

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: P563337

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563337
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7083.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

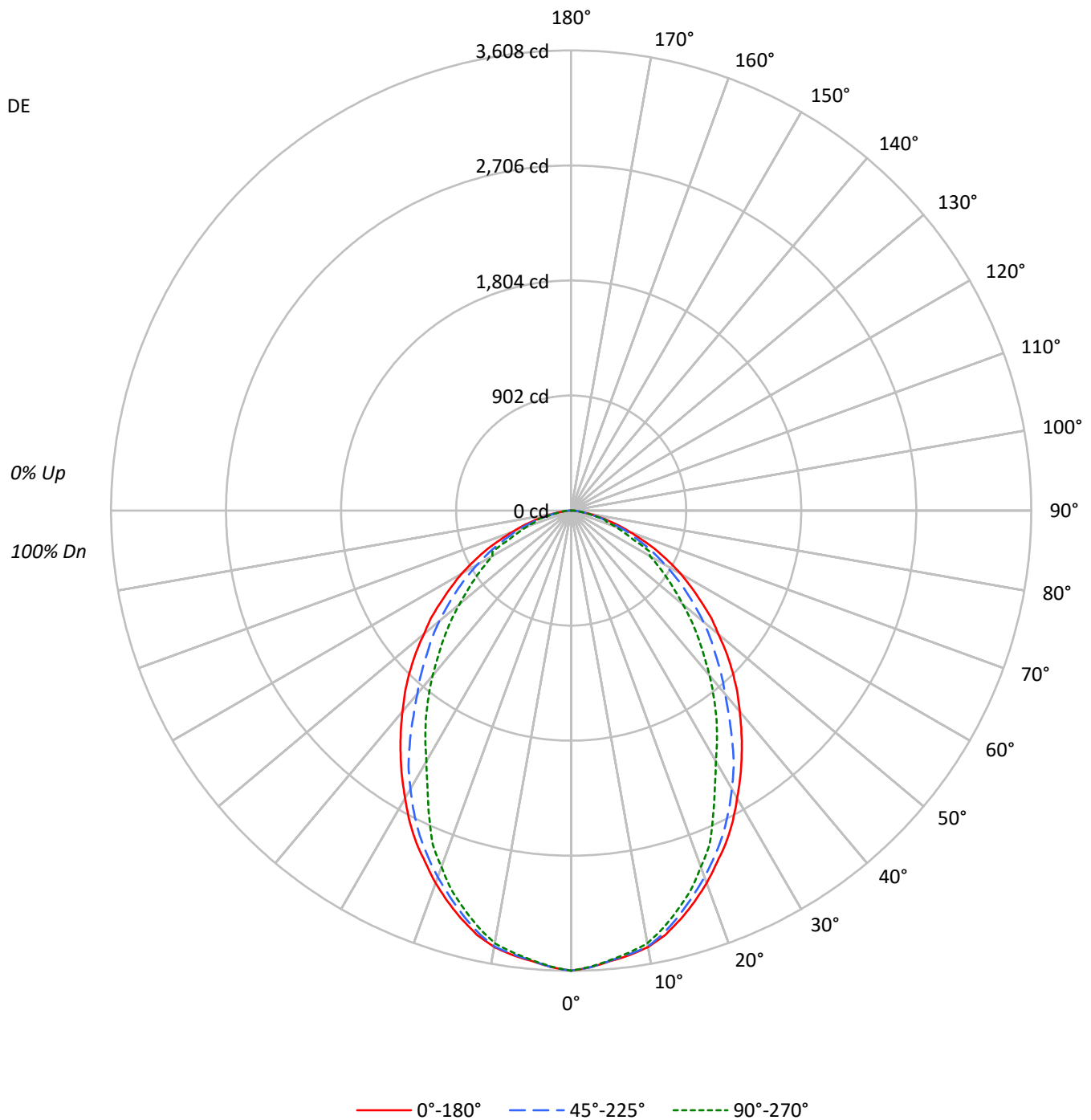
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4855	4855	4855
5°	4789	4783	4777
10°	4747	4741	4707
15°	4619	4573	4509
20°	4449	4378	4258
25°	4267	4174	3914
30°	4044	3914	3525
35°	3830	3617	3261
40°	3612	3297	2967
45°	3405	3048	2683
50°	3152	2829	2392
55°	2916	2563	2143
60°	2671	2290	1919
65°	2351	2005	1700
70°	1936	1756	1444
75°	1539	1344	1409
80°	1034	969	905
85°	644	773	902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	335.9	4.7
10°-20°	921.7	13.0
20°-30°	1276.1	18.0
30°-40°	1360.7	19.2
40°-50°	1241.3	17.5
50°-60°	972.5	13.7
60°-70°	633.8	8.9
70°-80°	280.8	4.0
80°-90°	60.3	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°	2533.6	35.8
0°-40°	3894.3	55.0
0°-60°	6108.1	86.2
0°-90°	7083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3608	3608	3608	3608	3608	
5°	3545	3541	3541	3537	3537	337
15°	3316	3316	3283	3249	3237	932
25°	2874	2857	2811	2711	2636	1319
35°	2332	2315	2202	2036	1985	1458
45°	1789	1752	1602	1468	1410	1378
55°	1243	1205	1093	964	914	1115
65°	738	697	630	642	534	728
75°	296	275	259	246	271	317
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3608.0	3608.0	3608.0	3608.0	3608.0
