

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: P561392

Luminaire Tested: FSR-12-4-LD4-2HI-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561392
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-12-4-LD4-2HI-40-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6915.0 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

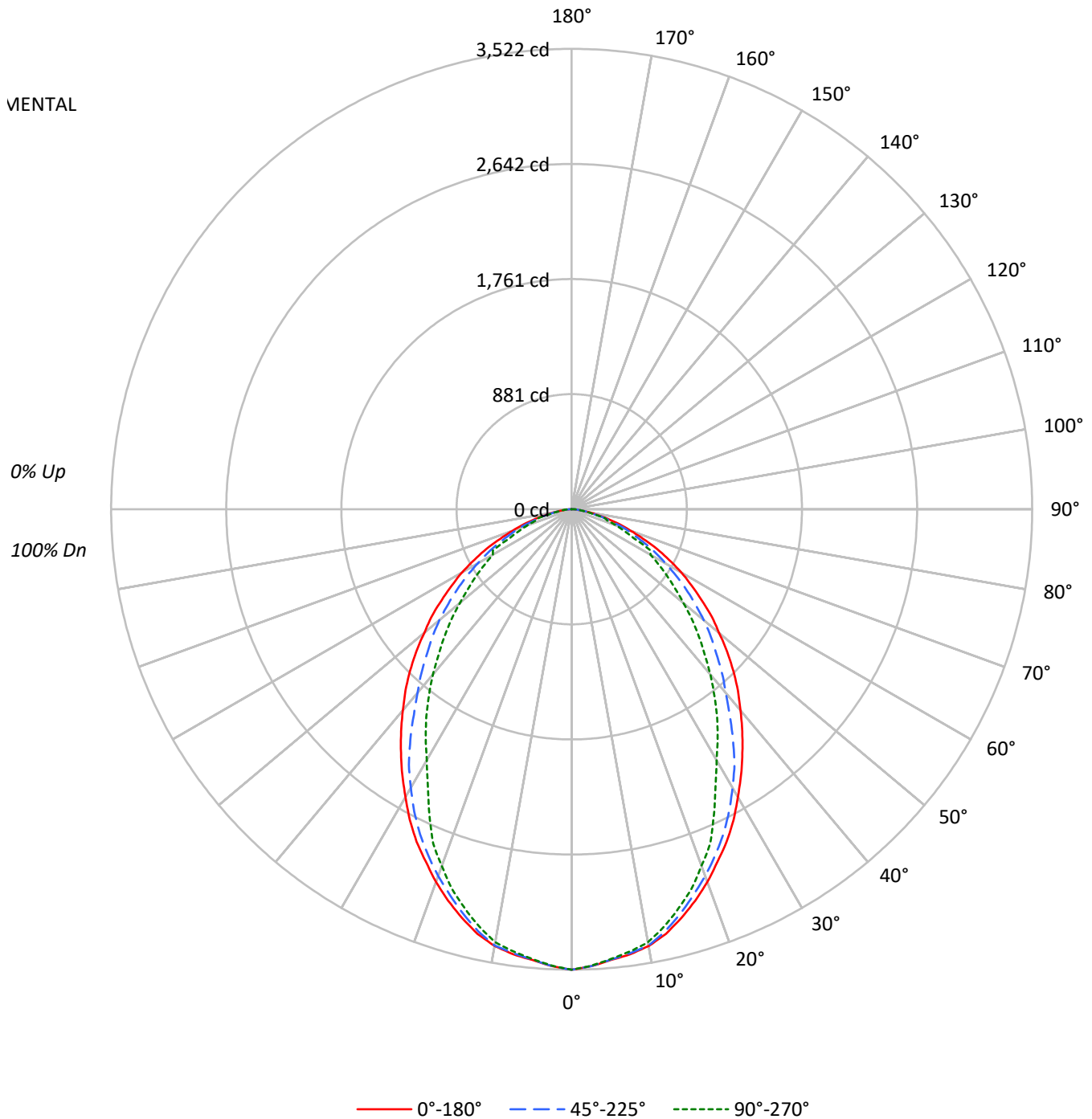
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9479	9479	9479
5°	9350	9339	9328
10°	9269	9258	9191
15°	9019	8928	8803
20°	8688	8548	8314
25°	8331	8149	7641
30°	7896	7643	6883
35°	7478	7063	6367
40°	7052	6437	5793
45°	6648	5951	5238
50°	6154	5524	4671
55°	5693	5005	4184
60°	5216	4471	3747
65°	4590	3915	3319
70°	3781	3428	2819
75°	3006	2625	2752
80°	2019	1894	1767
85°	1257	1510	1760

