

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: P562723

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562723
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-LD4-2LO-35-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5724.0 lumens
Efficiency: N/A
Efficacy: 122.3 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

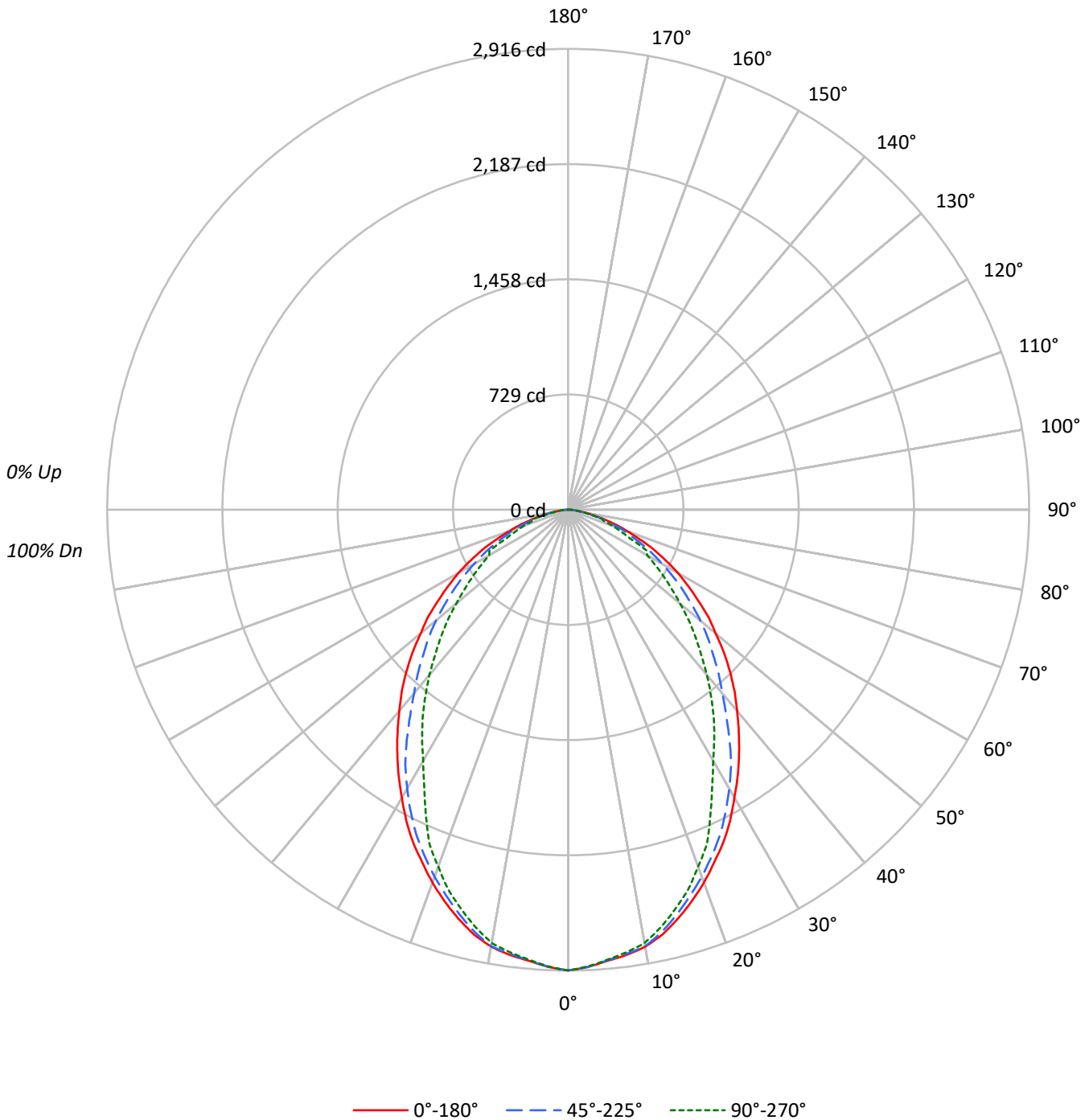
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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												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°	3923	3923	3923
5°	3870	3865	3861
10°	3836	3832	3804
15°	3733	3695	3644
20°	3596	3538	3441
25°	3448	3373	3163
30°	3268	3163	2849
35°	3095	2923	2635
40°	2919	2664	2398
45°	2752	2463	2168
50°	2547	2286	1933
55°	2356	2072	1732
60°	2159	1850	1551
65°	1899	1621	1374
70°	1565	1419	1167
75°	1244	1087	1139
80°	836	783	731
85°	520	624	729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2752 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.4	4.7
10°-20°	744.9	13.0
20°-30°	1031.2	18.0
30°-40°	1099.6	19.2
40°-50°	1003.1	17.5
50°-60°	785.9	13.7
60°-70°	512.2	8.9
70°-80°	226.9	4.0
80°-90°	48.7	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°	2047.5	35.8
0°-40°	3147.1	55.0
0°-60°	4936.2	86.2
0°-90°	5724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5724.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2916	2916	2916	2916	2916	
5°	2865	2862	2862	2858	2858	272
15°	2680	2680	2653	2626	2616	753
25°	2322	2309	2272	2191	2130	1066
35°	1884	1871	1780	1645	1604	1178
45°	1446	1416	1294	1186	1139	1114
