

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: P562771

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562771
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-LD4-2LO-40-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

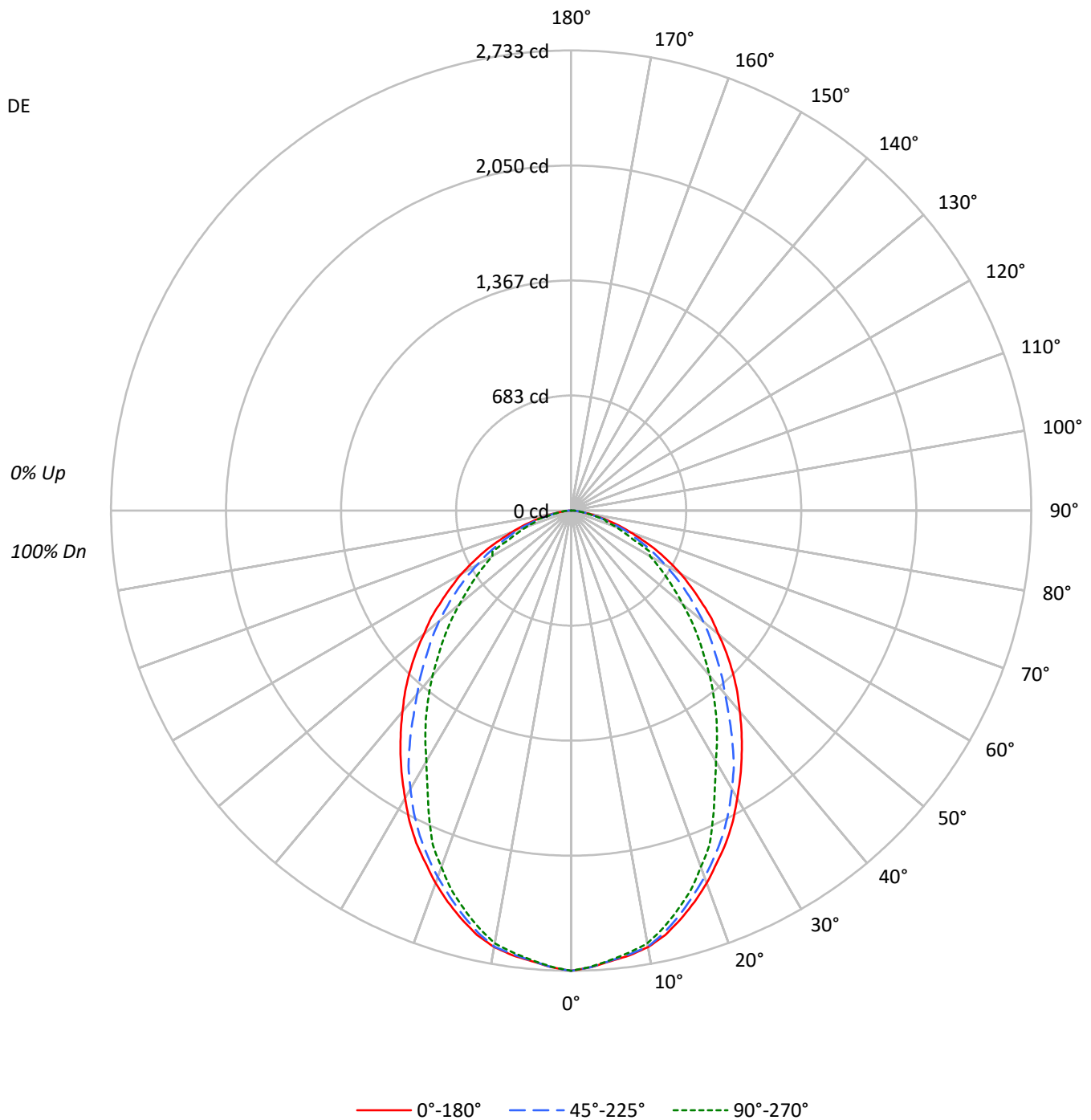
Lumens per Lamp: N/A
Luminaire Lumens: 5366.0 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3678	3678	3678
5°	3628	3623	3619
10°	3596	3592	3566
15°	3499	3464	3416
20°	3371	3317	3226
25°	3232	3162	2965
30°	3063	2965	2671
35°	2901	2741	2471
40°	2736	2498	2248
45°	2579	2309	2032
50°	2388	2143	1812
55°	2209	1942	1623
60°	2024	1735	1454
65°	1781	1519	1288
70°	1467	1330	1094
75°	1167	1018	1068
80°	783	735	686
85°	488	585	682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2579 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.4	4.7
10°-20°	698.3	13.0
20°-30°	966.7	18.0
30°-40°	1030.8	19.2
40°-50°	940.4	17.5
50°-60°	736.7	13.7
60°-70°	480.2	8.9
70°-80°	212.7	4.0
80°-90°	45.7	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°	1919.5	35.8
0°-40°	2950.3	55.0
0°-60°	4627.4	86.2
0°-90°	5366.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5366.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2733	2733	2733	2733	2733	
5°	2686	2683	2683	2680	2680	255
15°	2512	2512	2487	2462	2452	706
25°	2177	2165	2130	2054	1997	1000
35°	1766	1754	1668	1542	1504	1104
45°	1356	1327	1213	1112	1068	1044
55°	942	913	828	730	692	845
65°	559	528	477	487	404	551
75°	224	209	196	186	205	240
