

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: P562606

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562606
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-40-UNV-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7779.0 lumens
Efficiency: N/A
Efficacy: 90.0 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

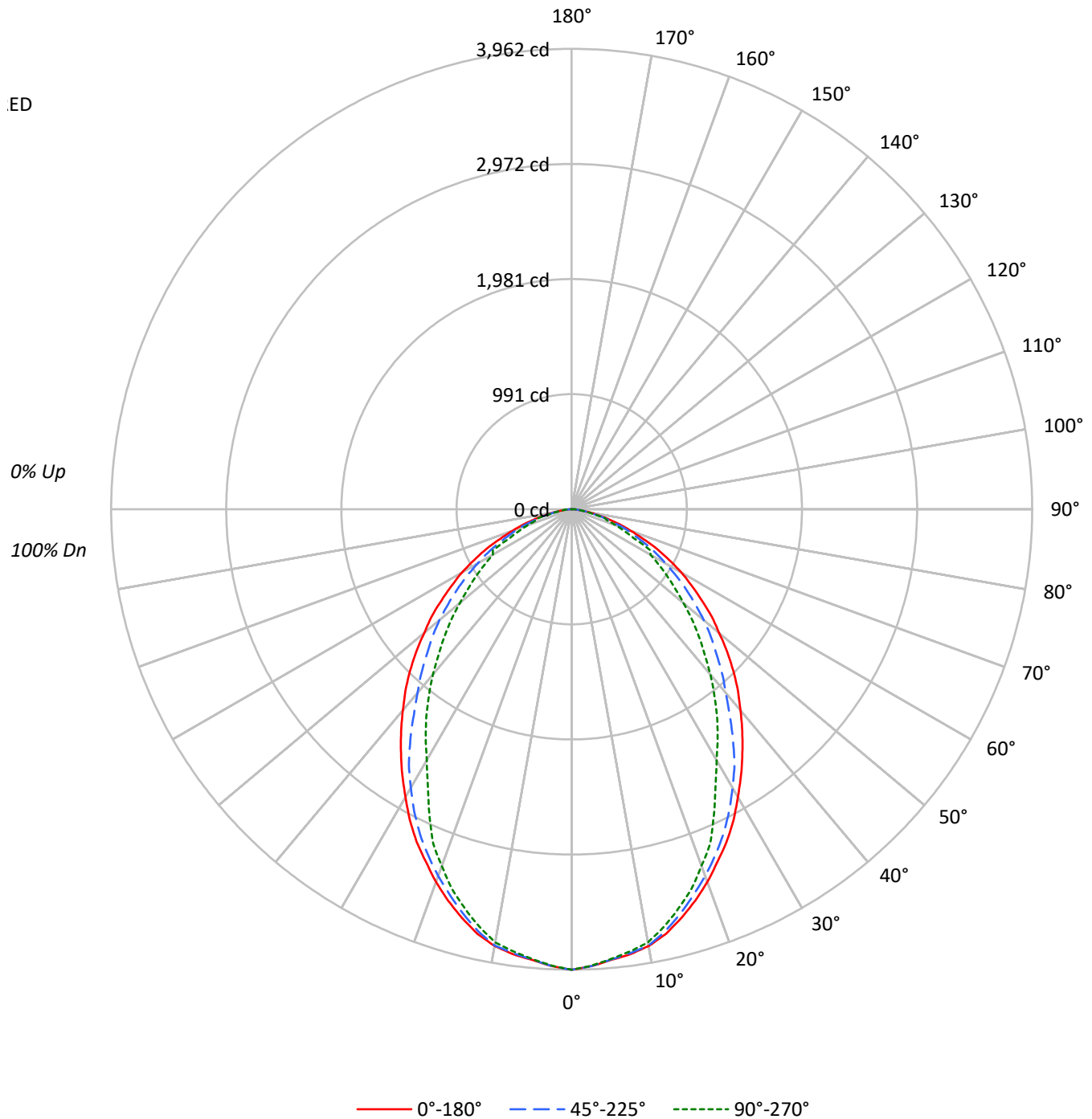
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5332	5332	5332
5°	5259	5253	5247
10°	5213	5207	5170
15°	5073	5022	4952
20°	4887	4808	4677
25°	4686	4584	4298
30°	4441	4299	3872
35°	4206	3973	3582
40°	3967	3621	3259
45°	3739	3347	2946
50°	3462	3107	2627
55°	3202	2815	2353
60°	2934	2515	2108
65°	2581	2202	1867
70°	2127	1928	1586
75°	1691	1476	1548
80°	1136	1065	994
85°	707	849	990

