

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: P563436

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563436
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-LD4-3LO-50-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7759.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

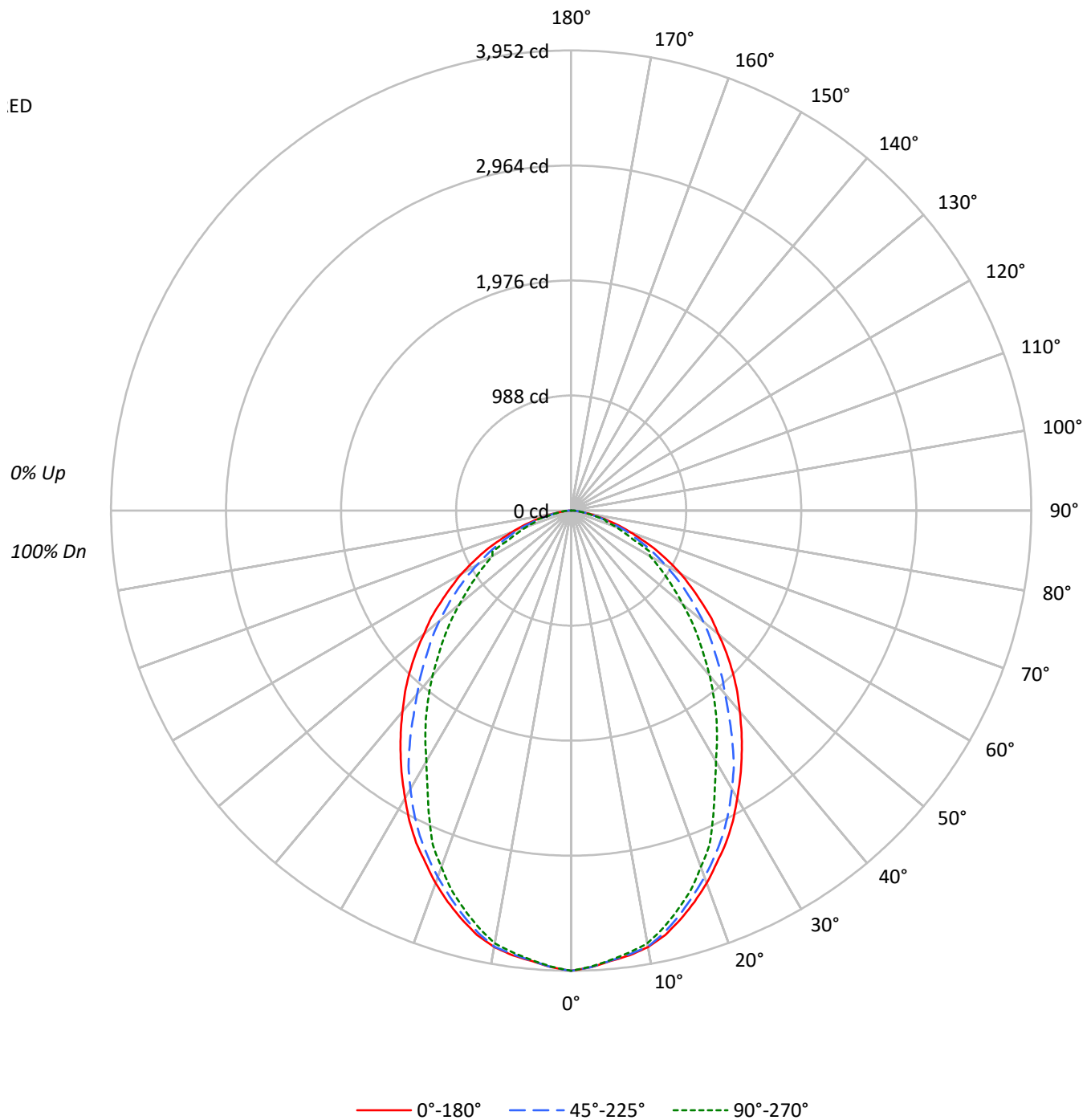
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5318	5318	5318
5°	5246	5239	5233
10°	5200	5194	5156
15°	5060	5009	4939
20°	4874	4796	4665
25°	4674	4572	4287
30°	4430	4288	3862
35°	4195	3963	3572
40°	3956	3611	3250
45°	3730	3339	2939
50°	3453	3099	2621
55°	3194	2808	2347
60°	2926	2508	2102
65°	2575	2196	1862
70°	2121	1923	1582
75°	1686	1473	1544
80°	1133	1062	991
85°	706	846	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3730 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.9	4.7
10°-20°	1009.7	13.0
20°-30°	1397.9	18.0
30°-40°	1490.5	19.2
40°-50°	1359.8	17.5
50°-60°	1065.3	13.7
60°-70°	694.3	8.9
70°-80°	307.6	4.0
80°-90°	66.0	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°	2775.5	35.8
0°-40°	4266.0	55.0
0°-60°	6691.1	86.2
0°-90°	7759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3952	3952	3952	3952	3952	
5°	3884	3879	3879	3875	3875	369
15°	3632	3632	3596	3559	3546	1021
25°	3148	3130	3080	2970	2888	1445
35°	2554	2536	2412	2230	2175	1597
45°	1960	1919	1755	1608	1544	1510
55°	1362	1320	1197	1056	1001	1221
65°	809	763	690	704	585	797
75°	324	302	283	270	297	348
