

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: P563723

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563723
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-LD4-4HI-40-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18413.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

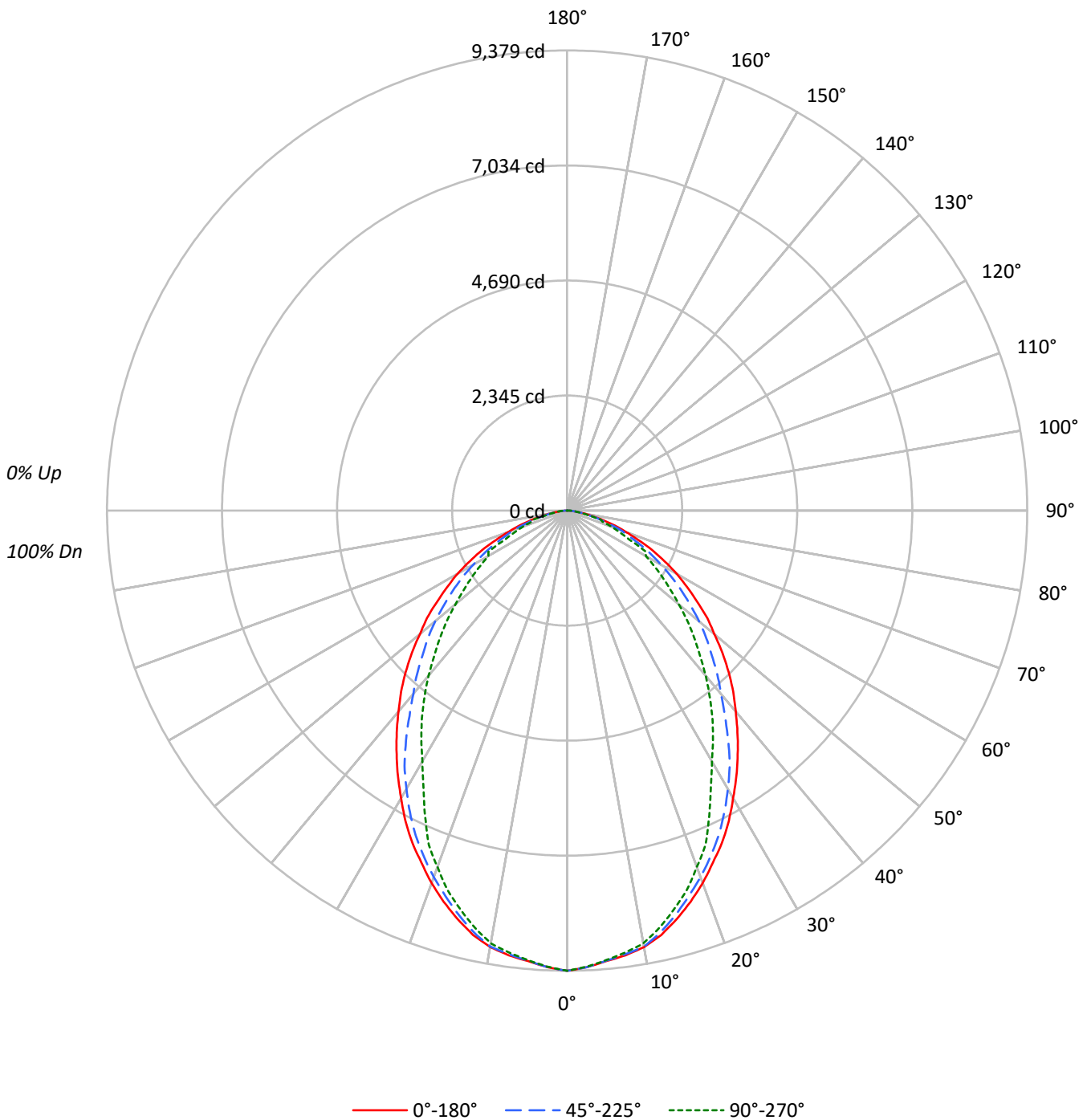
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12620	12620	12620
5°	12448	12434	12419
10°	12340	12326	12237
15°	12008	11887	11721
20°	11567	11380	11070
25°	11091	10850	10174
30°	10512	10175	9164
35°	9956	9404	8478
40°	9389	8570	7713
45°	8851	7923	6974
50°	8194	7354	6219
55°	7580	6664	5571
60°	6945	5952	4990
65°	6110	5213	4419
70°	5033	4564	3754
75°	4002	3495	3664
80°	2689	2521	2352
85°	1673	2008	2343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8851 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	873.1	4.7
10°-20°	2396.1	13.0
20°-30°	3317.3	18.0
30°-40°	3537.2	19.2
40°-50°	3226.9	17.5
50°-60°	2528.1	13.7
60°-70°	1647.6	8.9
70°-80°	730.0	4.0
80°-90°	156.7	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°	6586.5	35.8
0°-40°	10123.7	55.0
0°-60°	15878.6	86.2
0°-90°	18413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9379	9379	9379	9379	9379	
5°	9217	9206	9206	9195	9195	875
15°	8620	8620	8534	8447	8414	2423
25°	7471	7428	7308	7048	6853	3430
35°	6061	6018	5725	5292	5161	3789
45°	4652	4554	4164	3817	3665	3583
55°	3231	3134	2841	2505	2375	2898
65°	1919	1811	1637	1670	1388	1891
75°	770	716	672	640	705	825
85°	108	119	130	141	152	150
