

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: P562135

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562135
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-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4287.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

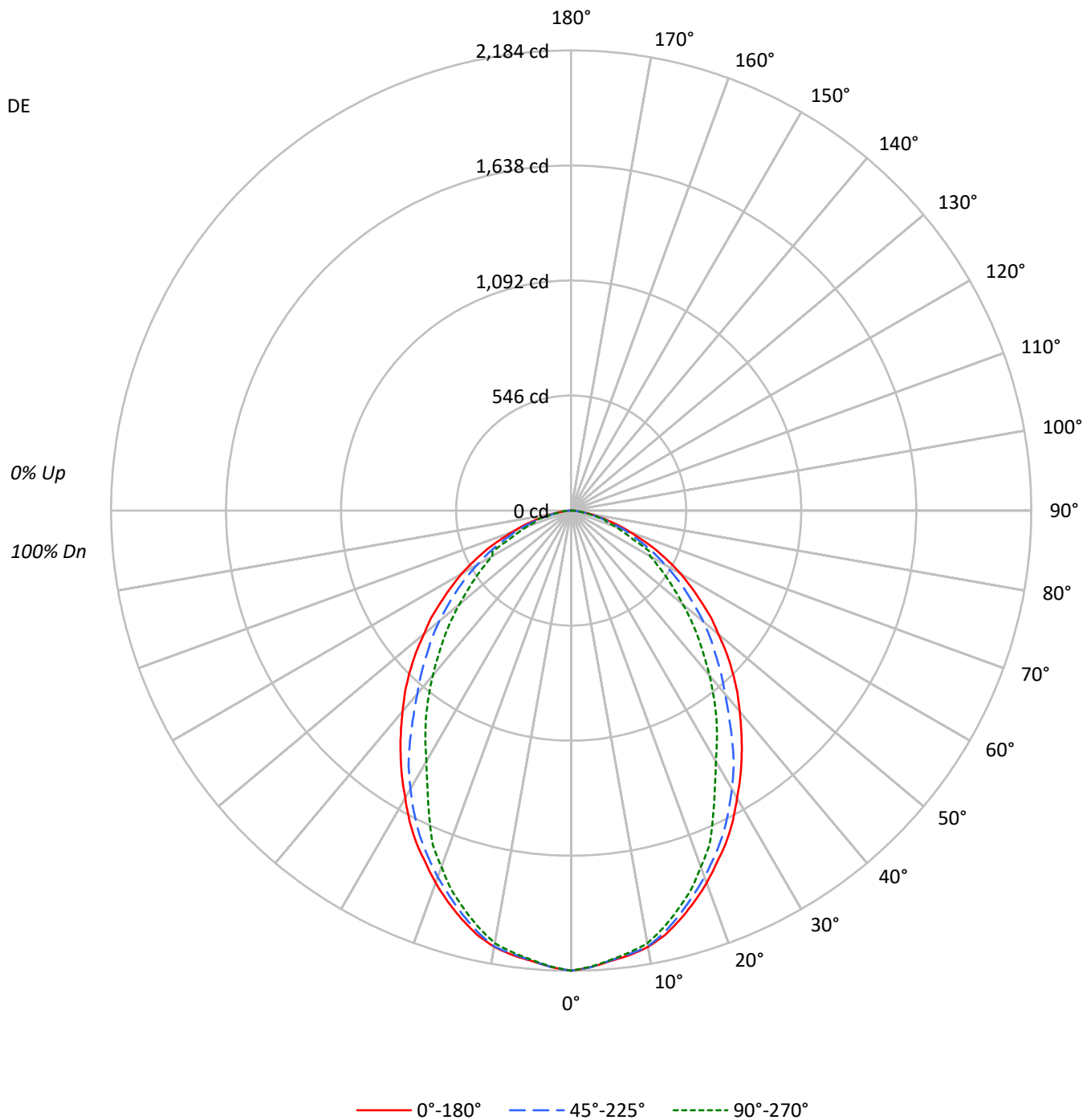
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2938	2938	2938
5°	2898	2895	2891
10°	2873	2870	2849
15°	2796	2768	2729
20°	2693	2650	2577
25°	2582	2526	2369
30°	2447	2369	2134
35°	2318	2190	1974
40°	2186	1995	1796
45°	2061	1845	1624
50°	1908	1712	1448
55°	1765	1552	1297
60°	1617	1386	1162
65°	1422	1214	1029
70°	1172	1063	874
75°	932	814	853
80°	626	587	548
85°	389	468	545

