

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: P563286

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563286
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-35-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6379.0 lumens
Efficiency: N/A
Efficacy: 90.9 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

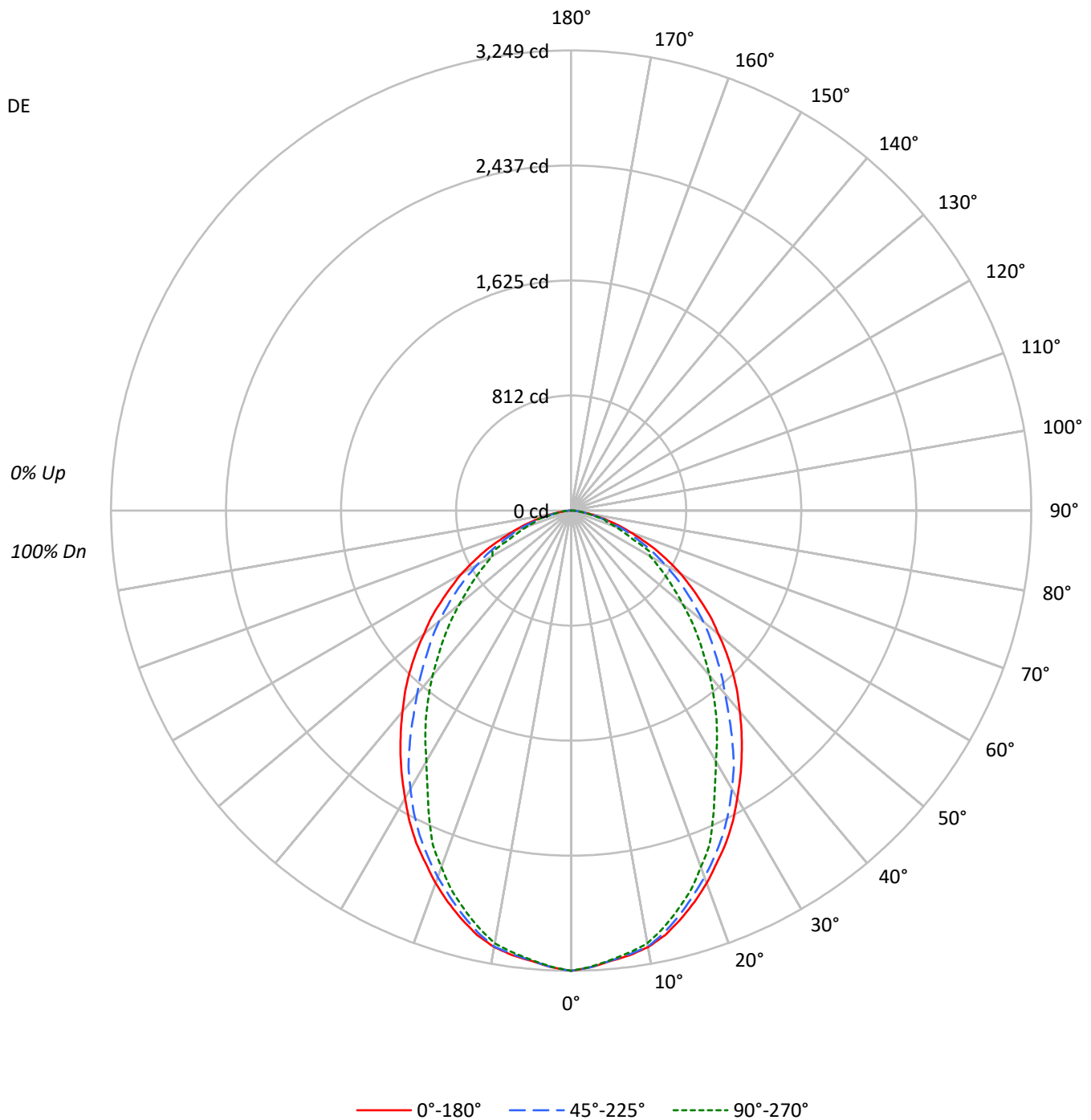
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4372	4372	4372
5°	4313	4308	4302
10°	4275	4270	4239
15°	4160	4118	4060
20°	4007	3943	3835
25°	3842	3759	3525
30°	3642	3525	3175
35°	3449	3258	2937
40°	3253	2969	2672
45°	3066	2745	2416
50°	2839	2548	2155
55°	2626	2309	1930
60°	2406	2062	1729
65°	2117	1806	1531
70°	1744	1581	1301
75°	1386	1211	1269
80°	931	873	815
85°	580	696	812