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.9	4.7
10°-20°	899.9	13.0
20°-30°	1245.8	18.0
30°-40°	1328.4	19.2
40°-50°	1211.9	17.5
50°-60°	949.4	13.7
60°-70°	618.8	8.9
70°-80°	274.2	4.0
80°-90°	58.9	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°	2473.6	35.8
0°-40°	3801.9	55.0
0°-60°	5963.2	86.2
0°-90°	6915.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6915.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3522	3522	3522	3522	3522	
5°	3461	3457	3457	3453	3453	329
15°	3237	3237	3205	3172	3160	910
25°	2806	2789	2745	2647	2574	1288
35°	2276	2260	2150	1987	1938	1423
45°	1747	1710	1564	1433	1376	1346
55°	1214	1177	1067	941	892	1088
65°	721	680	615	627	521	710
75°	289	269	252	240	265	310
85°	41	45	49	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3522.4	3522.4	3522.4	3522.4	3522.4
2.5°	3498.0	3498.0	3498.0	3493.9	3493.9
5°	3461.3	3457.3	3457.3	3453.2	3453.2
7.5°	3432.8	3428.7	3424.7	3420.6	3412.5
10°	3392.1	3392.1	3388.0	3367.7	3363.6
12.5°	3326.9	3322.9	3306.6	3278.1	3269.9
15°	3237.4	3237.4	3204.8	3172.2	3160.0
17.5°	3139.6	3135.6	3094.8	3062.3	3046.0
20°	3033.8	3025.6	2984.9	2931.9	2903.4
22.5°	2915.7	2915.7	2866.8	2797.6	2769.1
25°	2805.7	2789.4	2744.6	2646.9	2573.6
27.5°	2679.5	2655.0	2606.2	2467.7	2382.2
30°	2541.0	2528.8	2459.6	2280.4	2215.2
32.5°	2410.7	2390.4	2317.1	2129.7	2076.8
35°	2276.3	2260.0	2150.1	1987.2	1938.3
37.5°	2142.0	2121.6	1983.1	1852.8	1791.7
40°	2007.6	1983.1	1832.5	1714.4	1649.2
42.5°	1881.3	1848.8	1702.2	1575.9	1502.6
45°	1747.0	1710.3	1563.7	1433.4	1376.4
47.5°	1612.6	1580.0	1445.6	1311.2	1246.1
50°	1470.0	1441.5	1319.4	1185.0	1115.8
52.5°	1352.0	1307.2	1189.1	1054.7	997.7
55°	1213.5	1176.9	1066.9	940.7	891.8
57.5°	1087.3	1050.6	948.8	830.7	790.0
60°	969.2	916.2	830.7	728.9	696.3
62.5°	838.9	798.1	724.8	639.3	680.0
65°	720.8	680.0	614.9	627.1	521.2
67.5°	590.5	570.1	513.1	456.1	439.8
70°	480.5	456.1	435.7	374.6	358.3
72.5°	382.8	358.3	329.8	297.3	285.1
75°	289.1	268.8	252.5	240.3	264.7
77.5°	199.5	191.4	179.2	167.0	162.9
80°	130.3	126.2	122.2	118.1	114.0
82.5°	77.4	77.4	77.4	77.4	77.4
85°	40.7	44.8	48.9	52.9	57.0
87.5°	24.4	24.4	28.5	32.6	36.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)