

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: P560824

Luminaire Tested: FSR-12-4-LD4-1HI-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560824
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-LD4-1HI-40-UNV-80-88-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2919.0 lumens
Efficiency: N/A
Efficacy: 67.6 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

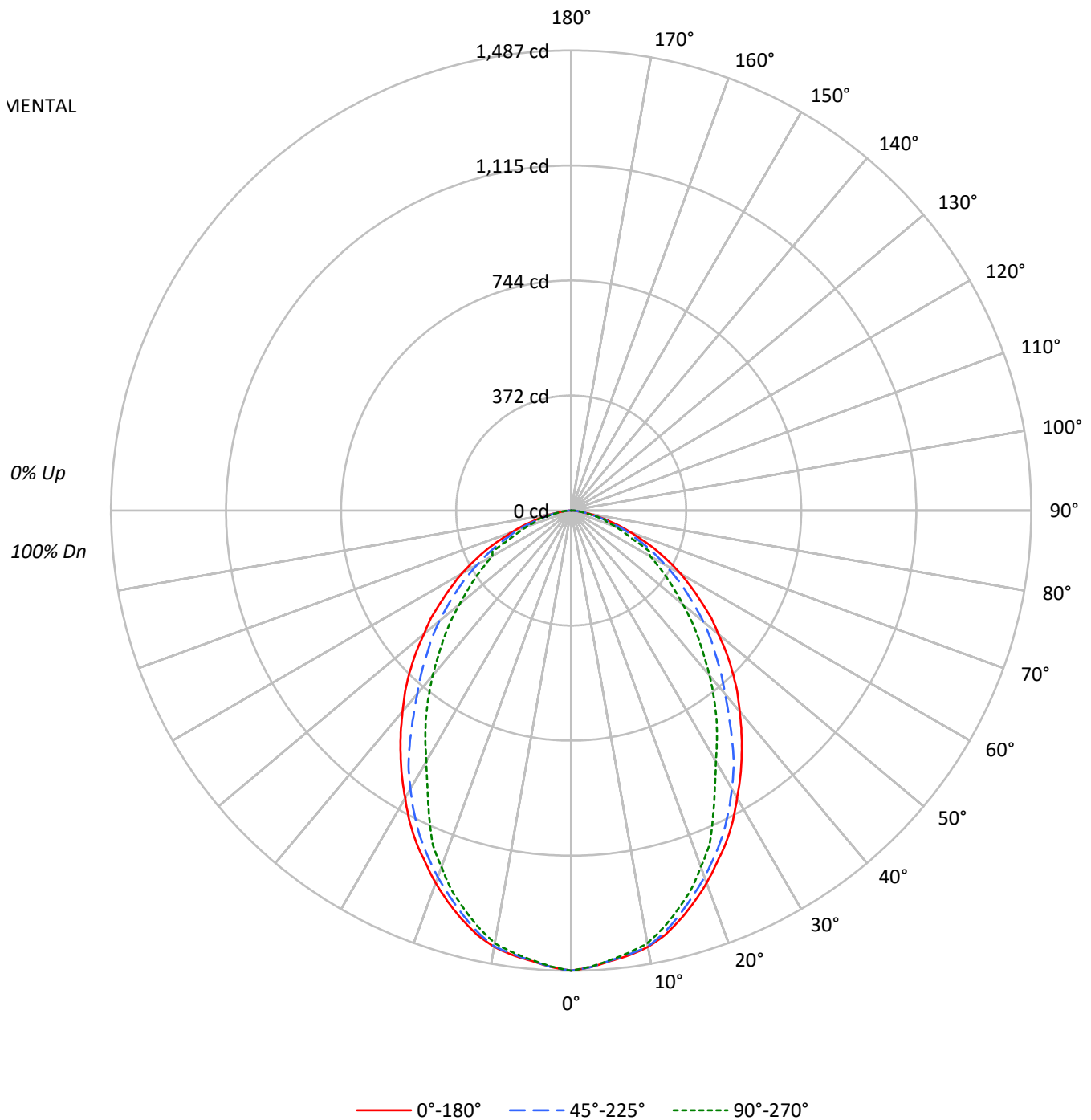
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4001	4001	4001
5°	3947	3942	3938
10°	3913	3908	3880
15°	3807	3769	3716
20°	3667	3608	3510
25°	3517	3440	3226
30°	3333	3226	2906
35°	3157	2982	2688
40°	2977	2717	2446
45°	2806	2512	2211
50°	2598	2331	1972
55°	2403	2113	1766
60°	2202	1887	1582
65°	1938	1653	1401
70°	1596	1447	1190
75°	1268	1108	1161
80°	852	800	745
85°	531	636	744

