

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: P562613

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562613
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-LD4-2HI-50-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

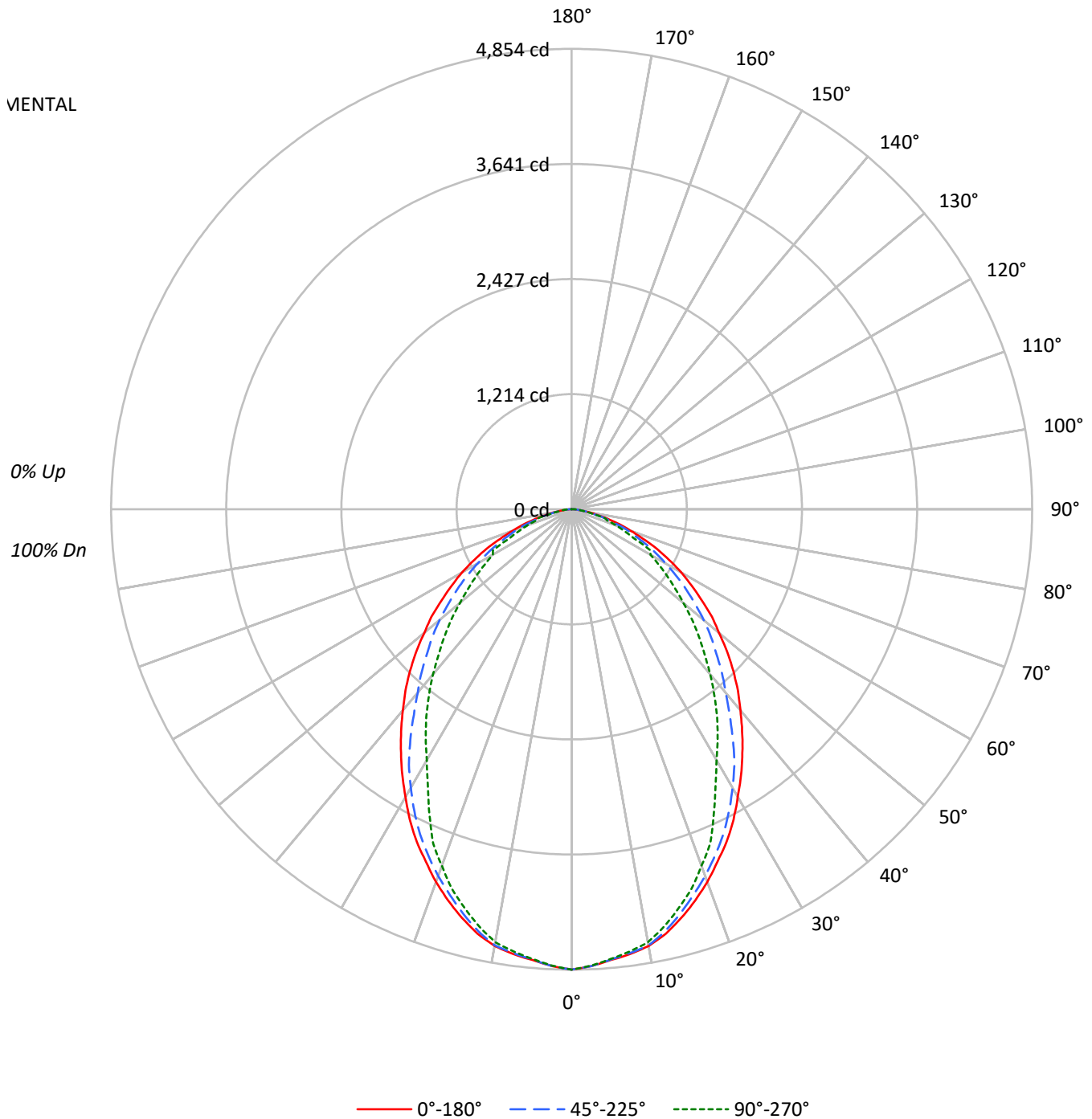
Lumens per Lamp: N/A
Luminaire Lumens: 9529.0 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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	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°	6531	6531	6531
5°	6442	6435	6427
10°	6386	6379	6333
15°	6214	6152	6066
20°	5986	5889	5729
25°	5740	5615	5265
30°	5440	5266	4743
35°	5152	4867	4387
40°	4859	4435	3992
45°	4581	4100	3609
50°	4240	3806	3219
55°	3923	3449	2883
60°	3594	3080	2582
65°	3162	2698	2287
70°	2605	2362	1943
75°	2071	1809	1896
80°	1392	1304	1217
85°	866	1039	1213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4581 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	451.8	4.7
10°-20°	1240.0	13.0
20°-30°	1716.7	18.0
30°-40°	1830.5	19.2
40°-50°	1670.0	17.5
50°-60°	1308.3	13.7
60°-70°	852.7	8.9
70°-80°	377.8	4.0
80°-90°	81.1	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°	3408.6	35.8
0°-40°	5239.1	55.0
0°-60°	8217.4	86.2
0°-90°	9529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9529.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4854	4854	4854	4854	4854	
5°	4770	4764	4764	4758	4758	453
15°	4461	4461	4416	4371	4354	1254
25°	3866	3844	3782	3648	3546	1775
35°	3137	3114	2963	2738	2671	1961
45°	2407	2357	2155	1975	1897	1854
55°	1672	1622	1470	1296	1229	1500
