

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: P563763

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563763
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-50-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19276.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

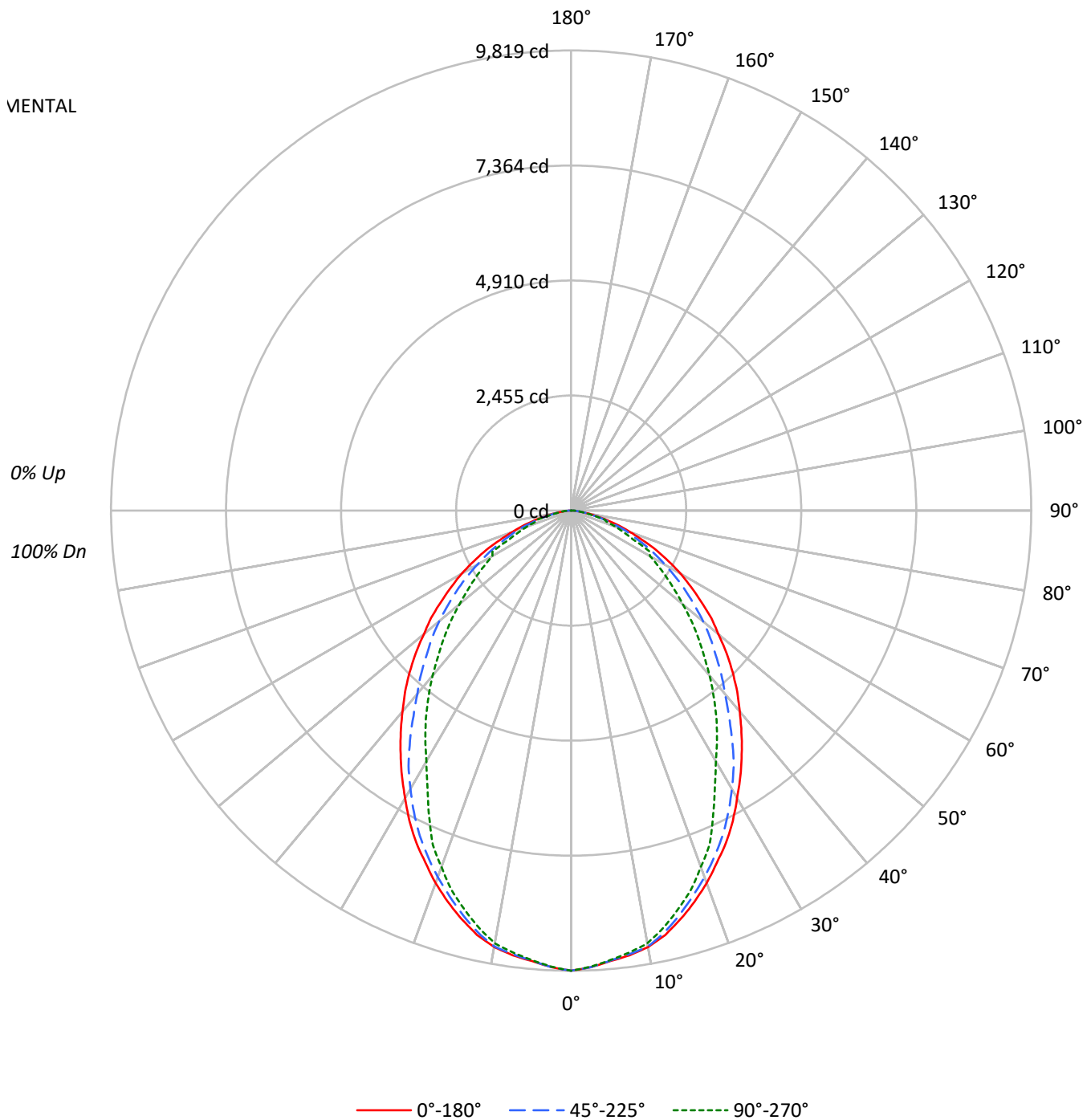
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	13211	13211	13211
5°	13032	13016	13001
10°	12919	12903	12810
15°	12570	12444	12270
20°	12109	11914	11589
25°	11611	11358	10651
30°	11005	10652	9594
35°	10423	9845	8875
40°	9829	8972	8075
45°	9266	8294	7301
50°	8578	7698	6511
55°	7935	6977	5832
60°	7270	6231	5223
65°	6397	5457	4626
70°	5270	4778	3930
75°	4190	3659	3836
80°	2814	2638	2462
85°	1752	2103	2453

