

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: P562545

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562545
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-40-UNV-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9669.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

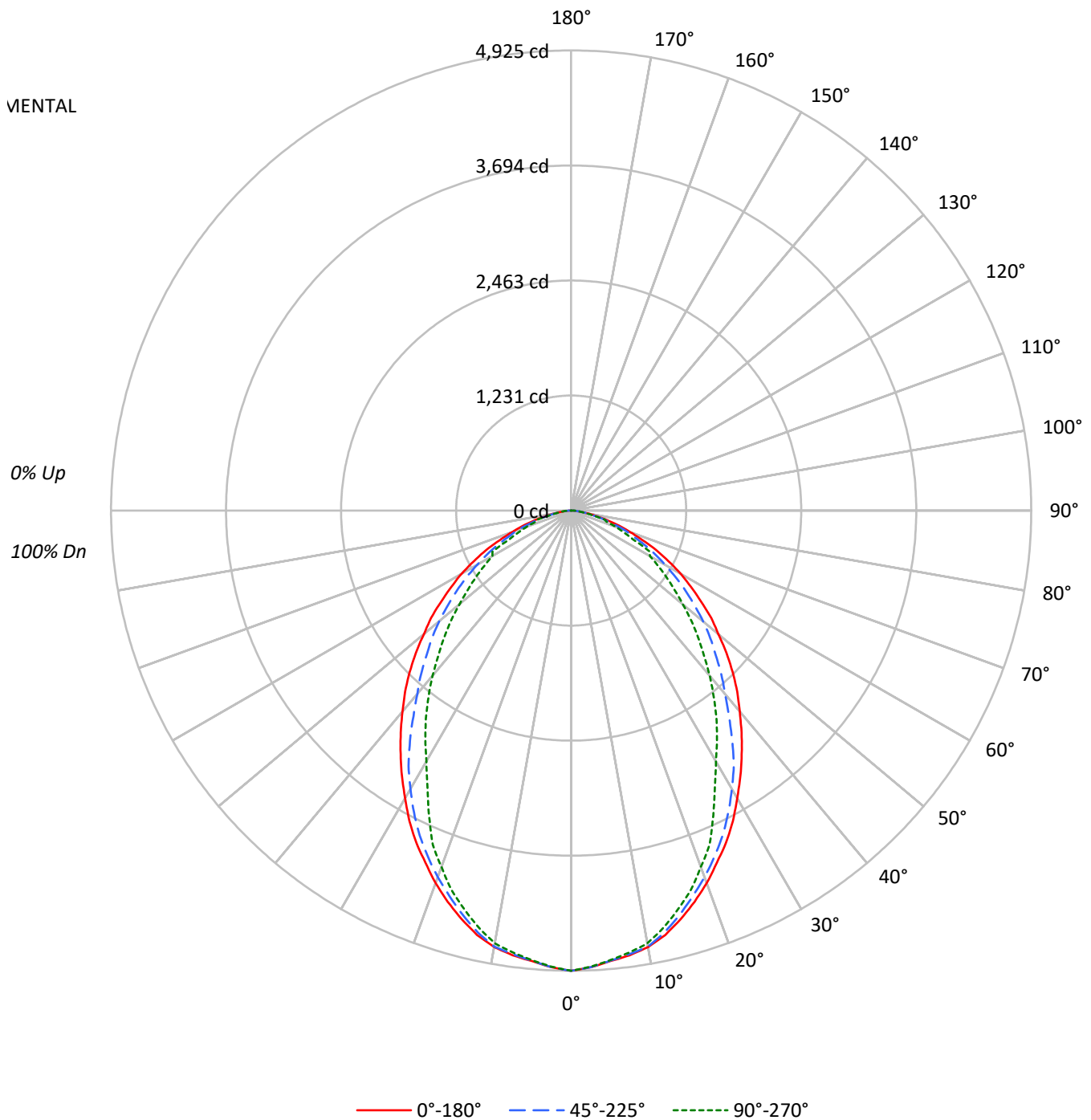
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6627	6627	6627
5°	6537	6529	6522
10°	6480	6472	6426
15°	6305	6242	6155
20°	6074	5976	5813
25°	5824	5697	5342
30°	5520	5343	4812
35°	5228	4938	4452
40°	4930	4500	4050
45°	4648	4160	3662
50°	4303	3862	3266
55°	3980	3499	2925
60°	3647	3126	2620
65°	3209	2737	2320
70°	2643	2397	1971
75°	2102	1835	1924
80°	1412	1323	1235
85°	878	1054	1230

