

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: P562901

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562901
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-LD4-2STD-35-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7034.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

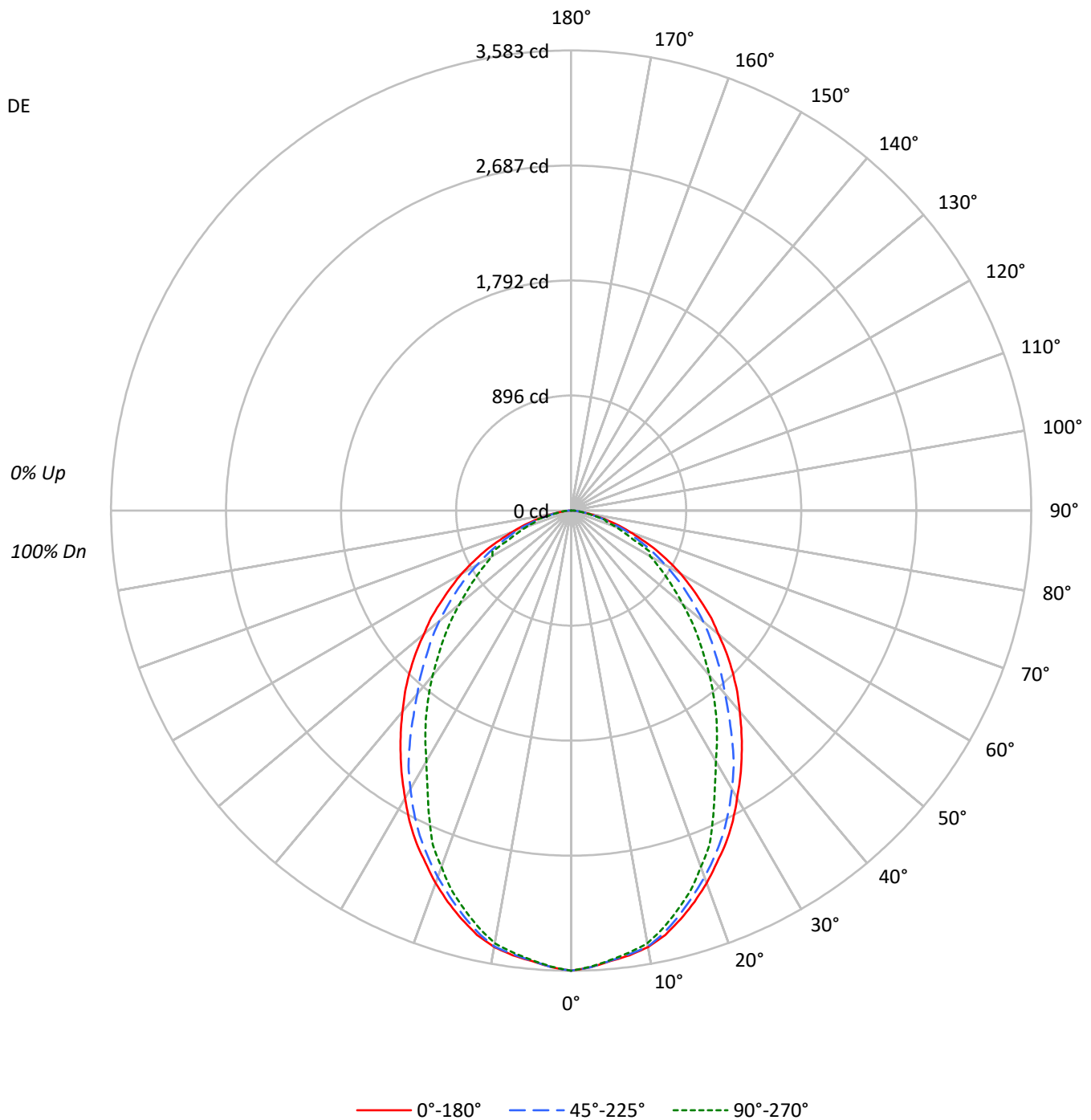
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	4821	4821	4821
5°	4755	4750	4744
10°	4714	4708	4675
15°	4587	4541	4478
20°	4419	4347	4229
25°	4237	4145	3886
30°	4016	3887	3501
35°	3803	3592	3239
40°	3587	3274	2947
45°	3381	3027	2664
50°	3130	2809	2376
55°	2896	2546	2128
60°	2653	2274	1906
65°	2334	1991	1688
70°	1923	1744	1434
75°	1529	1335	1399
80°	1027	963	899
85°	639	767	895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3381 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.5	4.7
10°-20°	915.4	13.0
20°-30°	1267.2	18.0
30°-40°	1351.2	19.2
40°-50°	1232.7	17.5
50°-60°	965.7	13.7
60°-70°	629.4	8.9
70°-80°	278.9	4.0
80°-90°	59.9	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°	2516.1	35.8
0°-40°	3867.4	55.0
0°-60°	6065.8	86.2
0°-90°	7034.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7034.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3583	3583	3583	3583	3583	
5°	3521	3517	3517	3513	3513	334
15°	3293	3293	3260	3227	3214	926
25°	2854	2837	2792	2692	2618	1310
35°	2316	2299	2187	2021	1972	1448
45°	1777	1740	1591	1458	1400	1369
55°	1234	1197	1085	957	907	1107
65°	733	692	626	638	530	723
