

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: P590838

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590838
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-LD4-4LO-40-UNV-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

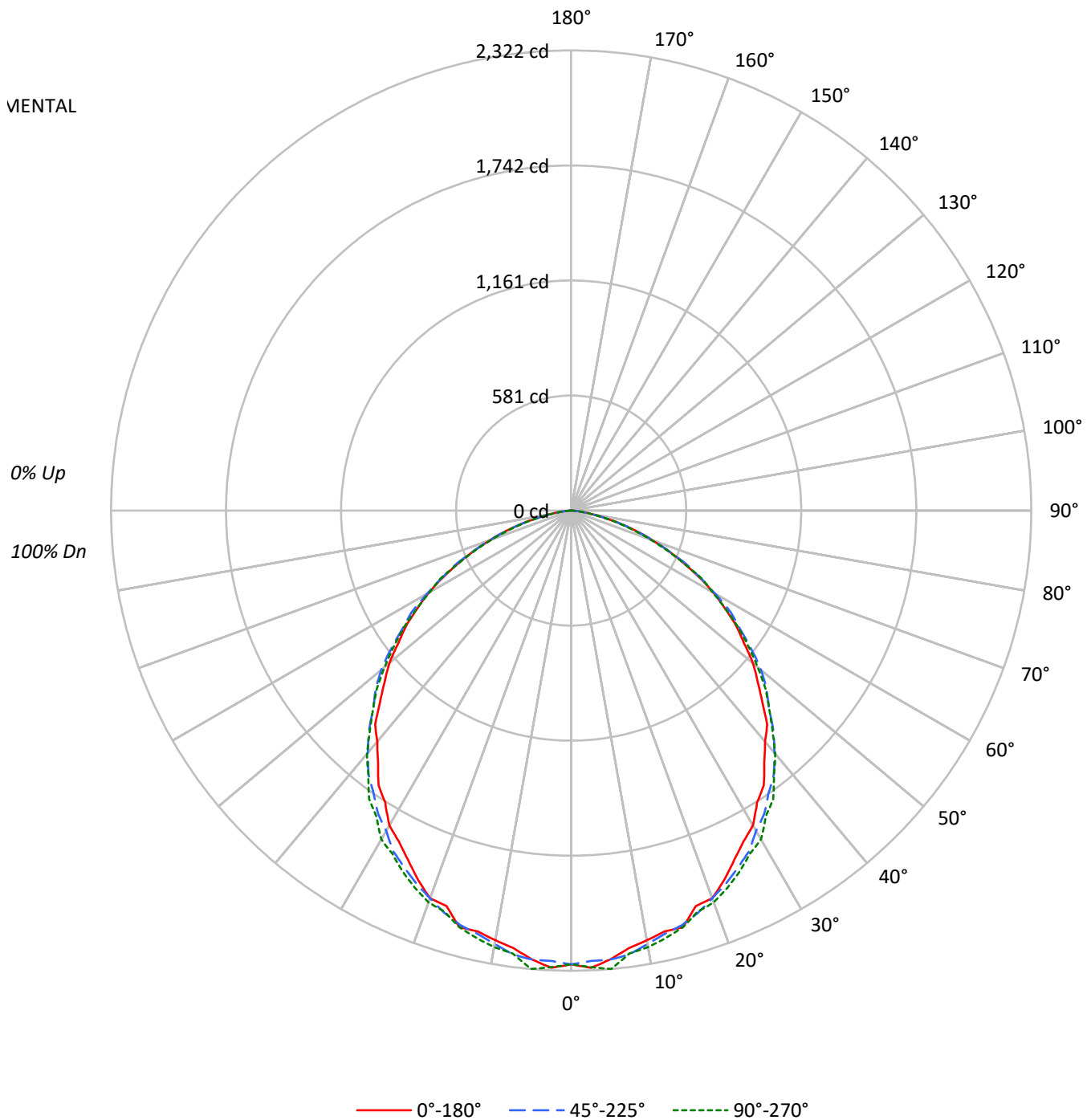
Lumens per Lamp: N/A
Luminaire Lumens: 5770.0 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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																		
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°	6161	6161	6161
5°	6140	6143	6272
10°	6016	6068	6111
15°	6064	6030	6064
20°	5961	5961	6025
25°	5778	5904	5969
30°	5698	5798	5953
35°	5564	5710	5838
40°	5348	5605	5630
45°	5186	5370	5378
50°	5016	5242	5142
55°	4779	4872	4837
60°	4469	4513	4432
65°	3985	4086	3956
70°	3419	3430	3335
75°	2707	2701	2597
80°	1815	1764	1695
85°	985	976	914

