

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: P562568

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562568
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-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6517.0 lumens
Efficiency: N/A
Efficacy: 75.4 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

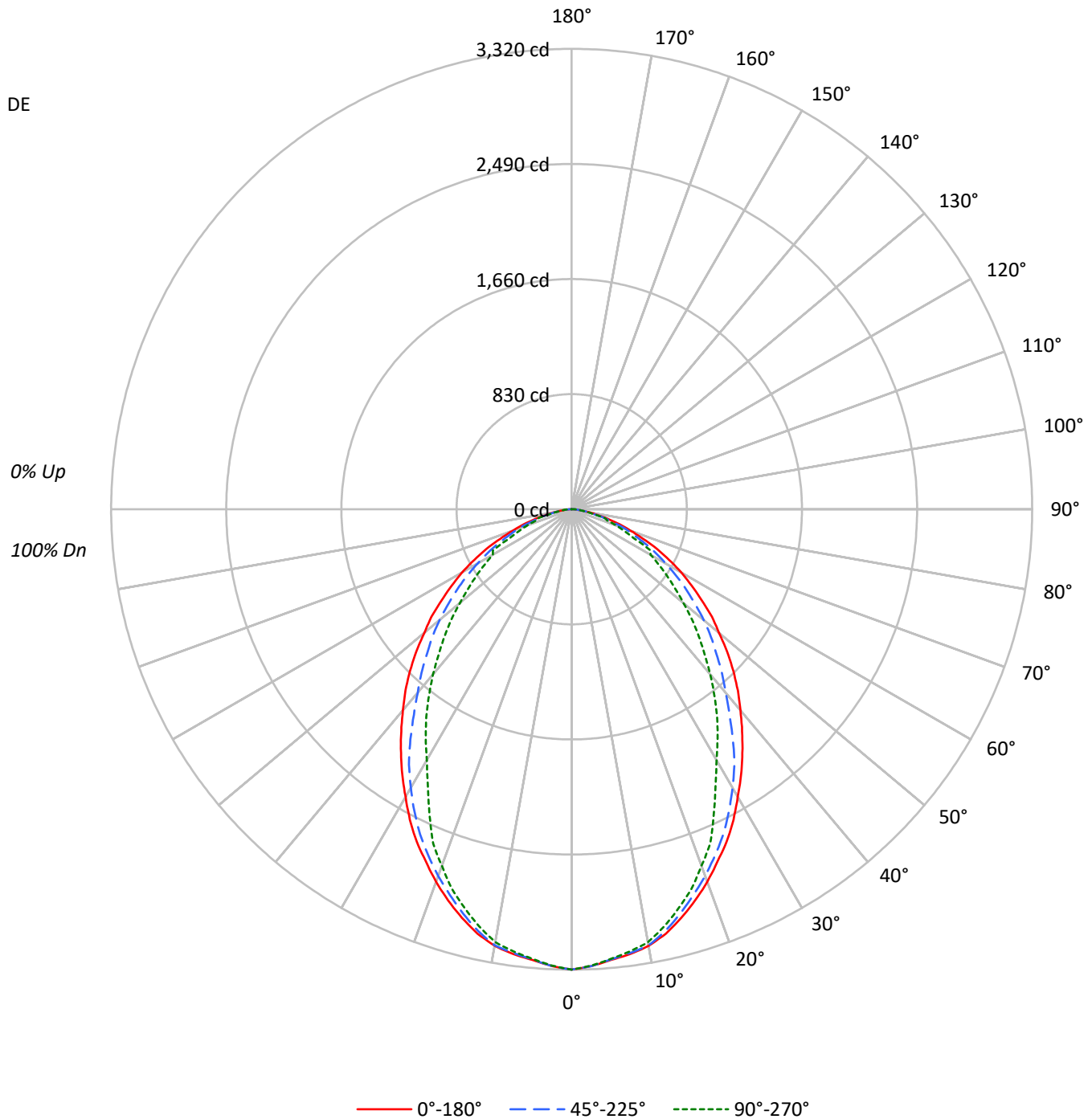
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4467	4467	4467
5°	4406	4401	4395
10°	4368	4362	4331
15°	4250	4207	4148
20°	4094	4028	3918
25°	3926	3840	3601
30°	3721	3601	3244
35°	3524	3328	3001
40°	3323	3033	2730
45°	3133	2804	2468
50°	2900	2603	2201
55°	2683	2359	1972
60°	2458	2107	1766
65°	2163	1845	1564
70°	1782	1615	1328
75°	1417	1237	1297
80°	951	892	833
85°	593	712	829

