

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: P562055

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562055
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-40-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4306.0 lumens
Efficiency: N/A
Efficacy: 99.7 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

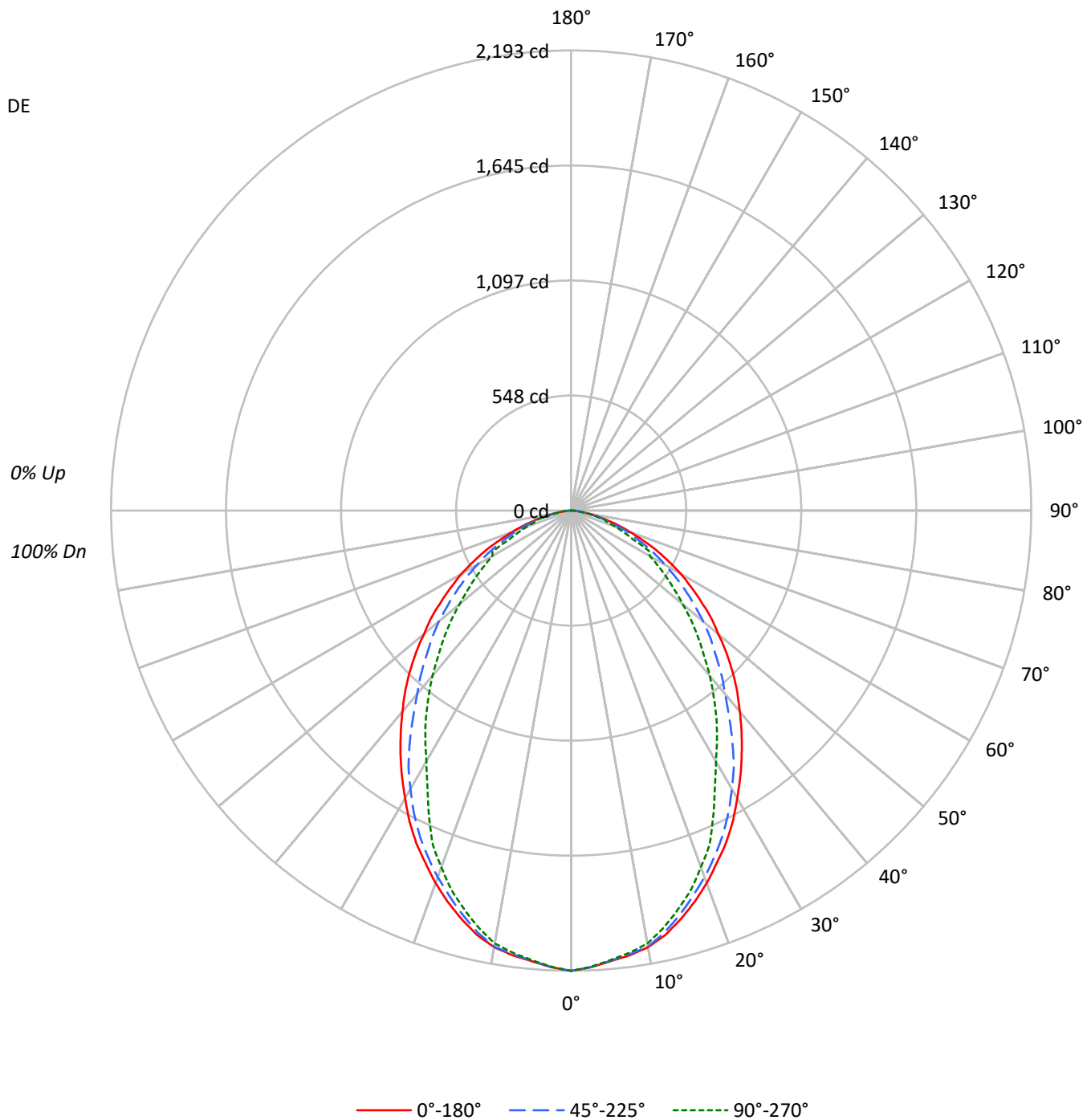
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	2951	2951	2951
5°	2911	2908	2904
10°	2886	2882	2862
15°	2808	2780	2741
20°	2705	2661	2589
25°	2594	2537	2379
30°	2458	2380	2143
35°	2328	2199	1983
40°	2196	2004	1804
45°	2070	1853	1631
50°	1916	1720	1454
55°	1773	1559	1303
60°	1624	1392	1167
65°	1429	1219	1033
70°	1177	1067	878
75°	936	817	857
80°	628	590	550
85°	392	469	548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2070 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.2	4.7
10°-20°	560.3	13.0
20°-30°	775.8	18.0
30°-40°	827.2	19.2
40°-50°	754.6	17.5
50°-60°	591.2	13.7
60°-70°	385.3	8.9
70°-80°	170.7	4.0
80°-90°	36.7	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°	1540.3	35.8
0°-40°	2367.5	55.0
0°-60°	3713.3	86.2
0°-90°	4306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4306.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2193	2193	2193	2193	2193	
5°	2155	2153	2153	2150	2150	205
15°	2016	2016	1996	1975	1968	567
25°	1747	1737	1709	1648	1603	802
35°	1418	1407	1339	1237	1207	886
45°	1088	1065	974	893	857	838
55°	756	733	664	586	555	678
65°	449	424	383	390	325	442