2.5°	3583.0	3583.0	3583.0	3578.8	3578.8
5°	3545.4	3541.2	3541.2	3537.1	3537.1
7.5°	3516.2	3512.1	3507.9	3503.7	3495.4
10°	3474.5	3474.5	3470.3	3449.5	3445.3
12.5°	3407.8	3403.6	3386.9	3357.7	3349.4
15°	3316.0	3316.0	3282.6	3249.3	3236.8
17.5°	3215.9	3211.7	3170.0	3136.7	3120.0
20°	3107.5	3099.1	3057.4	3003.2	2974.0
22.5°	2986.5	2986.5	2936.4	2865.5	2836.3
25°	2873.9	2857.2	2811.3	2711.2	2636.1
27.5°	2744.6	2719.5	2669.5	2527.7	2440.1
30°	2602.8	2590.2	2519.3	2335.8	2269.1
32.5°	2469.3	2448.4	2373.3	2181.5	2127.3
35°	2331.6	2315.0	2202.3	2035.5	1985.4
37.5°	2194.0	2173.1	2031.3	1897.8	1835.3
40°	2056.3	2031.3	1877.0	1756.0	1689.3
42.5°	1927.0	1893.7	1743.5	1614.2	1539.1
45°	1789.4	1751.9	1601.7	1468.2	1409.8
47.5°	1651.7	1618.4	1480.7	1343.1	1276.4
50°	1505.8	1476.6	1351.4	1213.8	1142.9
52.5°	1384.8	1338.9	1218.0	1080.3	1021.9
55°	1243.0	1205.4	1092.8	963.5	913.5
57.5°	1113.7	1076.1	971.9	850.9	809.2
60°	992.7	938.5	850.9	746.6	713.3
62.5°	859.2	817.5	742.5	654.9	696.6
65°	738.3	696.6	629.8	642.3	533.9
67.5°	604.8	584.0	525.6	467.2	450.5
70°	492.2	467.2	446.3	383.7	367.1
72.5°	392.1	367.1	337.9	304.5	292.0
75°	296.1	275.3	258.6	246.1	271.1
77.5°	204.4	196.0	183.5	171.0	166.8
80°	133.5	129.3	125.1	121.0	116.8
82.5°	79.3	79.3	79.3	79.3	79.3
85°	41.7	45.9	50.1	54.2	58.4
87.5°	25.0	25.0	29.2	33.4	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)