

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: P563352

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563352
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-40-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 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: 5826.0 lumens
Efficiency: N/A
Efficacy: 83.0 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

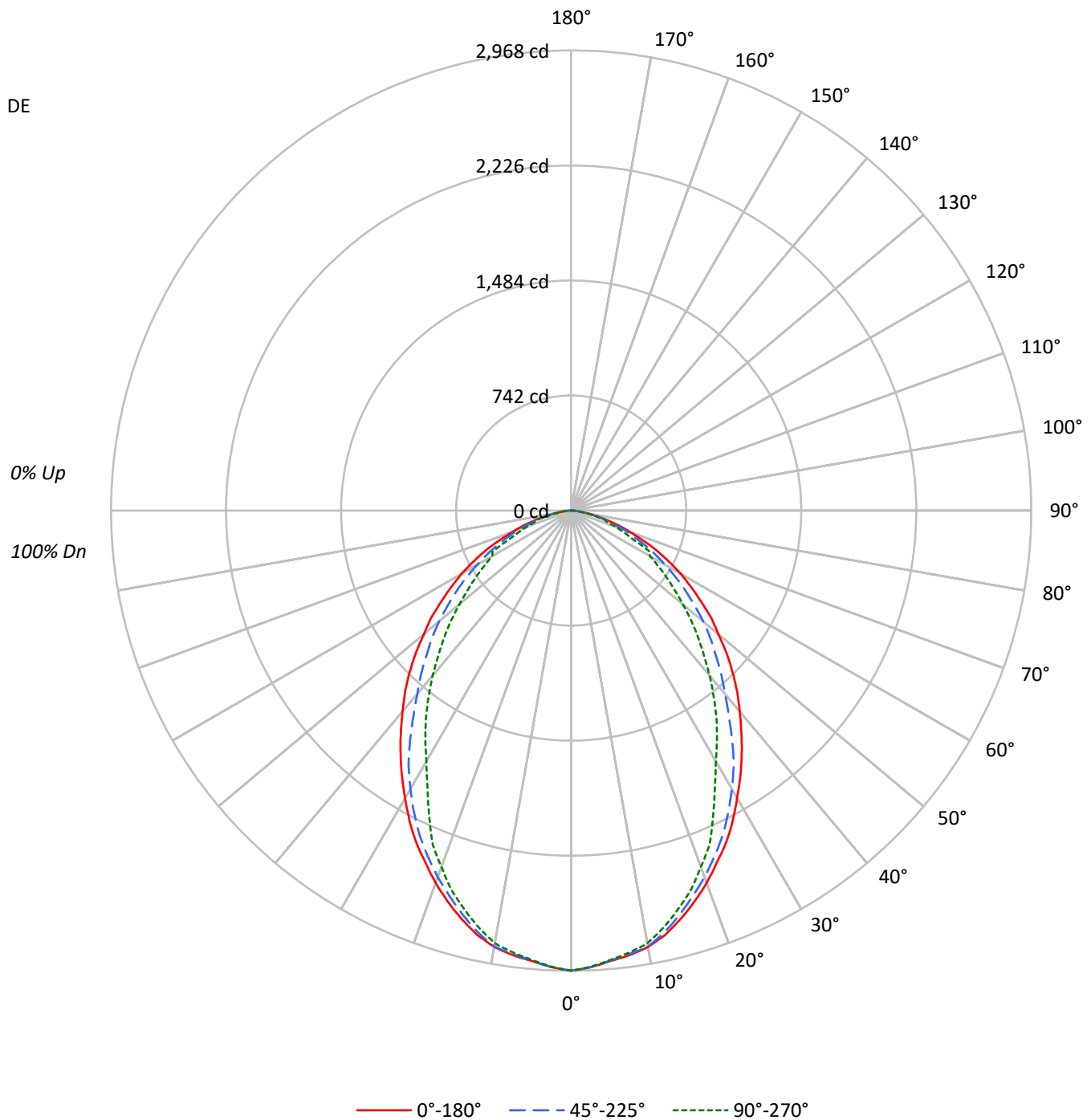
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3993	3993	3993
5°	3939	3934	3930
10°	3905	3900	3872
15°	3799	3761	3708
20°	3660	3601	3503
25°	3509	3433	3219
30°	3326	3219	2900
35°	3150	2975	2682
40°	2971	2712	2441
45°	2801	2507	2206
50°	2592	2327	1968
55°	2398	2109	1763
60°	2197	1883	1579
65°	1933	1649	1398
70°	1592	1444	1188
75°	1266	1106	1159
80°	851	797	745
85°	530	636	741

