

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: P564082

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564082
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-LD4-4STD-40-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12984.0 lumens
Efficiency: N/A
Efficacy: 97.5 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

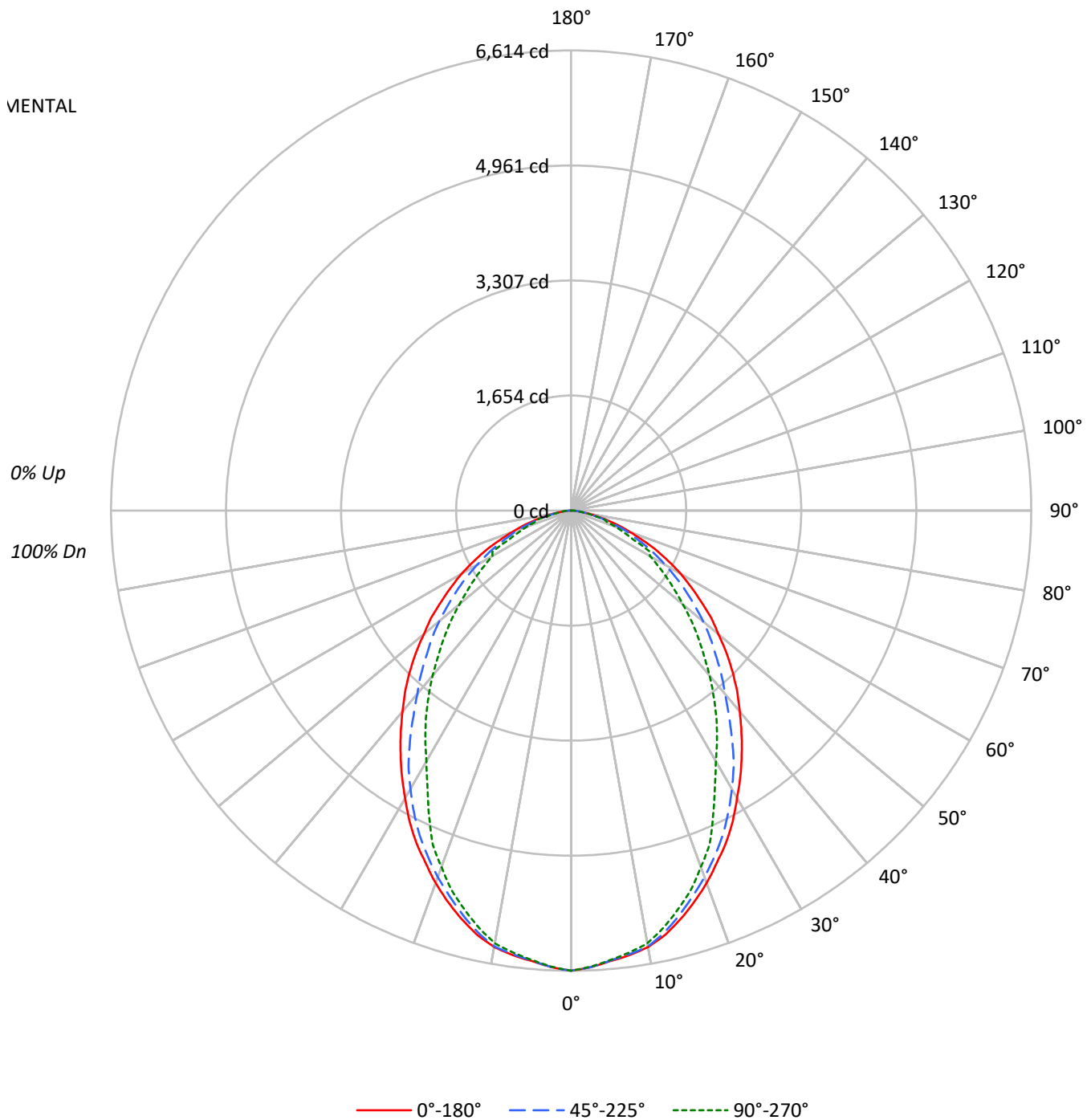
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	8899	8899	8899
5°	8778	8768	8757
10°	8702	8692	8629
15°	8467	8382	8265
20°	8156	8025	7806
25°	7821	7651	7174
30°	7413	7175	6462
35°	7021	6631	5978
40°	6621	6043	5439
45°	6242	5587	4918
50°	5778	5186	4385
55°	5345	4699	3928
60°	4897	4197	3518
65°	4309	3676	3116
70°	3549	3218	2647
75°	2822	2465	2584
80°	1896	1777	1659
85°	1181	1417	1652