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9379.3	9379.3	9379.3	9379.3	9379.3
2.5°	9314.3	9314.3	9314.3	9303.4	9303.4
5°	9216.7	9205.8	9205.8	9195.0	9195.0
7.5°	9140.8	9129.9	9119.1	9108.3	9086.6
10°	9032.4	9032.4	9021.5	8967.3	8956.5
12.5°	8858.9	8848.0	8804.6	8728.7	8707.1
15°	8620.3	8620.3	8533.6	8446.8	8414.3
17.5°	8360.1	8349.2	8240.8	8154.1	8110.7
20°	8078.2	8056.5	7948.0	7807.1	7731.2
22.5°	7763.7	7763.7	7633.6	7449.3	7373.4
25°	7470.9	7427.6	7308.3	7048.1	6852.9
27.5°	7134.8	7069.7	6939.6	6571.0	6343.3
30°	6766.1	6733.6	6549.3	6072.2	5898.7
32.5°	6419.2	6364.9	6169.8	5671.0	5530.0
35°	6061.3	6018.0	5725.2	5291.5	5161.3
37.5°	5703.5	5649.3	5280.6	4933.6	4771.0
40°	5345.7	5280.6	4879.4	4565.0	4391.5
42.5°	5009.5	4922.8	4532.4	4196.3	4001.1
45°	4651.7	4554.1	4163.8	3816.8	3665.0
47.5°	4293.9	4207.1	3849.3	3491.5	3318.0
50°	3914.4	3838.5	3513.2	3155.4	2971.0
52.5°	3599.9	3480.7	3166.2	2808.4	2656.6
55°	3231.3	3133.7	2840.9	2504.8	2374.7
57.5°	2895.1	2797.5	2526.5	2212.0	2103.6
60°	2580.7	2439.7	2212.0	1940.9	1854.2
62.5°	2233.7	2125.3	1930.1	1702.4	1810.8
65°	1919.2	1810.8	1637.3	1669.8	1387.9
67.5°	1572.3	1518.0	1366.2	1214.4	1171.1
70°	1279.5	1214.4	1160.2	997.6	954.2
72.5°	1019.3	954.2	878.3	791.6	759.0
75°	769.9	715.6	672.3	639.7	704.8
77.5°	531.3	509.6	477.1	444.6	433.7
80°	347.0	336.1	325.3	314.5	303.6
82.5°	206.0	206.0	206.0	206.0	206.0
85°	108.4	119.3	130.1	141.0	151.8
87.5°	65.1	65.1	75.9	86.7	97.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)