

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: P561458

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561458
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-50-UNV-80-85-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7137.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

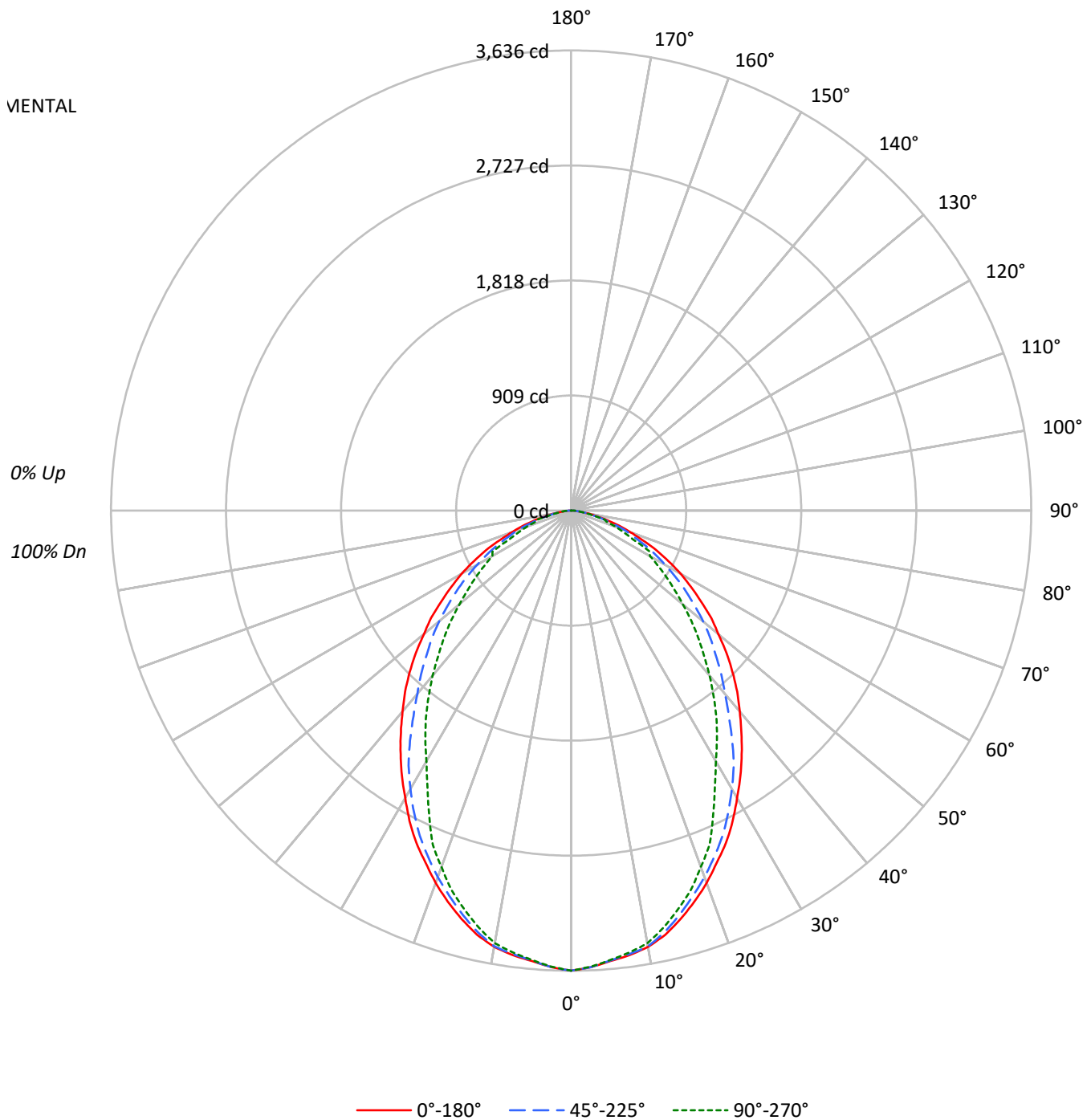
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9783	9783	9783
5°	9650	9639	9627
10°	9566	9555	9486
15°	9309	9215	9086
20°	8966	8822	8582
25°	8598	8411	7887
30°	8149	7888	7104
35°	7718	7290	6572
40°	7279	6644	5980
45°	6862	6142	5406
50°	6352	5701	4821
55°	5876	5166	4318
60°	5384	4614	3868
65°	4737	4041	3426
70°	3902	3538	2910
75°	3103	2709	2840
80°	2084	1954	1824
85°	1297	1556	1815