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2061 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.3	4.7
10°-20°	557.9	13.0
20°-30°	772.3	18.0
30°-40°	823.5	19.2
40°-50°	751.3	17.5
50°-60°	588.6	13.7
60°-70°	383.6	8.9
70°-80°	170.0	4.0
80°-90°	36.5	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°	1533.5	35.8
0°-40°	2357.0	55.0
0°-60°	3696.9	86.2
0°-90°	4287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4287.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2184	2184	2184	2184	2184	
5°	2146	2143	2143	2141	2141	204
15°	2007	2007	1987	1967	1959	564
25°	1739	1729	1702	1641	1596	799
35°	1411	1401	1333	1232	1202	882
45°	1083	1060	969	889	853	834
55°	752	730	661	583	553	675
65°	447	422	381	389	323	440
75°	179	167	156	149	164	192
85°	25	28	30	33	35	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2183.7	2183.7	2183.7	2183.7	2183.7
2.5°	2168.6	2168.6	2168.6	2166.1	2166.1
5°	2145.9	2143.3	2143.3	2140.8	2140.8
7.5°	2128.2	2125.7	2123.2	2120.6	2115.6
10°	2103.0	2103.0	2100.4	2087.8	2085.3
12.5°	2062.6	2060.0	2049.9	2032.3	2027.2
15°	2007.0	2007.0	1986.8	1966.6	1959.1
17.5°	1946.4	1943.9	1918.7	1898.5	1888.4
20°	1880.8	1875.7	1850.5	1817.7	1800.0
22.5°	1807.6	1807.6	1777.3	1734.4	1716.7
25°	1739.4	1729.3	1701.6	1641.0	1595.5
27.5°	1661.2	1646.0	1615.7	1529.9	1476.9
30°	1575.3	1567.7	1524.8	1413.8	1373.4
32.5°	1494.5	1481.9	1436.5	1320.3	1287.5
35°	1411.2	1401.1	1333.0	1232.0	1201.7
37.5°	1327.9	1315.3	1229.5	1148.7	1110.8
40°	1244.6	1229.5	1136.0	1062.8	1022.4
42.5°	1166.3	1146.1	1055.3	977.0	931.6
45°	1083.0	1060.3	969.4	888.6	853.3
47.5°	999.7	979.5	896.2	812.9	772.5
50°	911.4	893.7	818.0	734.6	691.7
52.5°	838.2	810.4	737.2	653.9	618.5
55°	752.3	729.6	661.4	583.2	552.9
57.5°	674.1	651.3	588.2	515.0	489.8
60°	600.8	568.0	515.0	451.9	431.7
62.5°	520.1	494.8	449.4	396.4	421.6
65°	446.8	421.6	381.2	388.8	323.1
67.5°	366.1	353.4	318.1	282.8	272.7
70°	297.9	282.8	270.1	232.3	222.2
72.5°	237.3	222.2	204.5	184.3	176.7
75°	179.2	166.6	156.5	148.9	164.1
77.5°	123.7	118.7	111.1	103.5	101.0
80°	80.8	78.3	75.7	73.2	70.7
82.5°	48.0	48.0	48.0	48.0	48.0
85°	25.2	27.8	30.3	32.8	35.3
87.5°	15.1	15.1	17.7	20.2	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)