

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: P562885

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562885
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-LD4-2STD-35-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7185.0 lumens
Efficiency: N/A
Efficacy: 107.9 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

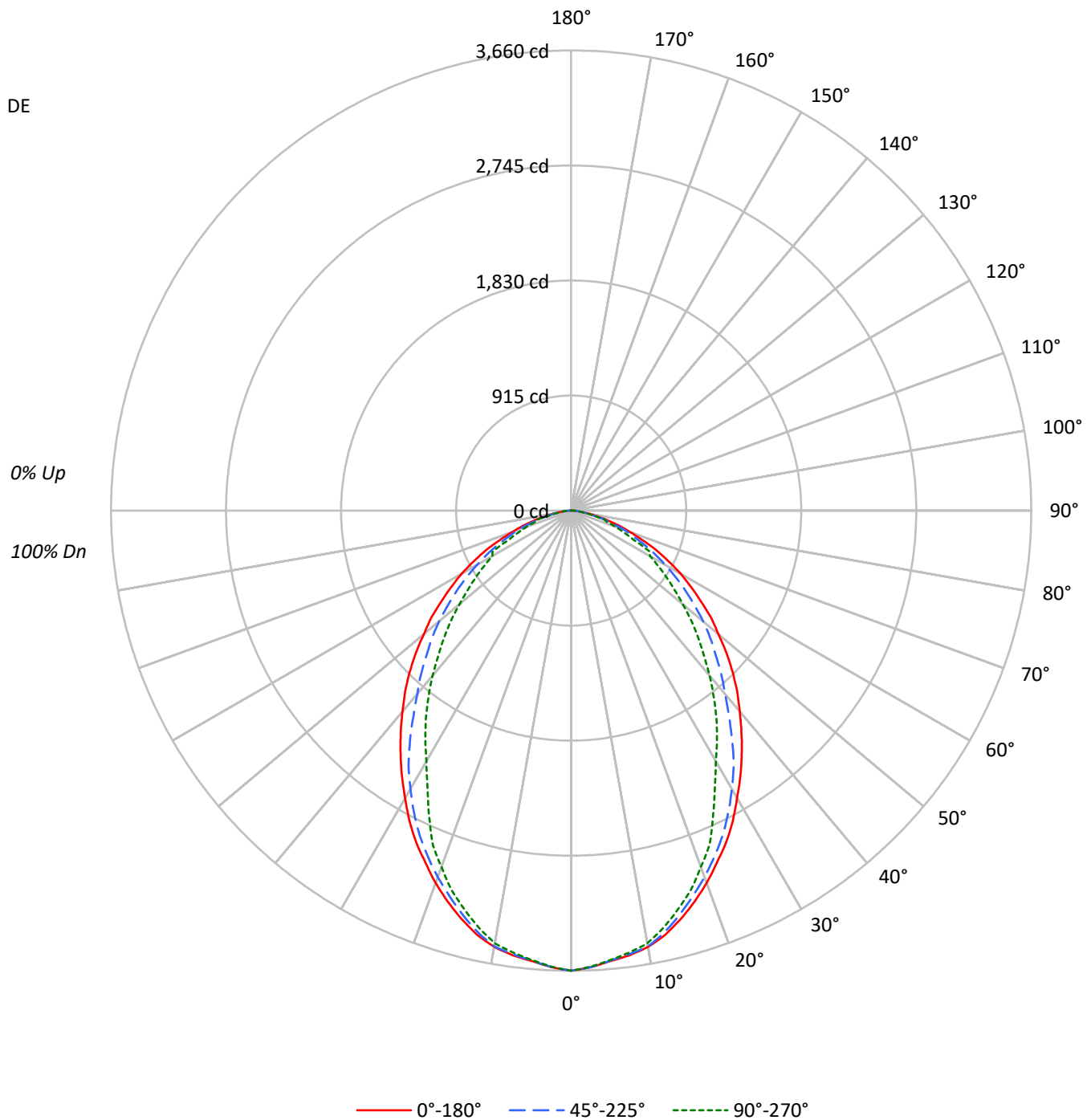
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	4924	4924	4924
5°	4858	4852	4846
10°	4815	4810	4775
15°	4686	4638	4574
20°	4513	4441	4320
25°	4328	4234	3970
30°	4102	3970	3576
35°	3885	3669	3308
40°	3664	3344	3010
45°	3454	3092	2721
50°	3197	2870	2427
55°	2958	2601	2174
60°	2710	2323	1947
65°	2384	2034	1724
70°	1964	1781	1465
75°	1562	1364	1430
80°	1049	983	918
85°	653	784	914