75°	294	273	257	244	269	315
85°	41	46	50	54	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3583.0	3583.0	3583.0	3583.0	3583.0
2.5°	3558.2	3558.2	3558.2	3554.0	3554.0
5°	3520.9	3516.8	3516.8	3512.6	3512.6
7.5°	3491.9	3487.8	3483.6	3479.5	3471.2
10°	3450.5	3450.5	3446.3	3425.6	3421.5
12.5°	3384.2	3380.1	3363.5	3334.5	3326.2
15°	3293.1	3293.1	3259.9	3226.8	3214.4
17.5°	3193.7	3189.5	3148.1	3115.0	3098.4
20°	3086.0	3077.7	3036.3	2982.4	2953.4
22.5°	2965.8	2965.8	2916.1	2845.7	2816.7
25°	2854.0	2837.4	2791.9	2692.4	2617.9
27.5°	2725.6	2700.7	2651.0	2510.2	2423.2
30°	2584.7	2572.3	2501.9	2319.6	2253.4
32.5°	2452.2	2431.5	2356.9	2166.4	2112.5
35°	2315.5	2298.9	2187.1	2021.4	1971.7
37.5°	2178.8	2158.1	2017.3	1884.7	1822.6
40°	2042.1	2017.3	1864.0	1743.9	1677.6
42.5°	1913.7	1880.6	1731.5	1603.0	1528.5
45°	1777.0	1739.7	1590.6	1458.1	1400.1
47.5°	1640.3	1607.2	1470.5	1333.8	1267.5
50°	1495.3	1466.3	1342.1	1205.4	1135.0
52.5°	1375.2	1329.7	1209.5	1072.8	1014.8
55°	1234.4	1197.1	1085.3	956.9	907.1
57.5°	1106.0	1068.7	965.1	845.0	803.6
60°	985.8	932.0	845.0	741.5	708.3
62.5°	853.3	811.9	737.3	650.3	691.8
65°	733.2	691.8	625.5	637.9	530.2
67.5°	600.6	579.9	521.9	463.9	447.4
70°	488.8	463.9	443.2	381.1	364.5
72.5°	389.4	364.5	335.5	302.4	290.0
75°	294.1	273.4	256.8	244.4	269.2
77.5°	203.0	194.7	182.3	169.8	165.7
80°	132.6	128.4	124.3	120.1	116.0
82.5°	78.7	78.7	78.7	78.7	78.7
85°	41.4	45.6	49.7	53.8	58.0
87.5°	24.9	24.9	29.0	33.1	37.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)