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3066 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.5	4.7
10°-20°	830.1	13.0
20°-30°	1149.2	18.0
30°-40°	1225.4	19.2
40°-50°	1117.9	17.5
50°-60°	875.8	13.7
60°-70°	570.8	8.9
70°-80°	252.9	4.0
80°-90°	54.3	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°	2281.8	35.8
0°-40°	3507.2	55.0
0°-60°	5501.0	86.2
0°-90°	6379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6379.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3249	3249	3249	3249	3249	
5°	3193	3189	3189	3186	3186	303
15°	2986	2986	2956	2926	2915	840
25°	2588	2573	2532	2442	2374	1188
35°	2100	2085	1983	1833	1788	1313
45°	1612	1578	1442	1322	1270	1241
55°	1119	1086	984	868	823	1004
65°	665	627	567	578	481	655
75°	267	248	233	222	244	286
85°	38	41	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3249.4	3249.4	3249.4	3249.4	3249.4
2.5°	3226.8	3226.8	3226.8	3223.1	3223.1
5°	3193.0	3189.3	3189.3	3185.5	3185.5
7.5°	3166.7	3163.0	3159.2	3155.5	3148.0
10°	3129.2	3129.2	3125.4	3106.6	3102.9
12.5°	3069.1	3065.3	3050.3	3024.0	3016.5
15°	2986.4	2986.4	2956.4	2926.3	2915.0
17.5°	2896.3	2892.5	2854.9	2824.9	2809.9
20°	2798.6	2791.1	2753.5	2704.7	2678.4
22.5°	2689.7	2689.7	2644.6	2580.7	2554.4
25°	2588.2	2573.2	2531.9	2441.7	2374.1
27.5°	2471.8	2449.2	2404.2	2276.4	2197.6
30°	2344.1	2332.8	2268.9	2103.6	2043.5
32.5°	2223.9	2205.1	2137.5	1964.7	1915.8
35°	2099.9	2084.9	1983.4	1833.2	1788.1
37.5°	1975.9	1957.1	1829.4	1709.2	1652.9
40°	1852.0	1829.4	1690.4	1581.5	1521.4
42.5°	1735.5	1705.5	1570.2	1453.8	1386.2
45°	1611.5	1577.7	1442.5	1322.3	1269.7
47.5°	1487.6	1457.5	1333.6	1209.6	1149.5
50°	1356.1	1329.8	1217.1	1093.1	1029.3
52.5°	1247.2	1205.8	1096.9	972.9	920.3
55°	1119.4	1085.6	984.2	867.8	822.7
57.5°	1003.0	969.2	875.3	766.3	728.8
60°	894.0	845.2	766.3	672.4	642.4
62.5°	773.8	736.3	668.7	589.8	627.3
65°	664.9	627.3	567.2	578.5	480.8
67.5°	544.7	525.9	473.3	420.7	405.7
70°	443.3	420.7	401.9	345.6	330.6
72.5°	353.1	330.6	304.3	274.2	263.0
75°	266.7	247.9	232.9	221.6	244.2
77.5°	184.1	176.6	165.3	154.0	150.3
80°	120.2	116.5	112.7	108.9	105.2
82.5°	71.4	71.4	71.4	71.4	71.4
85°	37.6	41.3	45.1	48.8	52.6
87.5°	22.5	22.5	26.3	30.1	33.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)