

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: P562480

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562480
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-35-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8010.0 lumens
Efficiency: N/A
Efficacy: 92.7 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

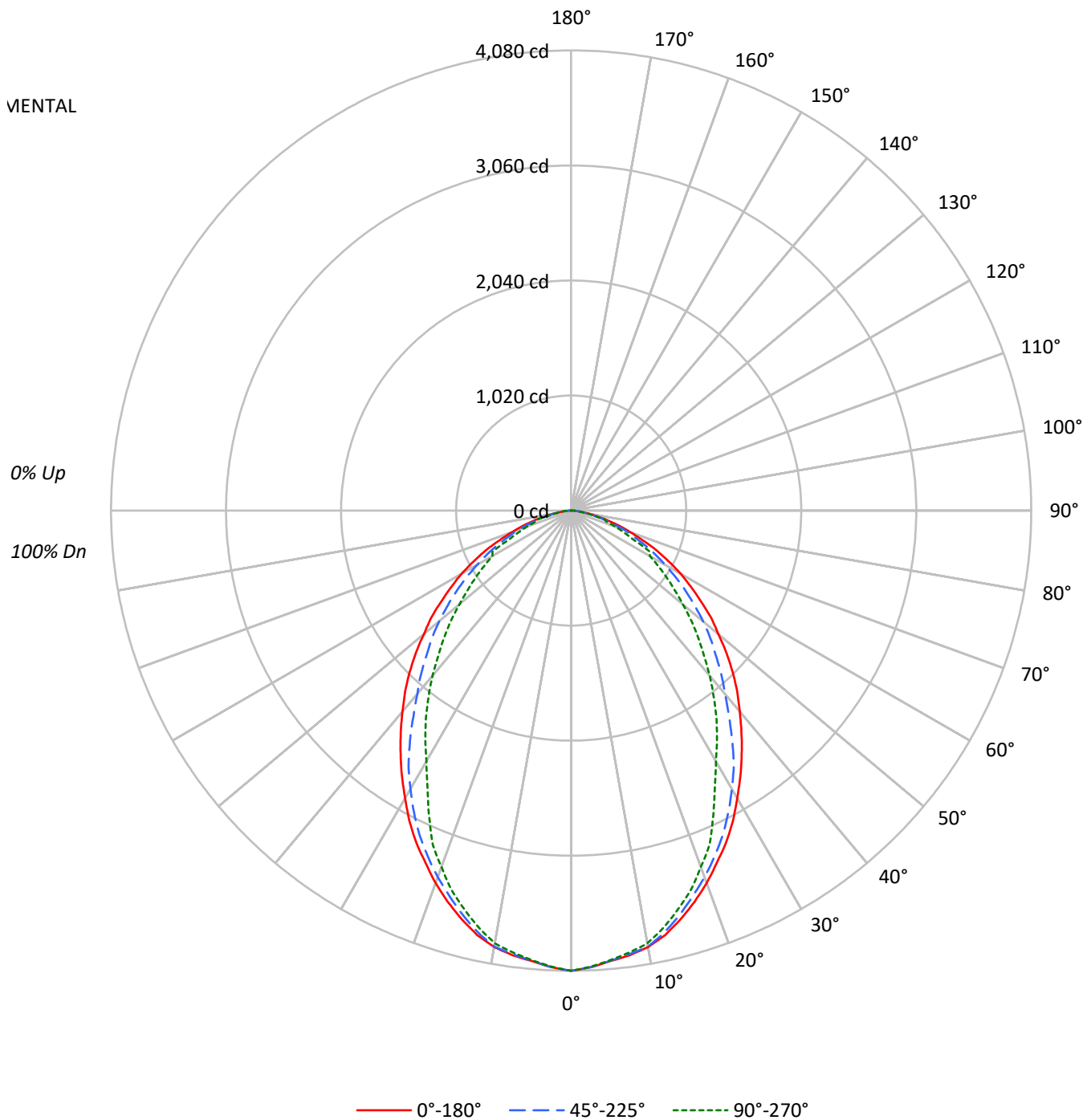
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5490	5490	5490
5°	5415	5409	5403
10°	5368	5362	5323
15°	5224	5171	5099
20°	5032	4951	4816
25°	4825	4720	4426
30°	4573	4426	3987
35°	4331	4091	3688
40°	4085	3728	3355
45°	3851	3447	3034
50°	3564	3199	2705
55°	3297	2899	2423
60°	3021	2590	2171
65°	2658	2268	1922
70°	2190	1985	1633
75°	1741	1521	1594
80°	1169	1096	1024
85°	729	874	1019