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9266 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	914.0	4.7
10°-20°	2508.4	13.0
20°-30°	3472.8	18.0
30°-40°	3703.0	19.2
40°-50°	3378.2	17.5
50°-60°	2646.5	13.7
60°-70°	1724.9	8.9
70°-80°	764.2	4.0
80°-90°	164.1	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°	6895.2	35.8
0°-40°	10598.1	55.0
0°-60°	16622.9	86.2
0°-90°	19276.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19276.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9819	9819	9819	9819	9819	
5°	9649	9637	9637	9626	9626	916
15°	9024	9024	8934	8843	8809	2537
25°	7821	7776	7651	7378	7174	3591
35°	6345	6300	5994	5540	5403	3967
45°	4870	4768	4359	3996	3837	3751
55°	3383	3280	2974	2622	2486	3034
65°	2009	1896	1714	1748	1453	1980
75°	806	749	704	670	738	864
85°	114	125	136	148	159	157
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9818.9	9818.9	9818.9	9818.9	9818.9
2.5°	9750.8	9750.8	9750.8	9739.5	9739.5
5°	9648.7	9637.3	9637.3	9626.0	9626.0
7.5°	9569.2	9557.9	9546.5	9535.2	9512.4
10°	9455.7	9455.7	9444.3	9387.6	9376.2
12.5°	9274.1	9262.7	9217.3	9137.9	9115.2
15°	9024.3	9024.3	8933.5	8842.7	8808.7
17.5°	8751.9	8740.6	8627.0	8536.2	8490.8
20°	8456.8	8434.1	8320.6	8173.0	8093.5
22.5°	8127.6	8127.6	7991.4	7798.4	7718.9
25°	7821.1	7775.7	7650.8	7378.4	7174.1
27.5°	7469.2	7401.1	7264.9	6878.9	6640.6
30°	7083.3	7049.2	6856.2	6356.8	6175.1
32.5°	6720.0	6663.3	6458.9	5936.8	5789.2
35°	6345.4	6300.0	5993.5	5539.5	5403.3
37.5°	5970.8	5914.1	5528.1	5164.9	4994.6
40°	5596.2	5528.1	5108.1	4778.9	4597.3
42.5°	5244.3	5153.5	4744.9	4393.0	4188.7
45°	4869.7	4767.6	4358.9	3995.7	3836.8
47.5°	4495.1	4404.3	4029.7	3655.1	3473.5
50°	4097.8	4018.4	3677.8	3303.2	3110.3
52.5°	3768.7	3643.8	3314.6	2940.0	2781.1
55°	3382.7	3280.5	2974.1	2622.2	2486.0
57.5°	3030.8	2928.7	2644.9	2315.7	2202.2
60°	2701.6	2554.1	2315.7	2031.9	1941.1
62.5°	2338.4	2224.9	2020.5	1782.2	1895.7
65°	2009.2	1895.7	1714.1	1748.1	1453.0
67.5°	1645.9	1589.2	1430.3	1271.4	1225.9
70°	1339.5	1271.4	1214.6	1044.3	998.9
72.5°	1067.0	998.9	919.5	828.7	794.6
75°	805.9	749.2	703.8	669.7	737.8
77.5°	556.2	533.5	499.5	465.4	454.1
80°	363.2	351.9	340.5	329.2	317.8
82.5°	215.7	215.7	215.7	215.7	215.7
85°	113.5	124.9	136.2	147.6	158.9
87.5°	68.1	68.1	79.5	90.8	102.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)