

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: P590937

Luminaire Tested: FSR-24-2-LD4-4STD-40-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4STD-40-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6656.0 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

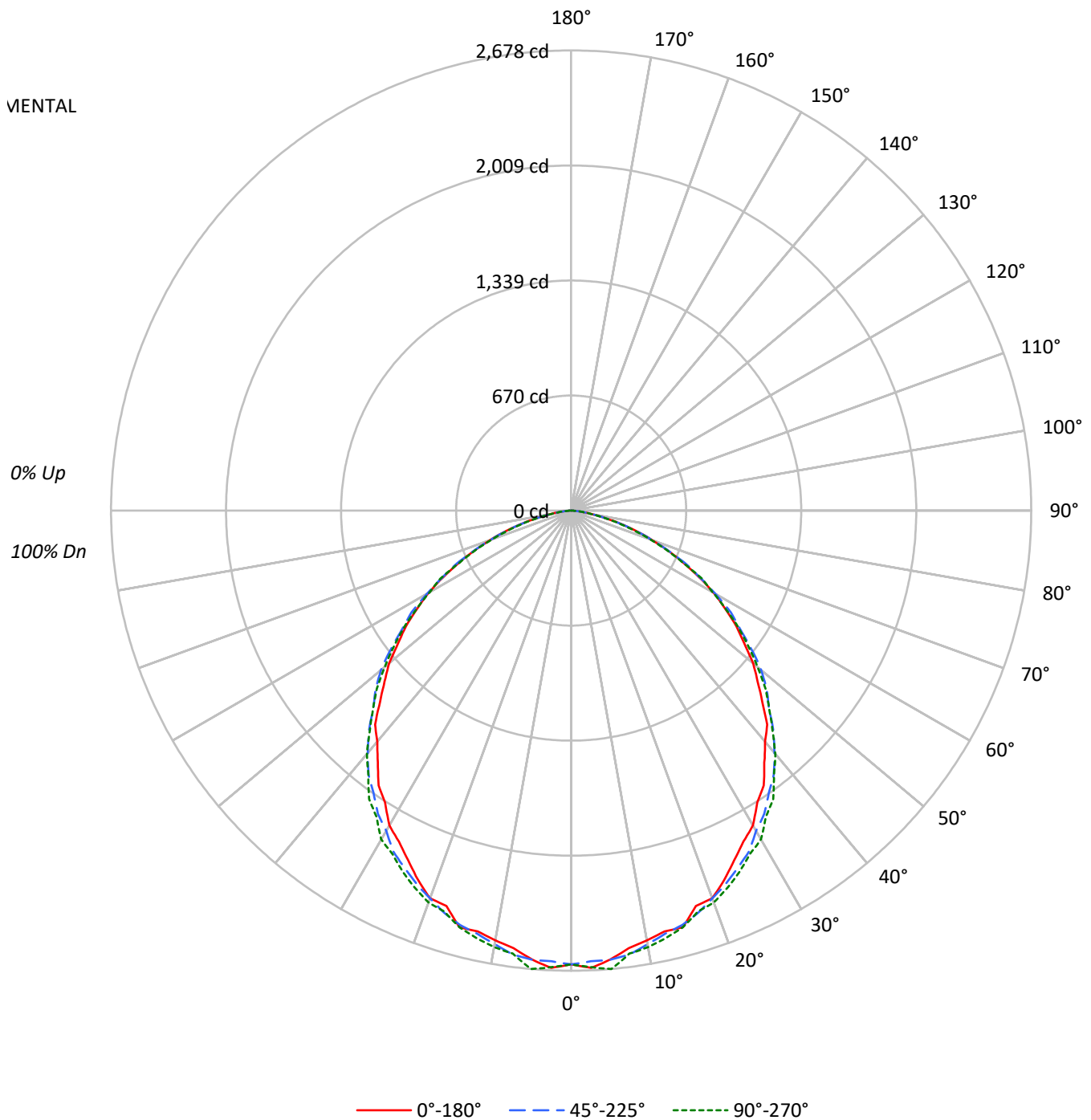
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86													86															
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73													73															
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62													62															
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53													53															
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46													46															
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41													41															
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36													36															
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32													32															
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29													29															
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7107	7107	7107
5°	7083	7086	7235
10°	6940	7000	7050
15°	6995	6956	6995
20°	6876	6876	6950
25°	6665	6811	6885
30°	6573	6689	6867
35°	6418	6587	6734
40°	6169	6466	6495
45°	5982	6195	6204
50°	5786	6047	5931
55°	5513	5620	5580
60°	5155	5207	5113
65°	4597	4714	4564
70°	3943	3958	3847
75°	3123	3116	2995
80°	2092	2035	1956
85°	1136	1127	1053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6355 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.4	3.7
10°-20°	704.1	10.6
20°-30°	1054.8	15.8
30°-40°	1250.2	18.8
40°-50°	1252.5	18.8
50°-60°	1063.2	16.0
60°-70°	716.8	10.8
70°-80°	315.0	4.7
80°-90°	51.2	0.8
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°	2007.3	30.2
0°-40°	3257.5	48.9
0°-60°	5573.1	83.7