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	458.5	4.7
10°-20°	1258.2	13.0
20°-30°	1742.0	18.0
30°-40°	1857.4	19.2
40°-50°	1694.5	17.5
50°-60°	1327.5	13.7
60°-70°	865.2	8.9
70°-80°	383.3	4.0
80°-90°	82.3	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°	3458.7	35.8
0°-40°	5316.1	55.0
0°-60°	8338.1	86.2
0°-90°	9669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9669.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4925	4925	4925	4925	4925	
5°	4840	4834	4834	4828	4828	459
15°	4527	4527	4481	4436	4418	1273
25°	3923	3900	3838	3701	3599	1801
35°	3183	3160	3006	2779	2710	1990
45°	2443	2392	2186	2004	1925	1882
55°	1697	1646	1492	1315	1247	1522
65°	1008	951	860	877	729	993
75°	404	376	353	336	370	433
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4925.3	4925.3	4925.3	4925.3	4925.3
2.5°	4891.1	4891.1	4891.1	4885.4	4885.4
5°	4839.9	4834.2	4834.2	4828.5	4828.5
7.5°	4800.0	4794.3	4788.6	4782.9	4771.5
10°	4743.1	4743.1	4737.4	4708.9	4703.2
12.5°	4652.0	4646.3	4623.5	4583.6	4572.2
15°	4526.7	4526.7	4481.1	4435.6	4418.5
17.5°	4390.0	4384.3	4327.4	4281.8	4259.1
20°	4242.0	4230.6	4173.7	4099.6	4059.8
22.5°	4076.9	4076.9	4008.5	3911.7	3871.9
25°	3923.1	3900.3	3837.7	3701.1	3598.6
27.5°	3746.6	3712.4	3644.1	3450.5	3331.0
30°	3553.0	3535.9	3439.1	3188.6	3097.5
32.5°	3370.8	3342.3	3239.9	2977.9	2903.9
35°	3182.9	3160.1	3006.4	2778.6	2710.3
37.5°	2995.0	2966.5	2772.9	2590.7	2505.3
40°	2807.1	2772.9	2562.3	2397.1	2306.0
42.5°	2630.6	2585.0	2380.1	2203.6	2101.1
45°	2442.7	2391.5	2186.5	2004.3	1924.6
47.5°	2254.8	2209.2	2021.3	1833.4	1742.3
50°	2055.5	2015.7	1844.8	1656.9	1560.1
52.5°	1890.4	1827.8	1662.6	1474.7	1395.0
55°	1696.8	1645.5	1491.8	1315.3	1247.0
57.5°	1520.3	1469.0	1326.7	1161.6	1104.6
60°	1355.2	1281.1	1161.6	1019.2	973.7
62.5°	1173.0	1116.0	1013.5	893.9	950.9
65°	1007.8	950.9	859.8	876.9	728.8
67.5°	825.6	797.2	717.4	637.7	614.9
70°	671.9	637.7	609.3	523.8	501.1
72.5°	535.2	501.1	461.2	415.7	398.6
75°	404.3	375.8	353.0	335.9	370.1
77.5°	279.0	267.6	250.5	233.5	227.8
80°	182.2	176.5	170.8	165.1	159.4
82.5°	108.2	108.2	108.2	108.2	108.2
85°	56.9	62.6	68.3	74.0	79.7
87.5°	34.2	34.2	39.9	45.6	51.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)