

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: P561842

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561842
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-LD4-2STD-50-UNV-80-85-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5818.0 lumens
Efficiency: N/A
Efficacy: 87.4 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

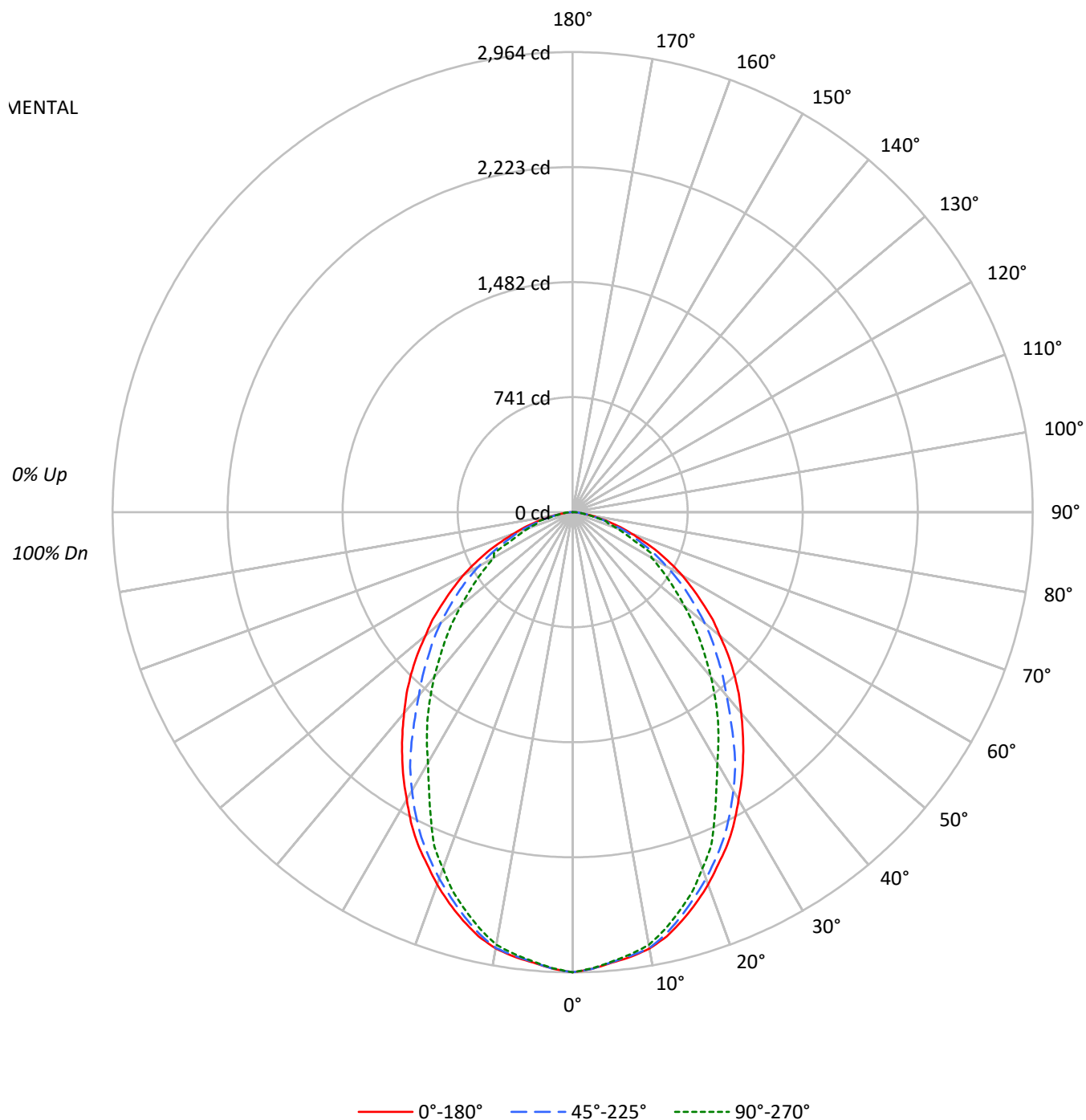
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	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°	7975	7975	7975
5°	7867	7857	7848
10°	7799	7789	7733
15°	7588	7512	7407
20°	7310	7192	6995
25°	7009	6856	6429
30°	6643	6430	5791
35°	6292	5943	5357
40°	5934	5416	4874
45°	5593	5007	4407
50°	5178	4647	3930
55°	4790	4211	3520
60°	4388	3761	3153
65°	3861	3294	2792
70°	3181	2884	2372
75°	2530	2208	2315
80°	1698	1593	1486
85°	1059	1269	1482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5593 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	275.9	4.7
10°-20°	757.1	13.0
20°-30°	1048.2	18.0
30°-40°	1117.6	19.2
40°-50°	1019.6	17.5
50°-60°	798.8	13.7
60°-70°	520.6	8.9
70°-80°	230.7	4.0
80°-90°	49.5	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°	2081.1	35.8
0°-40°	3198.8	55.0
0°-60°	5017.2	86.2
0°-90°	5818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2964	2964	2964	2964	2964	
5°	2912	2909	2909	2905	2905	276
15°	2724	2724	2696	2669	2659	766
25°	2361	2347	2309	2227	2165	1084
35°	1915	1902	1809	1672	1631	1197
45°	1470	1439	1316	1206	1158	1132
55°	1021	990	898	791	750	916