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2806 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.4	4.7
10°-20°	379.9	13.0
20°-30°	525.9	18.0
30°-40°	560.7	19.2
40°-50°	511.6	17.5
50°-60°	400.8	13.7
60°-70°	261.2	8.9
70°-80°	115.7	4.0
80°-90°	24.9	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°	1044.2	35.8
0°-40°	1604.9	55.0
0°-60°	2517.2	86.2
0°-90°	2919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1487	1487	1487	1487	1487	
5°	1461	1459	1459	1458	1458	139
15°	1367	1367	1353	1339	1334	384
25°	1184	1178	1159	1117	1086	544
35°	961	954	908	839	818	601
45°	737	722	660	605	581	568
55°	512	497	450	397	376	459
65°	304	287	260	265	220	300
75°	122	114	107	101	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1486.9	1486.9	1486.9	1486.9	1486.9
2.5°	1476.6	1476.6	1476.6	1474.9	1474.9
5°	1461.1	1459.4	1459.4	1457.7	1457.7
7.5°	1449.1	1447.4	1445.6	1443.9	1440.5
10°	1431.9	1431.9	1430.2	1421.6	1419.9
12.5°	1404.4	1402.7	1395.8	1383.8	1380.3
15°	1366.6	1366.6	1352.8	1339.1	1333.9
17.5°	1325.3	1323.6	1306.4	1292.7	1285.8
20°	1280.6	1277.2	1260.0	1237.7	1225.6
22.5°	1230.8	1230.8	1210.1	1180.9	1168.9
25°	1184.4	1177.5	1158.6	1117.3	1086.4
27.5°	1131.1	1120.8	1100.1	1041.7	1005.6
30°	1072.6	1067.5	1038.3	962.6	935.1
32.5°	1017.6	1009.0	978.1	899.0	876.7
35°	960.9	954.0	907.6	838.9	818.2
37.5°	904.2	895.6	837.1	782.1	756.3
40°	847.4	837.1	773.5	723.7	696.2
42.5°	794.2	780.4	718.5	665.2	634.3
45°	737.4	722.0	660.1	605.1	581.0
47.5°	680.7	667.0	610.2	553.5	526.0
50°	620.5	608.5	556.9	500.2	471.0
52.5°	570.7	551.8	501.9	445.2	421.1
55°	512.2	496.8	450.4	397.1	376.5
57.5°	459.0	443.5	400.5	350.7	333.5
60°	409.1	386.8	350.7	307.7	293.9
62.5°	354.1	336.9	306.0	269.9	287.1
65°	304.3	287.1	259.6	264.7	220.0
67.5°	249.2	240.7	216.6	192.5	185.6
70°	202.8	192.5	183.9	158.1	151.3
72.5°	161.6	151.3	139.2	125.5	120.3
75°	122.0	113.5	106.6	101.4	111.7
77.5°	84.2	80.8	75.6	70.5	68.8
80°	55.0	53.3	51.6	49.8	48.1
82.5°	32.7	32.7	32.7	32.7	32.7
85°	17.2	18.9	20.6	22.3	24.1
87.5°	10.3	10.3	12.0	13.8	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)