

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: P562880

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562880
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-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6204.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

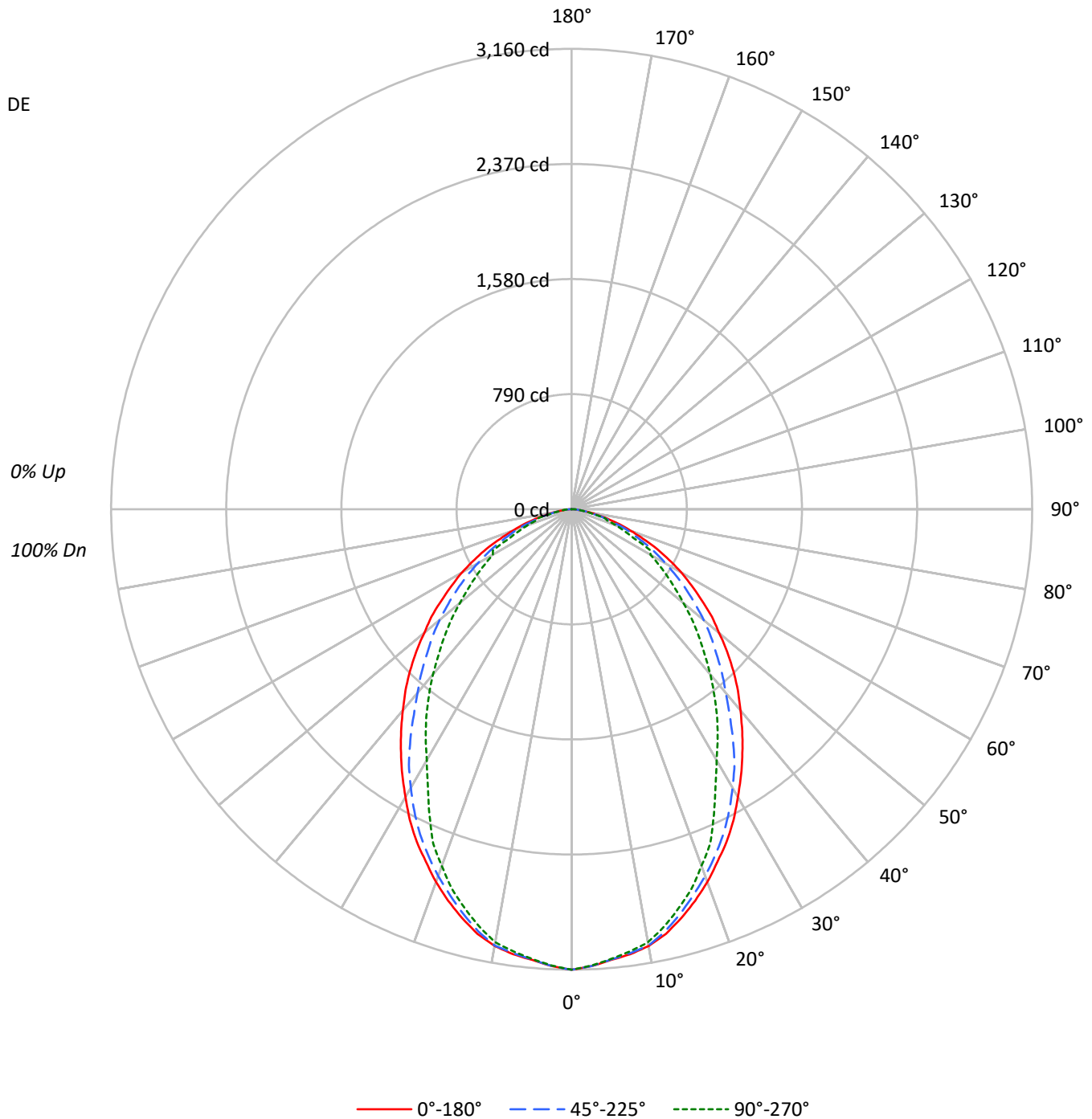
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4252	4252	4252
5°	4194	4189	4184
10°	4158	4153	4123
15°	4046	4005	3949
20°	3897	3834	3730
25°	3737	3656	3428
30°	3542	3428	3088
35°	3355	3168	2856
40°	3164	2888	2599
45°	2982	2669	2350
50°	2761	2478	2095
55°	2554	2245	1877
60°	2340	2006	1681
65°	2059	1756	1489
70°	1696	1538	1265
75°	1349	1177	1235
80°	906	849	793
85°	563	676	789