75°	180	167	157	150	165	193
85°	25	28	30	33	36	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2193.4	2193.4	2193.4	2193.4	2193.4
2.5°	2178.2	2178.2	2178.2	2175.7	2175.7
5°	2155.4	2152.8	2152.8	2150.3	2150.3
7.5°	2137.6	2135.1	2132.6	2130.0	2125.0
10°	2112.3	2112.3	2109.7	2097.1	2094.5
12.5°	2071.7	2069.2	2059.0	2041.3	2036.2
15°	2015.9	2015.9	1995.6	1975.3	1967.7
17.5°	1955.1	1952.5	1927.2	1906.9	1896.7
20°	1889.1	1884.1	1858.7	1825.7	1808.0
22.5°	1815.6	1815.6	1785.2	1742.1	1724.3
25°	1747.1	1737.0	1709.1	1648.2	1602.6
27.5°	1668.5	1653.3	1622.9	1536.7	1483.4
30°	1582.3	1574.7	1531.6	1420.0	1379.4
32.5°	1501.2	1488.5	1442.8	1326.2	1293.2
35°	1417.5	1407.3	1338.9	1237.4	1207.0
37.5°	1333.8	1321.1	1234.9	1153.8	1115.7
40°	1250.1	1234.9	1141.1	1067.5	1027.0
42.5°	1171.5	1151.2	1059.9	981.3	935.7
45°	1087.8	1065.0	973.7	892.6	857.1
47.5°	1004.2	983.9	900.2	816.5	775.9
50°	915.4	897.7	821.6	737.9	694.8
52.5°	841.9	814.0	740.4	656.8	621.3
55°	755.7	732.8	664.4	585.8	555.3
57.5°	677.0	654.2	590.8	517.3	491.9
60°	603.5	570.5	517.3	453.9	433.6
62.5°	522.4	497.0	451.4	398.1	423.5
65°	448.8	423.5	382.9	390.5	324.6
67.5°	367.7	355.0	319.5	284.0	273.9
70°	299.2	284.0	271.3	233.3	223.1
72.5°	238.4	223.1	205.4	185.1	177.5
75°	180.0	167.4	157.2	149.6	164.8
77.5°	124.3	119.2	111.6	104.0	101.4
80°	81.1	78.6	76.1	73.5	71.0
82.5°	48.2	48.2	48.2	48.2	48.2
85°	25.4	27.9	30.4	33.0	35.5
87.5°	15.2	15.2	17.8	20.3	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)