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5509 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.3	3.7
10°-20°	610.3	10.6
20°-30°	914.4	15.8
30°-40°	1083.8	18.8
40°-50°	1085.8	18.8
50°-60°	921.6	16.0
60°-70°	621.4	10.8
70°-80°	273.0	4.7
80°-90°	44.4	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°	1740.1	30.2
0°-40°	2823.8	48.9
0°-60°	4831.2	83.7
0°-90°	5770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5770.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2289	2289	2289	2289	2289	
5°	2273	2268	2274	2267	2322	214
15°	2176	2151	2165	2176	2177	606
25°	1946	1956	1988	2014	2010	900
35°	1694	1699	1738	1778	1777	1052
45°	1363	1388	1411	1448	1413	1054
55°	1019	1012	1038	1031	1031	906
65°	626	618	642	617	621	622
75°	260	255	260	242	250	279
85°	32	31	32	31	30	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2289.4	2289.4	2289.4	2289.4	2289.4
2.5°	2309.2	2291.8	2275.5	2294.4	2305.9
5°	2273.1	2267.8	2274.0	2267.2	2321.9
7.5°	2226.4	2246.8	2258.6	2251.3	2254.5
10°	2201.6	2194.5	2220.8	2239.1	2236.5
12.5°	2175.0	2185.6	2187.1	2206.9	2208.7
15°	2176.5	2151.3	2164.6	2175.9	2176.8
17.5°	2091.9	2119.1	2128.3	2154.0	2122.1
20°	2081.6	2061.8	2081.6	2107.9	2103.8
22.5°	2018.0	1995.9	2038.4	2061.8	2060.3
25°	1945.9	1956.5	1988.5	2014.5	2010.3
27.5°	1882.7	1895.1	1940.6	1976.4	1953.3
30°	1833.9	1827.7	1866.1	1898.0	1915.8
32.5°	1746.7	1769.1	1814.1	1845.7	1828.9
35°	1693.8	1698.8	1738.1	1778.3	1777.1
37.5°	1601.2	1624.6	1679.9	1691.1	1680.8
40°	1522.3	1545.7	1595.6	1607.7	1602.7
42.5°	1464.1	1468.2	1511.1	1525.0	1502.8
45°	1362.7	1388.1	1411.2	1447.5	1413.2
47.5°	1276.4	1288.2	1337.9	1347.6	1329.6
50°	1198.1	1202.2	1252.1	1240.0	1228.2
52.5°	1099.6	1117.1	1145.1	1142.8	1128.9
55°	1018.6	1011.8	1038.4	1031.3	1031.0
57.5°	921.4	933.2	955.1	943.8	925.8
60°	830.3	830.6	838.6	825.9	823.5
62.5°	728.9	732.5	734.3	718.6	744.0
65°	625.8	617.5	641.7	617.2	621.3
67.5°	530.9	535.0	532.7	517.3	523.2
70°	434.5	439.8	436.0	418.6	423.9
72.5°	346.4	339.9	344.1	322.2	332.2
75°	260.4	255.1	259.8	241.5	249.8
77.5°	177.4	181.5	178.5	168.8	174.4
80°	117.1	113.8	113.8	108.2	109.4
82.5°	68.3	65.0	64.1	62.4	65.0
85°	31.9	31.0	31.6	30.7	29.6
87.5°	11.5	11.8	11.8	11.2	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)