55°	1004	974	883	779	738	901
65°	597	563	509	519	432	588
75°	239	222	209	199	219	257
85°	34	37	40	44	47	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2915.7	2915.7	2915.7	2915.7	2915.7
2.5°	2895.5	2895.5	2895.5	2892.1	2892.1
5°	2865.2	2861.8	2861.8	2858.4	2858.4
7.5°	2841.6	2838.2	2834.8	2831.5	2824.7
10°	2807.9	2807.9	2804.5	2787.6	2784.3
12.5°	2753.9	2750.6	2737.1	2713.5	2706.7
15°	2679.8	2679.8	2652.8	2625.8	2615.7
17.5°	2598.9	2595.5	2561.8	2534.8	2521.3
20°	2511.2	2504.5	2470.8	2427.0	2403.4
22.5°	2413.5	2413.5	2373.0	2315.7	2292.1
25°	2322.5	2309.0	2271.9	2191.0	2130.3
27.5°	2218.0	2197.8	2157.3	2042.7	1971.9
30°	2103.4	2093.3	2036.0	1887.6	1833.7
32.5°	1995.5	1978.7	1918.0	1762.9	1719.1
35°	1884.3	1870.8	1779.8	1644.9	1604.5
37.5°	1773.0	1756.2	1641.6	1533.7	1483.1
40°	1661.8	1641.6	1516.9	1419.1	1365.2
42.5°	1557.3	1530.3	1409.0	1304.5	1243.8
45°	1446.1	1415.7	1294.4	1186.5	1139.3
47.5°	1334.8	1307.9	1196.6	1085.4	1031.5
50°	1216.9	1193.3	1092.1	980.9	923.6
52.5°	1119.1	1082.0	984.3	873.0	825.8
55°	1004.5	974.2	883.1	778.7	738.2
57.5°	900.0	869.7	785.4	687.6	653.9
60°	802.2	758.4	687.6	603.4	576.4
62.5°	694.4	660.7	600.0	529.2	562.9
65°	596.6	562.9	509.0	519.1	431.5
67.5°	488.8	471.9	424.7	377.5	364.0
70°	397.8	377.5	360.7	310.1	296.6
72.5°	316.9	296.6	273.0	246.1	236.0
75°	239.3	222.5	209.0	198.9	219.1
77.5°	165.2	158.4	148.3	138.2	134.8
80°	107.9	104.5	101.1	97.8	94.4
82.5°	64.0	64.0	64.0	64.0	64.0
85°	33.7	37.1	40.4	43.8	47.2
87.5°	20.2	20.2	23.6	27.0	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)