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6242 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	615.7	4.7
10°-20°	1689.6	13.0
20°-30°	2339.2	18.0
30°-40°	2494.3	19.2
40°-50°	2275.5	17.5
50°-60°	1782.7	13.7
60°-70°	1161.9	8.9
70°-80°	514.7	4.0
80°-90°	110.5	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°	4644.5	35.8
0°-40°	7138.7	55.0
0°-60°	11196.9	86.2
0°-90°	12984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6614	6614	6614	6614	6614	
5°	6499	6492	6492	6484	6484	617
15°	6079	6079	6018	5956	5933	1709
25°	5268	5238	5154	4970	4832	2419
35°	4274	4244	4037	3731	3640	2672
45°	3280	3211	2936	2691	2584	2527
55°	2278	2210	2003	1766	1674	2044
65°	1353	1277	1155	1178	979	1334
75°	543	505	474	451	497	582
85°	76	84	92	99	107	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6613.9	6613.9	6613.9	6613.9	6613.9
2.5°	6568.0	6568.0	6568.0	6560.4	6560.4
5°	6499.2	6491.5	6491.5	6483.9	6483.9
7.5°	6445.7	6438.0	6430.4	6422.7	6407.4
10°	6369.2	6369.2	6361.6	6323.3	6315.7
12.5°	6246.9	6239.2	6208.6	6155.1	6139.8
15°	6078.6	6078.6	6017.5	5956.3	5933.4
17.5°	5895.1	5887.5	5811.0	5749.9	5719.3
20°	5696.3	5681.1	5604.6	5505.2	5451.7
22.5°	5474.6	5474.6	5382.9	5252.9	5199.3
25°	5268.2	5237.6	5153.5	4970.0	4832.3
27.5°	5031.1	4985.3	4893.5	4633.5	4473.0
30°	4771.2	4748.2	4618.2	4281.8	4159.5
32.5°	4526.5	4488.3	4350.6	3998.9	3899.5
35°	4274.2	4243.6	4037.1	3731.3	3639.5
37.5°	4021.8	3983.6	3723.7	3479.0	3364.3
40°	3769.5	3723.7	3440.7	3219.0	3096.7
42.5°	3532.5	3471.3	3196.1	2959.0	2821.4
45°	3280.2	3211.4	2936.1	2691.4	2584.4
47.5°	3027.9	2966.7	2714.4	2462.0	2339.7
50°	2760.2	2706.7	2477.3	2225.0	2095.0
52.5°	2538.5	2454.4	2232.7	1980.3	1873.3
55°	2278.5	2209.7	2003.3	1766.2	1674.5
57.5°	2041.5	1972.7	1781.5	1559.8	1483.3
60°	1819.8	1720.4	1559.8	1368.7	1307.5
62.5°	1575.1	1498.6	1361.0	1200.4	1276.9
65°	1353.4	1276.9	1154.6	1177.5	978.7
67.5°	1108.7	1070.5	963.4	856.4	825.8
70°	902.2	856.4	818.1	703.4	672.9
72.5°	718.7	672.9	619.3	558.2	535.2
75°	542.9	504.6	474.1	451.1	497.0
77.5°	374.7	359.4	336.4	313.5	305.8
80°	244.7	237.0	229.4	221.7	214.1
82.5°	145.3	145.3	145.3	145.3	145.3
85°	76.5	84.1	91.8	99.4	107.0
87.5°	45.9	45.9	53.5	61.2	68.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)