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3851 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	379.8	4.7
10°-20°	1042.4	13.0
20°-30°	1443.1	18.0
30°-40°	1538.7	19.2
40°-50°	1403.8	17.5
50°-60°	1099.8	13.7
60°-70°	716.8	8.9
70°-80°	317.6	4.0
80°-90°	68.2	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°	2865.2	35.8
0°-40°	4404.0	55.0
0°-60°	6907.5	86.2
0°-90°	8010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4080	4080	4080	4080	4080	
5°	4009	4005	4005	4000	4000	381
15°	3750	3750	3712	3674	3660	1054
25°	3250	3231	3179	3066	2981	1492
35°	2637	2618	2491	2302	2245	1648
45°	2024	1981	1811	1660	1594	1559
55°	1406	1363	1236	1090	1033	1261
65°	835	788	712	726	604	823
75°	335	311	292	278	307	359
85°	47	52	57	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4080.2	4080.2	4080.2	4080.2	4080.2
2.5°	4051.9	4051.9	4051.9	4047.2	4047.2
5°	4009.4	4004.7	4004.7	4000.0	4000.0
7.5°	3976.4	3971.7	3967.0	3962.3	3952.8
10°	3929.2	3929.2	3924.5	3900.9	3896.2
12.5°	3853.8	3849.1	3830.2	3797.2	3787.7
15°	3750.0	3750.0	3712.3	3674.5	3660.4
17.5°	3636.8	3632.1	3584.9	3547.2	3528.3
20°	3514.1	3504.7	3457.5	3396.2	3363.2
22.5°	3377.4	3377.4	3320.8	3240.6	3207.5
25°	3250.0	3231.1	3179.2	3066.0	2981.1
27.5°	3103.8	3075.5	3018.9	2858.5	2759.4
30°	2943.4	2929.2	2849.1	2641.5	2566.0
32.5°	2792.5	2768.9	2684.0	2467.0	2405.7
35°	2636.8	2617.9	2490.6	2301.9	2245.3
37.5°	2481.1	2457.5	2297.2	2146.2	2075.5
40°	2325.5	2297.2	2122.6	1985.8	1910.4
42.5°	2179.2	2141.5	1971.7	1825.5	1740.6
45°	2023.6	1981.1	1811.3	1660.4	1594.3
47.5°	1867.9	1830.2	1674.5	1518.9	1443.4
50°	1702.8	1669.8	1528.3	1372.6	1292.5
52.5°	1566.0	1514.2	1377.4	1221.7	1155.7
55°	1405.7	1363.2	1235.8	1089.6	1033.0
57.5°	1259.4	1217.0	1099.1	962.3	915.1
60°	1122.6	1061.3	962.3	844.3	806.6
62.5°	971.7	924.5	839.6	740.6	787.7
65°	834.9	787.7	712.3	726.4	603.8
67.5°	684.0	660.4	594.3	528.3	509.4
70°	556.6	528.3	504.7	434.0	415.1
72.5°	443.4	415.1	382.1	344.3	330.2
75°	334.9	311.3	292.5	278.3	306.6
77.5°	231.1	221.7	207.5	193.4	188.7
80°	150.9	146.2	141.5	136.8	132.1
82.5°	89.6	89.6	89.6	89.6	89.6
85°	47.2	51.9	56.6	61.3	66.0
87.5°	28.3	28.3	33.0	37.7	42.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)