

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: P562143

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562143
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-LD4-1HI-50-UNV-82-97-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4464.0 lumens
Efficiency: N/A
Efficacy: 103.3 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

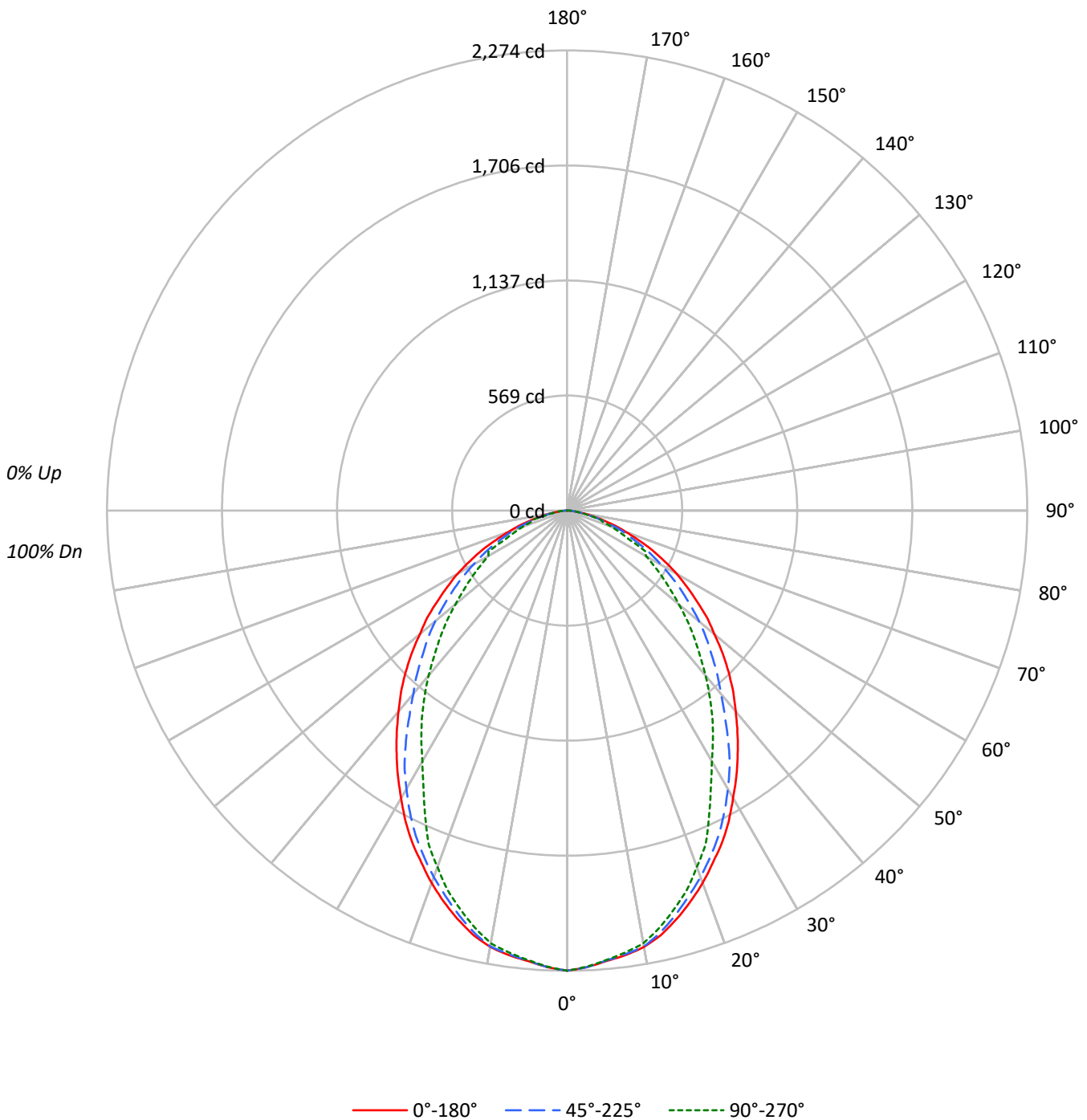
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3060	3060	3060
5°	3018	3014	3011
10°	2992	2988	2967
15°	2911	2882	2841
20°	2804	2759	2684
25°	2689	2630	2466
30°	2549	2467	2222
35°	2414	2280	2055
40°	2276	2078	1870
45°	2146	1921	1691
50°	1986	1783	1508
55°	1838	1616	1350
60°	1684	1443	1210
65°	1481	1264	1071
70°	1220	1107	910
75°	970	847	888
80°	652	611	570
85°	406	486	568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2146 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.7	4.7
10°-20°	580.9	13.0
20°-30°	804.2	18.0
30°-40°	857.5	19.2
40°-50°	782.3	17.5
50°-60°	612.9	13.7
60°-70°	399.4	8.9
70°-80°	177.0	4.0
80°-90°	38.0	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°	1596.8	35.8
0°-40°	2454.4	55.0
0°-60°	3849.6	86.2
0°-90°	4464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4464.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2274	2274	2274	2274	2274	
5°	2234	2232	2232	2229	2229	212
15°	2090	2090	2069	2048	2040	588
25°	1811	1801	1772	1709	1661	832
35°	1470	1459	1388	1283	1251	919
45°	1128	1104	1010	925	888	869
55°	783	760	689	607	576	703