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3454 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	340.7	4.7
10°-20°	935.0	13.0
20°-30°	1294.4	18.0
30°-40°	1380.3	19.2
40°-50°	1259.2	17.5
50°-60°	986.5	13.7
60°-70°	642.9	8.9
70°-80°	284.8	4.0
80°-90°	61.2	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°	2570.1	35.8
0°-40°	3950.4	55.0
0°-60°	6196.1	86.2
0°-90°	7185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7185.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3660	3660	3660	3660	3660	
5°	3596	3592	3592	3588	3588	341
15°	3364	3364	3330	3296	3283	946
25°	2915	2898	2852	2750	2674	1338
35°	2365	2348	2234	2065	2014	1479
45°	1815	1777	1625	1489	1430	1398
55°	1261	1223	1109	977	927	1131
65°	749	707	639	652	542	738
75°	300	279	262	250	275	322
85°	42	46	51	55	59	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3659.9	3659.9	3659.9	3659.9	3659.9
2.5°	3634.6	3634.6	3634.6	3630.3	3630.3
5°	3596.5	3592.2	3592.2	3588.0	3588.0
7.5°	3566.9	3562.6	3558.4	3554.2	3545.7
10°	3524.5	3524.5	3520.3	3499.2	3494.9
12.5°	3456.8	3452.6	3435.7	3406.1	3397.6
15°	3363.8	3363.8	3329.9	3296.1	3283.4
17.5°	3262.2	3258.0	3215.7	3181.8	3164.9
20°	3152.2	3143.7	3101.4	3046.4	3016.8
22.5°	3029.5	3029.5	2978.7	2906.8	2877.2
25°	2915.3	2898.3	2851.8	2750.2	2674.1
27.5°	2784.1	2758.7	2707.9	2564.1	2475.2
30°	2640.2	2627.5	2555.6	2369.4	2301.7
32.5°	2504.8	2483.7	2407.5	2212.9	2157.9
35°	2365.2	2348.3	2234.0	2064.8	2014.0
37.5°	2225.6	2204.4	2060.6	1925.2	1861.7
40°	2086.0	2060.6	1904.0	1781.3	1713.6
42.5°	1954.8	1920.9	1768.6	1637.5	1561.3
45°	1815.2	1777.1	1624.8	1489.4	1430.1
47.5°	1675.5	1641.7	1502.1	1362.4	1294.7
50°	1527.4	1497.8	1370.9	1231.3	1159.3
52.5°	1404.7	1358.2	1235.5	1095.9	1036.6
55°	1260.9	1222.8	1108.6	977.4	926.6
57.5°	1129.7	1091.6	985.9	863.2	820.8
60°	1007.0	952.0	863.2	757.4	723.5
62.5°	871.6	829.3	753.1	664.3	706.6
65°	748.9	706.6	638.9	651.6	541.6
67.5°	613.5	592.4	533.1	473.9	457.0
70°	499.3	473.9	452.7	389.3	372.3
72.5°	397.7	372.3	342.7	308.9	296.2
75°	300.4	279.3	262.3	249.6	275.0
77.5°	207.3	198.9	186.2	173.5	169.2
80°	135.4	131.2	126.9	122.7	118.5
82.5°	80.4	80.4	80.4	80.4	80.4
85°	42.3	46.5	50.8	55.0	59.2
87.5°	25.4	25.4	29.6	33.8	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)