85°	32	35	38	41	44	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2733.4	2733.4	2733.4	2733.4	2733.4
2.5°	2714.4	2714.4	2714.4	2711.2	2711.2
5°	2686.0	2682.8	2682.8	2679.6	2679.6
7.5°	2663.8	2660.7	2657.5	2654.4	2648.0
10°	2632.2	2632.2	2629.1	2613.3	2610.1
12.5°	2581.7	2578.5	2565.9	2543.8	2537.5
15°	2512.2	2512.2	2486.9	2461.6	2452.1
17.5°	2436.3	2433.2	2401.6	2376.3	2363.7
20°	2354.2	2347.9	2316.3	2275.2	2253.1
22.5°	2262.5	2262.5	2224.6	2170.9	2148.8
25°	2177.2	2164.6	2129.8	2054.0	1997.1
27.5°	2079.3	2060.3	2022.4	1914.9	1848.6
30°	1971.8	1962.3	1908.6	1769.6	1719.0
32.5°	1870.7	1854.9	1798.0	1652.7	1611.6
35°	1766.4	1753.8	1668.5	1542.1	1504.1
37.5°	1662.1	1646.3	1538.9	1437.8	1390.4
40°	1557.9	1538.9	1422.0	1330.3	1279.8
42.5°	1459.9	1434.6	1320.9	1222.9	1166.0
45°	1355.6	1327.2	1213.4	1112.3	1068.1
47.5°	1251.3	1226.1	1121.8	1017.5	966.9
50°	1140.7	1118.6	1023.8	919.5	865.8
52.5°	1049.1	1014.3	922.7	818.4	774.2
55°	941.7	913.2	827.9	730.0	692.0
57.5°	843.7	815.3	736.3	644.6	613.0
60°	752.1	711.0	644.6	565.6	540.4
62.5°	651.0	619.4	562.5	496.1	527.7
65°	559.3	527.7	477.2	486.6	404.5
67.5°	458.2	442.4	398.2	353.9	341.3
70°	372.9	353.9	338.1	290.7	278.1
72.5°	297.0	278.1	256.0	230.7	221.2
75°	224.4	208.6	195.9	186.4	205.4
77.5°	154.8	148.5	139.0	129.6	126.4
80°	101.1	98.0	94.8	91.6	88.5
82.5°	60.0	60.0	60.0	60.0	60.0
85°	31.6	34.8	37.9	41.1	44.2
87.5°	19.0	19.0	22.1	25.3	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)