0°-90°	6656.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6656.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2641	2641	2641	2641	2641	
5°	2622	2616	2623	2615	2678	247
15°	2511	2482	2497	2510	2511	700
25°	2245	2257	2294	2324	2319	1038
35°	1954	1960	2005	2051	2050	1213
45°	1572	1601	1628	1670	1630	1216
55°	1175	1167	1198	1190	1189	1045
65°	722	712	740	712	717	718
75°	300	294	300	279	288	322
85°	37	36	36	36	34	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2640.9	2640.9	2640.9	2640.9	2640.9
2.5°	2663.8	2643.7	2624.9	2646.7	2660.0
5°	2622.2	2616.0	2623.2	2615.4	2678.4
7.5°	2568.3	2591.8	2605.5	2596.9	2600.7
10°	2539.7	2531.5	2561.8	2583.0	2579.9
12.5°	2509.0	2521.2	2523.0	2545.8	2547.8
15°	2510.7	2481.7	2497.0	2510.0	2511.0
17.5°	2413.2	2444.5	2455.1	2484.8	2447.9
20°	2401.2	2378.4	2401.2	2431.6	2426.8
22.5°	2327.9	2302.3	2351.4	2378.4	2376.7
25°	2244.7	2257.0	2293.8	2323.8	2319.0
27.5°	2171.7	2186.1	2238.6	2279.8	2253.2
30°	2115.5	2108.3	2152.6	2189.5	2209.9
32.5°	2014.9	2040.8	2092.6	2129.1	2109.7
35°	1953.8	1959.6	2005.0	2051.4	2050.0
37.5°	1847.1	1874.1	1937.8	1950.8	1938.8
40°	1756.1	1783.0	1840.6	1854.6	1848.8
42.5°	1688.9	1693.7	1743.1	1759.1	1733.6
45°	1571.9	1601.3	1627.9	1669.8	1630.3
47.5°	1472.4	1486.0	1543.3	1554.6	1533.8
50°	1382.0	1386.8	1444.4	1430.4	1416.8
52.5°	1268.5	1288.6	1321.0	1318.2	1302.2
55°	1175.0	1167.2	1197.9	1189.7	1189.4
57.5°	1062.9	1076.5	1101.7	1088.8	1068.0
60°	957.8	958.2	967.4	952.7	950.0
62.5°	840.9	845.0	847.0	828.9	858.3
65°	721.9	712.3	740.3	712.0	716.8
67.5°	612.4	617.2	614.5	596.7	603.5
70°	501.2	507.4	503.0	482.8	489.0
72.5°	399.6	392.1	396.9	371.7	383.3
75°	300.4	294.3	299.7	278.6	288.1
77.5°	204.6	209.4	206.0	194.7	201.2
80°	135.0	131.3	131.3	124.8	126.2
82.5°	78.8	75.0	74.0	71.9	75.0
85°	36.8	35.8	36.5	35.5	34.1
87.5°	13.3	13.6	13.6	13.0	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)