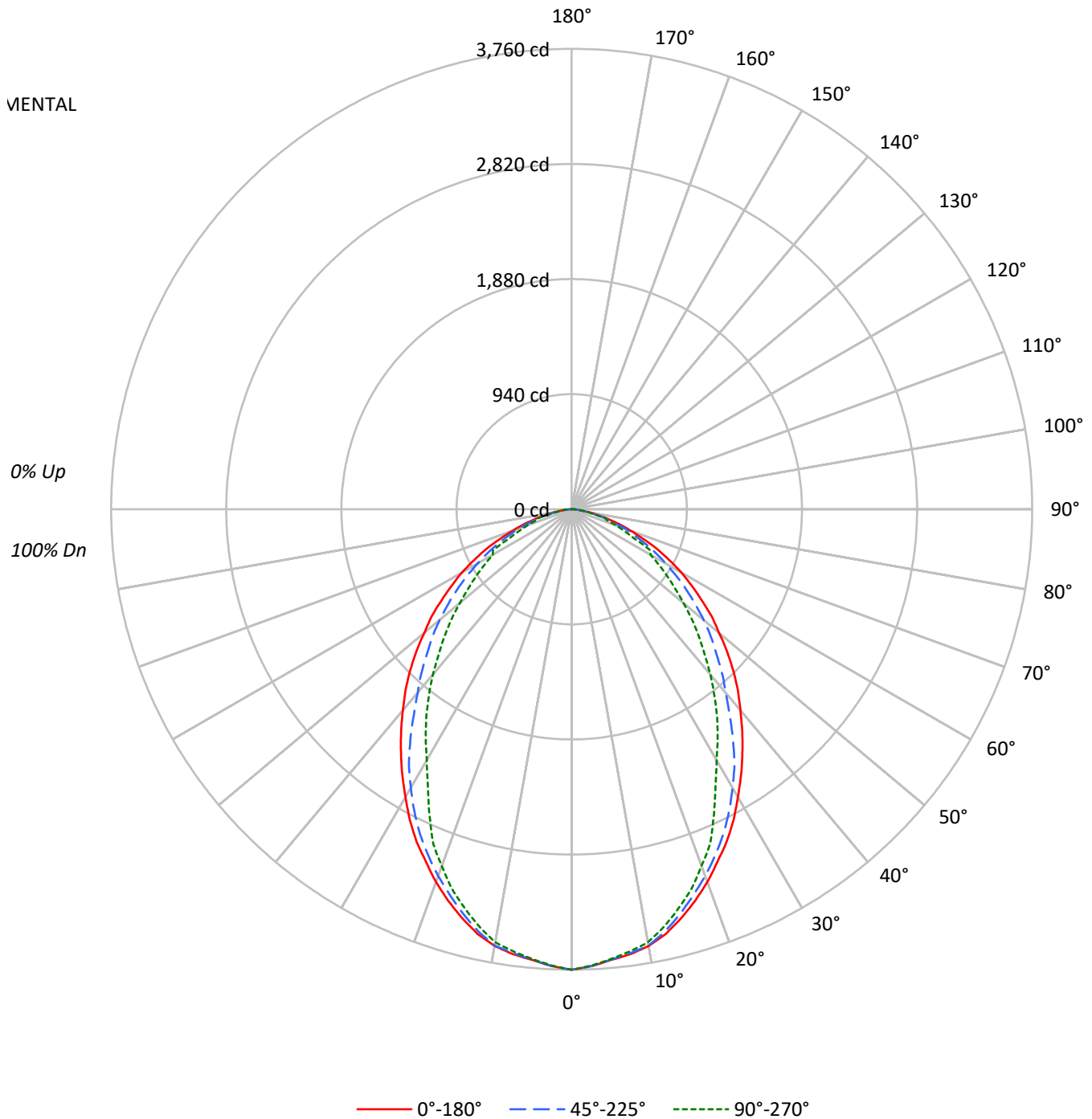
Lumens per Lamp: N/A
Luminaire Lumens: 7382.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	5059	5059	5059
5°	4991	4985	4979
10°	4947	4941	4906
15°	4814	4766	4699
20°	4637	4563	4438
25°	4447	4350	4079
30°	4214	4079	3674
35°	3992	3770	3399
40°	3764	3436	3092
45°	3549	3176	2796
50°	3285	2948	2493
55°	3039	2672	2233
60°	2784	2386	2000
65°	2450	2090	1771
70°	2018	1830	1505
75°	1604	1401	1469
80°	1078	1010	943
85°	672	806	940

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3549 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.0	4.7
10°-20°	960.6	13.0
20°-30°	1329.9	18.0
30°-40°	1418.1	19.2
40°-50°	1293.7	17.5
50°-60°	1013.5	13.7
60°-70°	660.6	8.9
70°-80°	292.6	4.0
80°-90°	62.8	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°	2640.6	35.8
0°-40°	4058.7	55.0
0°-60°	6366.0	86.2
0°-90°	7382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7382.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3760	3760	3760	3760	3760	
5°	3695	3691	3691	3686	3686	351
15°	3456	3456	3421	3386	3373	972
25°	2995	2978	2930	2826	2747	1375
35°	2430	2413	2295	2121	2069	1519
45°	1865	1826	1669	1530	1469	1437
55°	1296	1256	1139	1004	952	1162
65°	769	726	656	670	556	758
75°	309	287	270	256	283	331
85°	44	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3760.3	3760.3	3760.3	3760.3	3760.3