65°	606	572	517	528	438	598
75°	243	226	212	202	223	261
85°	34	38	41	44	48	48
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2963.6	2963.6	2963.6	2963.6	2963.6
2.5°	2943.1	2943.1	2943.1	2939.6	2939.6
5°	2912.2	2908.8	2908.8	2905.4	2905.4
7.5°	2888.2	2884.8	2881.4	2878.0	2871.1
10°	2854.0	2854.0	2850.5	2833.4	2830.0
12.5°	2799.2	2795.7	2782.0	2758.0	2751.2
15°	2723.8	2723.8	2696.4	2669.0	2658.7
17.5°	2641.6	2638.1	2603.9	2576.5	2562.8
20°	2552.5	2545.6	2511.4	2466.8	2442.8
22.5°	2453.1	2453.1	2412.0	2353.8	2329.8
25°	2360.6	2346.9	2309.2	2227.0	2165.3
27.5°	2254.4	2233.8	2192.7	2076.2	2004.3
30°	2137.9	2127.6	2069.4	1918.6	1863.8
32.5°	2028.3	2011.1	1949.5	1791.9	1747.3
35°	1915.2	1901.5	1809.0	1672.0	1630.8
37.5°	1802.1	1785.0	1668.5	1558.9	1507.5
40°	1689.1	1668.5	1541.8	1442.4	1387.6
42.5°	1582.9	1555.5	1432.1	1325.9	1264.2
45°	1469.8	1439.0	1315.6	1206.0	1158.0
47.5°	1356.8	1329.3	1216.3	1103.2	1048.4
50°	1236.8	1212.9	1110.1	997.0	938.8
52.5°	1137.5	1099.8	1000.4	887.4	839.4
55°	1021.0	990.2	897.6	791.4	750.3
57.5°	914.8	883.9	798.3	698.9	664.7
60°	815.4	770.9	698.9	613.3	585.9
62.5°	705.8	671.5	609.9	537.9	572.2
65°	606.4	572.2	517.3	527.6	438.5
67.5°	496.8	479.7	431.7	383.7	370.0
70°	404.3	383.7	366.6	315.2	301.5
72.5°	322.1	301.5	277.5	250.1	239.8
75°	243.3	226.1	212.4	202.1	222.7
77.5°	167.9	161.0	150.8	140.5	137.0
80°	109.6	106.2	102.8	99.4	95.9
82.5°	65.1	65.1	65.1	65.1	65.1
85°	34.3	37.7	41.1	44.5	48.0
87.5°	20.6	20.6	24.0	27.4	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)