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6862 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.4	4.7
10°-20°	928.8	13.0
20°-30°	1285.8	18.0
30°-40°	1371.0	19.2
40°-50°	1250.8	17.5
50°-60°	979.9	13.7
60°-70°	638.6	8.9
70°-80°	282.9	4.0
80°-90°	60.7	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°	2553.0	35.8
0°-40°	3924.0	55.0
0°-60°	6154.6	86.2
0°-90°	7137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3636	3636	3636	3636	3636	
5°	3572	3568	3568	3564	3564	339
15°	3341	3341	3308	3274	3261	939
25°	2896	2879	2833	2732	2656	1329
35°	2349	2333	2219	2051	2001	1469
45°	1803	1765	1614	1479	1421	1389
55°	1252	1215	1101	971	920	1123
65°	744	702	635	647	538	733
75°	298	277	261	248	273	320
85°	42	46	50	55	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3635.5	3635.5	3635.5	3635.5	3635.5
2.5°	3610.3	3610.3	3610.3	3606.1	3606.1
5°	3572.4	3568.2	3568.2	3564.0	3564.0
7.5°	3543.0	3538.8	3534.6	3530.4	3522.0
10°	3501.0	3501.0	3496.8	3475.8	3471.6
12.5°	3433.8	3429.6	3412.7	3383.3	3374.9
15°	3341.3	3341.3	3307.7	3274.0	3261.4
17.5°	3240.4	3236.2	3194.2	3160.6	3143.8
20°	3131.1	3122.7	3080.7	3026.1	2996.7
22.5°	3009.3	3009.3	2958.8	2887.4	2858.0
25°	2895.8	2879.0	2832.7	2731.9	2656.2
27.5°	2765.5	2740.3	2689.8	2546.9	2458.7
30°	2622.6	2610.0	2538.5	2353.6	2286.4
32.5°	2488.1	2467.1	2391.4	2198.1	2143.5
35°	2349.4	2332.6	2219.1	2051.0	2000.6
37.5°	2210.7	2189.7	2046.8	1912.3	1849.3
40°	2072.0	2046.8	1891.3	1769.4	1702.2
42.5°	1941.7	1908.1	1756.8	1626.5	1550.9
45°	1803.0	1765.2	1613.9	1479.4	1420.6
47.5°	1664.3	1630.7	1492.0	1353.3	1286.1
50°	1517.2	1487.8	1361.7	1223.0	1151.6
52.5°	1395.4	1349.1	1227.2	1088.5	1029.7
55°	1252.5	1214.6	1101.2	970.9	920.4
57.5°	1122.2	1084.3	979.3	857.4	815.4
60°	1000.3	945.6	857.4	752.3	718.7
62.5°	865.8	823.8	748.1	659.9	701.9
65°	743.9	701.9	634.6	647.2	538.0
67.5°	609.4	588.4	529.6	470.7	453.9
70°	495.9	470.7	449.7	386.7	369.9
72.5°	395.1	369.9	340.4	306.8	294.2
75°	298.4	277.4	260.6	248.0	273.2
77.5°	205.9	197.5	184.9	172.3	168.1
80°	134.5	130.3	126.1	121.9	117.7
82.5°	79.9	79.9	79.9	79.9	79.9
85°	42.0	46.2	50.4	54.6	58.8
87.5°	25.2	25.2	29.4	33.6	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)