2.5°	3734.2	3734.2	3734.2	3729.9	3729.9
5°	3695.1	3690.7	3690.7	3686.4	3686.4
7.5°	3664.7	3660.3	3656.0	3651.6	3642.9
10°	3621.2	3621.2	3616.8	3595.1	3590.8
12.5°	3551.6	3547.3	3529.9	3499.5	3490.8
15°	3456.0	3456.0	3421.2	3386.4	3373.4
17.5°	3351.7	3347.3	3303.8	3269.1	3251.7
20°	3238.6	3229.9	3186.5	3130.0	3099.5
22.5°	3112.6	3112.6	3060.4	2986.5	2956.1
25°	2995.2	2977.8	2930.0	2825.7	2747.4
27.5°	2860.4	2834.3	2782.2	2634.4	2543.1
30°	2712.6	2699.6	2625.7	2434.4	2364.9
32.5°	2573.5	2551.8	2473.5	2273.6	2217.1
35°	2430.1	2412.7	2295.3	2121.4	2069.2
37.5°	2286.6	2264.9	2117.1	1978.0	1912.7
40°	2143.1	2117.1	1956.2	1830.2	1760.6
42.5°	2008.4	1973.6	1817.1	1682.4	1604.1
45°	1864.9	1825.8	1669.3	1530.2	1469.3
47.5°	1721.5	1686.7	1543.2	1399.8	1330.2
50°	1569.3	1538.9	1408.5	1265.0	1191.1
52.5°	1443.3	1395.4	1269.4	1125.9	1065.1
55°	1295.5	1256.3	1139.0	1004.2	952.0
57.5°	1160.7	1121.6	1012.9	886.8	843.3
60°	1034.6	978.1	886.8	778.1	743.4
62.5°	895.5	852.0	773.8	682.5	726.0
65°	769.4	726.0	656.4	669.5	556.4
67.5°	630.3	608.6	547.7	486.9	469.5
70°	513.0	486.9	465.1	399.9	382.5
72.5°	408.6	382.5	352.1	317.3	304.3
75°	308.6	286.9	269.5	256.5	282.6
77.5°	213.0	204.3	191.3	178.2	173.9
80°	139.1	134.8	130.4	126.1	121.7
82.5°	82.6	82.6	82.6	82.6	82.6
85°	43.5	47.8	52.2	56.5	60.9
87.5°	26.1	26.1	30.4	34.8	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)