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3133 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.0	4.7
10°-20°	848.1	13.0
20°-30°	1174.1	18.0
30°-40°	1251.9	19.2
40°-50°	1142.1	17.5
50°-60°	894.8	13.7
60°-70°	583.2	8.9
70°-80°	258.4	4.0
80°-90°	55.5	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°	2331.2	35.8
0°-40°	3583.1	55.0
0°-60°	5620.0	86.2
0°-90°	6517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3320	3320	3320	3320	3320	
5°	3262	3258	3258	3254	3254	310
15°	3051	3051	3020	2990	2978	858
25°	2644	2629	2587	2495	2426	1214
35°	2145	2130	2026	1873	1827	1341
45°	1646	1612	1474	1351	1297	1268
55°	1144	1109	1006	886	840	1026
65°	679	641	580	591	491	669
75°	272	253	238	226	250	292
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3319.7	3319.7	3319.7	3319.7	3319.7
2.5°	3296.6	3296.6	3296.6	3292.8	3292.8
5°	3262.1	3258.3	3258.3	3254.4	3254.4
7.5°	3235.2	3231.4	3227.6	3223.7	3216.1
10°	3196.9	3196.9	3193.0	3173.8	3170.0
12.5°	3135.5	3131.6	3116.3	3089.4	3081.7
15°	3051.0	3051.0	3020.3	2989.6	2978.1
17.5°	2958.9	2955.1	2916.7	2886.0	2870.7
20°	2859.1	2851.5	2813.1	2763.2	2736.3
22.5°	2747.8	2747.8	2701.8	2636.5	2609.7
25°	2644.2	2628.9	2586.7	2494.6	2425.5
27.5°	2525.3	2502.2	2456.2	2325.7	2245.1
30°	2394.8	2383.3	2318.0	2149.2	2087.7
32.5°	2272.0	2252.8	2183.7	2007.2	1957.3
35°	2145.3	2130.0	2026.3	1872.8	1826.8
37.5°	2018.7	1999.5	1869.0	1746.2	1688.6
40°	1892.0	1869.0	1727.0	1615.7	1554.3
42.5°	1773.1	1742.3	1604.2	1485.2	1416.1
45°	1646.4	1611.9	1473.7	1350.9	1297.2
47.5°	1519.8	1489.1	1362.4	1235.8	1174.4
50°	1385.4	1358.6	1243.4	1116.8	1051.5
52.5°	1274.1	1231.9	1120.6	994.0	940.3
55°	1143.7	1109.1	1005.5	886.5	840.5
57.5°	1024.7	990.1	894.2	782.9	744.5
60°	913.4	863.5	782.9	687.0	656.3
62.5°	790.6	752.2	683.1	602.5	640.9
65°	679.3	640.9	579.5	591.0	491.2
67.5°	556.5	537.3	483.6	429.8	414.5
70°	452.9	429.8	410.6	353.1	337.7
72.5°	360.8	337.7	310.9	280.2	268.6
75°	272.5	253.3	237.9	226.4	249.5
77.5°	188.1	180.4	168.9	157.3	153.5
80°	122.8	119.0	115.1	111.3	107.5
82.5°	72.9	72.9	72.9	72.9	72.9
85°	38.4	42.2	46.1	49.9	53.7
87.5°	23.0	23.0	26.9	30.7	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)