65°	993	937	847	864	718	979
75°	398	370	348	331	365	427
85°	56	62	67	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4853.9	4853.9	4853.9	4853.9	4853.9
2.5°	4820.3	4820.3	4820.3	4814.7	4814.7
5°	4769.8	4764.2	4764.2	4758.5	4758.5
7.5°	4730.5	4724.9	4719.3	4713.7	4702.4
10°	4674.4	4674.4	4668.8	4640.7	4635.1
12.5°	4584.6	4579.0	4556.5	4517.3	4506.0
15°	4461.1	4461.1	4416.2	4371.4	4354.5
17.5°	4326.5	4320.9	4264.7	4219.8	4197.4
20°	4180.6	4169.3	4113.2	4040.3	4001.0
22.5°	4017.8	4017.8	3950.5	3855.1	3815.8
25°	3866.3	3843.9	3782.1	3647.5	3546.5
27.5°	3692.4	3658.7	3591.4	3400.6	3282.7
30°	3501.6	3484.7	3389.3	3142.4	3052.7
32.5°	3322.0	3293.9	3192.9	2934.8	2861.9
35°	3136.8	3114.4	2962.9	2738.4	2671.1
37.5°	2951.6	2923.6	2732.8	2553.2	2469.1
40°	2766.5	2732.8	2525.2	2362.4	2272.7
42.5°	2592.5	2547.6	2345.6	2171.6	2070.6
45°	2407.3	2356.8	2154.8	1975.2	1896.7
47.5°	2222.2	2177.3	1992.1	1806.9	1717.1
50°	2025.8	1986.5	1818.1	1632.9	1537.6
52.5°	1863.0	1801.3	1638.6	1453.4	1374.8
55°	1672.2	1621.7	1470.2	1296.3	1228.9
57.5°	1498.3	1447.8	1307.5	1144.7	1088.6
60°	1335.5	1262.6	1144.7	1004.5	959.6
62.5°	1156.0	1099.9	998.8	881.0	937.1
65°	993.2	937.1	847.3	864.2	718.3
67.5°	813.7	785.6	707.0	628.5	606.0
70°	662.2	628.5	600.4	516.3	493.8
72.5°	527.5	493.8	454.5	409.6	392.8
75°	398.4	370.4	347.9	331.1	364.7
77.5°	275.0	263.7	246.9	230.1	224.5
80°	179.6	174.0	168.3	162.7	157.1
82.5°	106.6	106.6	106.6	106.6	106.6
85°	56.1	61.7	67.3	72.9	78.6
87.5°	33.7	33.7	39.3	44.9	50.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)