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3739 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.9	4.7
10°-20°	1012.3	13.0
20°-30°	1401.5	18.0
30°-40°	1494.4	19.2
40°-50°	1363.3	17.5
50°-60°	1068.0	13.7
60°-70°	696.1	8.9
70°-80°	308.4	4.0
80°-90°	66.2	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°	2782.6	35.8
0°-40°	4277.0	55.0
0°-60°	6708.3	86.2
0°-90°	7779.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3962	3962	3962	3962	3962	
5°	3894	3889	3889	3885	3885	370
15°	3642	3642	3605	3569	3555	1024
25°	3156	3138	3088	2978	2895	1449
35°	2561	2542	2419	2236	2180	1601
45°	1965	1924	1759	1612	1548	1514
55°	1365	1324	1200	1058	1003	1224
65°	811	765	692	706	586	799
75°	325	302	284	270	298	349
85°	46	50	55	60	64	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3962.5	3962.5	3962.5	3962.5	3962.5
2.5°	3935.0	3935.0	3935.0	3930.5	3930.5
5°	3893.8	3889.2	3889.2	3884.6	3884.6
7.5°	3861.7	3857.2	3852.6	3848.0	3838.8
10°	3815.9	3815.9	3811.3	3788.4	3783.9
12.5°	3742.6	3738.1	3719.7	3687.7	3678.5
15°	3641.9	3641.9	3605.2	3568.6	3554.8
17.5°	3531.9	3527.3	3481.5	3444.9	3426.5
20°	3412.8	3403.6	3357.8	3298.3	3266.2
22.5°	3280.0	3280.0	3225.0	3147.1	3115.0
25°	3156.3	3137.9	3087.6	2977.6	2895.2
27.5°	3014.3	2986.8	2931.8	2776.1	2679.9
30°	2858.5	2844.8	2766.9	2565.3	2492.0
32.5°	2711.9	2689.0	2606.6	2395.8	2336.3
35°	2560.7	2542.4	2418.7	2235.5	2180.5
37.5°	2409.6	2386.7	2230.9	2084.3	2015.6
40°	2258.4	2230.9	2061.4	1928.6	1855.3
42.5°	2116.4	2079.7	1914.8	1772.8	1690.4
45°	1965.2	1924.0	1759.1	1612.5	1548.4
47.5°	1814.1	1777.4	1626.2	1475.1	1401.8
50°	1653.7	1621.7	1484.2	1333.1	1255.2
52.5°	1520.9	1470.5	1337.6	1186.5	1122.3
55°	1365.1	1323.9	1200.2	1058.2	1003.2
57.5°	1223.1	1181.9	1067.4	934.5	888.7
60°	1090.3	1030.7	934.5	820.0	783.3
62.5°	943.7	897.9	815.4	719.2	765.0
65°	810.8	765.0	691.7	705.5	586.4
67.5°	664.2	641.3	577.2	513.1	494.7
70°	540.6	513.1	490.2	421.4	403.1
72.5°	430.6	403.1	371.1	334.4	320.7
75°	325.2	302.3	284.0	270.3	297.8
77.5°	224.5	215.3	201.6	187.8	183.2
80°	146.6	142.0	137.4	132.8	128.3
82.5°	87.0	87.0	87.0	87.0	87.0
85°	45.8	50.4	55.0	59.6	64.1
87.5°	27.5	27.5	32.1	36.6	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)