85°	46	50	55	59	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3952.3	3952.3	3952.3	3952.3	3952.3
2.5°	3924.9	3924.9	3924.9	3920.3	3920.3
5°	3883.8	3879.2	3879.2	3874.7	3874.7
7.5°	3851.8	3847.2	3842.7	3838.1	3829.0
10°	3806.1	3806.1	3801.5	3778.7	3774.1
12.5°	3733.0	3728.4	3710.2	3678.2	3669.0
15°	3632.5	3632.5	3595.9	3559.4	3545.7
17.5°	3522.8	3518.3	3472.6	3436.0	3417.7
20°	3404.0	3394.9	3349.2	3289.8	3257.8
22.5°	3271.5	3271.5	3216.7	3139.0	3107.0
25°	3148.2	3129.9	3079.6	2970.0	2887.7
27.5°	3006.5	2979.1	2924.3	2768.9	2673.0
30°	2851.2	2837.5	2759.8	2558.7	2485.6
32.5°	2704.9	2682.1	2599.9	2389.7	2330.3
35°	2554.2	2535.9	2412.5	2229.8	2174.9
37.5°	2403.4	2380.5	2225.2	2079.0	2010.4
40°	2252.6	2225.2	2056.1	1923.6	1850.5
42.5°	2111.0	2074.4	1909.9	1768.3	1686.0
45°	1960.2	1919.1	1754.6	1608.3	1544.4
47.5°	1809.4	1772.8	1622.1	1471.3	1398.2
50°	1649.5	1617.5	1480.4	1329.6	1252.0
52.5°	1517.0	1466.7	1334.2	1183.4	1119.4
55°	1361.6	1320.5	1197.1	1055.5	1000.6
57.5°	1220.0	1178.8	1064.6	932.1	886.4
60°	1087.5	1028.1	932.1	817.9	781.3
62.5°	941.2	895.6	813.3	717.4	763.1
65°	808.7	763.1	689.9	703.7	584.9
67.5°	662.5	639.7	575.7	511.7	493.5
70°	539.2	511.7	488.9	420.4	402.1
72.5°	429.5	402.1	370.1	333.5	319.8
75°	324.4	301.6	283.3	269.6	297.0
77.5°	223.9	214.8	201.0	187.3	182.8
80°	146.2	141.6	137.1	132.5	127.9
82.5°	86.8	86.8	86.8	86.8	86.8
85°	45.7	50.3	54.8	59.4	64.0
87.5°	27.4	27.4	32.0	36.6	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)