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2982 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.2	4.7
10°-20°	807.3	13.0
20°-30°	1117.7	18.0
30°-40°	1191.8	19.2
40°-50°	1087.3	17.5
50°-60°	851.8	13.7
60°-70°	555.2	8.9
70°-80°	246.0	4.0
80°-90°	52.8	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°	2219.2	35.8
0°-40°	3411.0	55.0
0°-60°	5350.1	86.2
0°-90°	6204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6204.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3160	3160	3160	3160	3160	
5°	3105	3102	3102	3098	3098	295
15°	2904	2904	2875	2846	2835	817
25°	2517	2503	2462	2375	2309	1156
35°	2042	2028	1929	1783	1739	1277
45°	1567	1534	1403	1286	1235	1207
55°	1089	1056	957	844	800	977
65°	647	610	552	563	468	637
75°	259	241	226	216	238	278
85°	36	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3160.2	3160.2	3160.2	3160.2	3160.2
2.5°	3138.3	3138.3	3138.3	3134.7	3134.7
5°	3105.4	3101.8	3101.8	3098.1	3098.1
7.5°	3079.9	3076.2	3072.6	3068.9	3061.6
10°	3043.3	3043.3	3039.7	3021.4	3017.8
12.5°	2984.9	2981.2	2966.6	2941.0	2933.7
15°	2904.5	2904.5	2875.3	2846.0	2835.1
17.5°	2816.8	2813.2	2776.6	2747.4	2732.8
20°	2721.8	2714.5	2678.0	2630.5	2604.9
22.5°	2615.9	2615.9	2572.0	2509.9	2484.3
25°	2517.2	2502.6	2462.4	2374.7	2309.0
27.5°	2404.0	2382.0	2338.2	2214.0	2137.3
30°	2279.8	2268.8	2206.7	2045.9	1987.5
32.5°	2162.8	2144.6	2078.8	1910.8	1863.3
35°	2042.3	2027.7	1929.0	1782.9	1739.0
37.5°	1921.7	1903.4	1779.2	1662.3	1607.5
40°	1801.2	1779.2	1644.1	1538.1	1479.6
42.5°	1687.9	1658.7	1527.1	1413.9	1348.1
45°	1567.3	1534.4	1402.9	1286.0	1234.9
47.5°	1446.8	1417.5	1297.0	1176.4	1118.0
50°	1318.9	1293.3	1183.7	1063.2	1001.0
52.5°	1212.9	1172.8	1066.8	946.2	895.1
55°	1088.7	1055.8	957.2	843.9	800.1
57.5°	975.5	942.6	851.3	745.3	708.8
60°	869.5	822.0	745.3	654.0	624.7
62.5°	752.6	716.1	650.3	573.6	610.1
65°	646.7	610.1	551.7	562.6	467.6
67.5°	529.8	511.5	460.3	409.2	394.6
70°	431.1	409.2	390.9	336.1	321.5
72.5°	343.4	321.5	295.9	266.7	255.7
75°	259.4	241.1	226.5	215.6	237.5
77.5°	179.0	171.7	160.8	149.8	146.1
80°	116.9	113.3	109.6	106.0	102.3
82.5°	69.4	69.4	69.4	69.4	69.4
85°	36.5	40.2	43.8	47.5	51.1
87.5°	21.9	21.9	25.6	29.2	32.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)