65°	465	439	397	405	336	459
75°	187	174	163	155	171	200
85°	26	29	32	34	37	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2273.9	2273.9	2273.9	2273.9	2273.9
2.5°	2258.1	2258.1	2258.1	2255.5	2255.5
5°	2234.5	2231.8	2231.8	2229.2	2229.2
7.5°	2216.1	2213.4	2210.8	2208.2	2202.9
10°	2189.8	2189.8	2187.2	2174.0	2171.4
12.5°	2147.7	2145.1	2134.6	2116.2	2110.9
15°	2089.9	2089.9	2068.9	2047.8	2039.9
17.5°	2026.8	2024.2	1997.9	1976.8	1966.3
20°	1958.4	1953.2	1926.9	1892.7	1874.3
22.5°	1882.2	1882.2	1850.7	1806.0	1787.6
25°	1811.2	1800.7	1771.8	1708.7	1661.4
27.5°	1729.7	1714.0	1682.4	1593.0	1537.8
30°	1640.4	1632.5	1587.8	1472.1	1430.1
32.5°	1556.2	1543.1	1495.8	1374.9	1340.7
35°	1469.5	1459.0	1388.0	1282.8	1251.3
37.5°	1382.7	1369.6	1280.2	1196.1	1156.7
40°	1296.0	1280.2	1183.0	1106.7	1064.7
42.5°	1214.5	1193.5	1098.8	1017.3	970.0
45°	1127.8	1104.1	1009.5	925.3	888.5
47.5°	1041.0	1020.0	933.2	846.5	804.4
50°	949.0	930.6	851.7	765.0	720.3
52.5°	872.8	843.8	767.6	680.9	644.1
55°	783.4	759.7	688.7	607.3	575.7
57.5°	701.9	678.2	612.5	536.3	510.0
60°	625.7	591.5	536.3	470.6	449.5
62.5°	541.5	515.2	467.9	412.7	439.0
65°	465.3	439.0	396.9	404.8	336.5
67.5°	381.2	368.0	331.2	294.4	283.9
70°	310.2	294.4	281.3	241.8	231.3
72.5°	247.1	231.3	212.9	191.9	184.0
75°	186.6	173.5	163.0	155.1	170.9
77.5°	128.8	123.6	115.7	107.8	105.2
80°	84.1	81.5	78.9	76.2	73.6
82.5°	49.9	49.9	49.9	49.9	49.9
85°	26.3	28.9	31.5	34.2	36.8
87.5°	15.8	15.8	18.4	21.0	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)