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2801 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.3	4.7
10°-20°	758.1	13.0
20°-30°	1049.6	18.0
30°-40°	1119.2	19.2
40°-50°	1021.0	17.5
50°-60°	799.9	13.7
60°-70°	521.3	8.9
70°-80°	231.0	4.0
80°-90°	49.6	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°	2084.0	35.8
0°-40°	3203.2	55.0
0°-60°	5024.1	86.2
0°-90°	5826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2968	2968	2968	2968	2968	
5°	2916	2913	2913	2909	2909	277
15°	2728	2728	2700	2673	2662	767
25°	2364	2350	2312	2230	2168	1085
35°	1918	1904	1812	1674	1633	1199
45°	1472	1441	1317	1208	1160	1134
55°	1022	992	899	792	751	917
65°	607	573	518	528	439	598
75°	244	226	213	202	223	261
85°	34	38	41	45	48	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2967.7	2967.7	2967.7	2967.7	2967.7
2.5°	2947.1	2947.1	2947.1	2943.7	2943.7
5°	2916.2	2912.8	2912.8	2909.4	2909.4
7.5°	2892.2	2888.8	2885.3	2881.9	2875.1
10°	2857.9	2857.9	2854.5	2837.3	2833.9
12.5°	2803.0	2799.6	2785.9	2761.8	2755.0
15°	2727.5	2727.5	2700.1	2672.6	2662.3
17.5°	2645.2	2641.8	2607.4	2580.0	2566.3
20°	2556.0	2549.1	2514.8	2470.2	2446.2
22.5°	2456.5	2456.5	2415.3	2357.0	2333.0
25°	2363.9	2350.1	2312.4	2230.1	2168.3
27.5°	2257.5	2236.9	2195.7	2079.1	2007.0
30°	2140.9	2130.6	2072.2	1921.3	1866.4
32.5°	2031.1	2013.9	1952.2	1794.3	1749.7
35°	1917.8	1904.1	1811.5	1674.3	1633.1
37.5°	1804.6	1787.5	1670.8	1561.0	1509.6
40°	1691.4	1670.8	1543.9	1444.4	1389.5
42.5°	1585.1	1557.6	1434.1	1327.7	1266.0
45°	1471.8	1441.0	1317.4	1207.7	1159.6
47.5°	1358.6	1331.2	1218.0	1104.7	1049.8
50°	1238.5	1214.5	1111.6	998.4	940.1
52.5°	1139.0	1101.3	1001.8	888.6	840.6
55°	1022.4	991.5	898.9	792.5	751.4
57.5°	916.0	885.2	799.4	699.9	665.6
60°	816.5	771.9	699.9	614.1	586.7
62.5°	706.8	672.4	610.7	538.6	573.0
65°	607.3	573.0	518.1	528.4	439.1
67.5°	497.5	480.3	432.3	384.3	370.5
70°	404.8	384.3	367.1	315.6	301.9
72.5°	322.5	301.9	277.9	250.5	240.2
75°	243.6	226.4	212.7	202.4	223.0
77.5°	168.1	161.3	151.0	140.7	137.2
80°	109.8	106.4	102.9	99.5	96.1
82.5°	65.2	65.2	65.2	65.2	65.2
85°	34.3	37.7	41.2	44.6	48.0
87.5°	20.6	20.6	24.0	27.4	30.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)