

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: P561985

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561985
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-35-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4547.0 lumens
Efficiency: N/A
Efficacy: 105.3 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

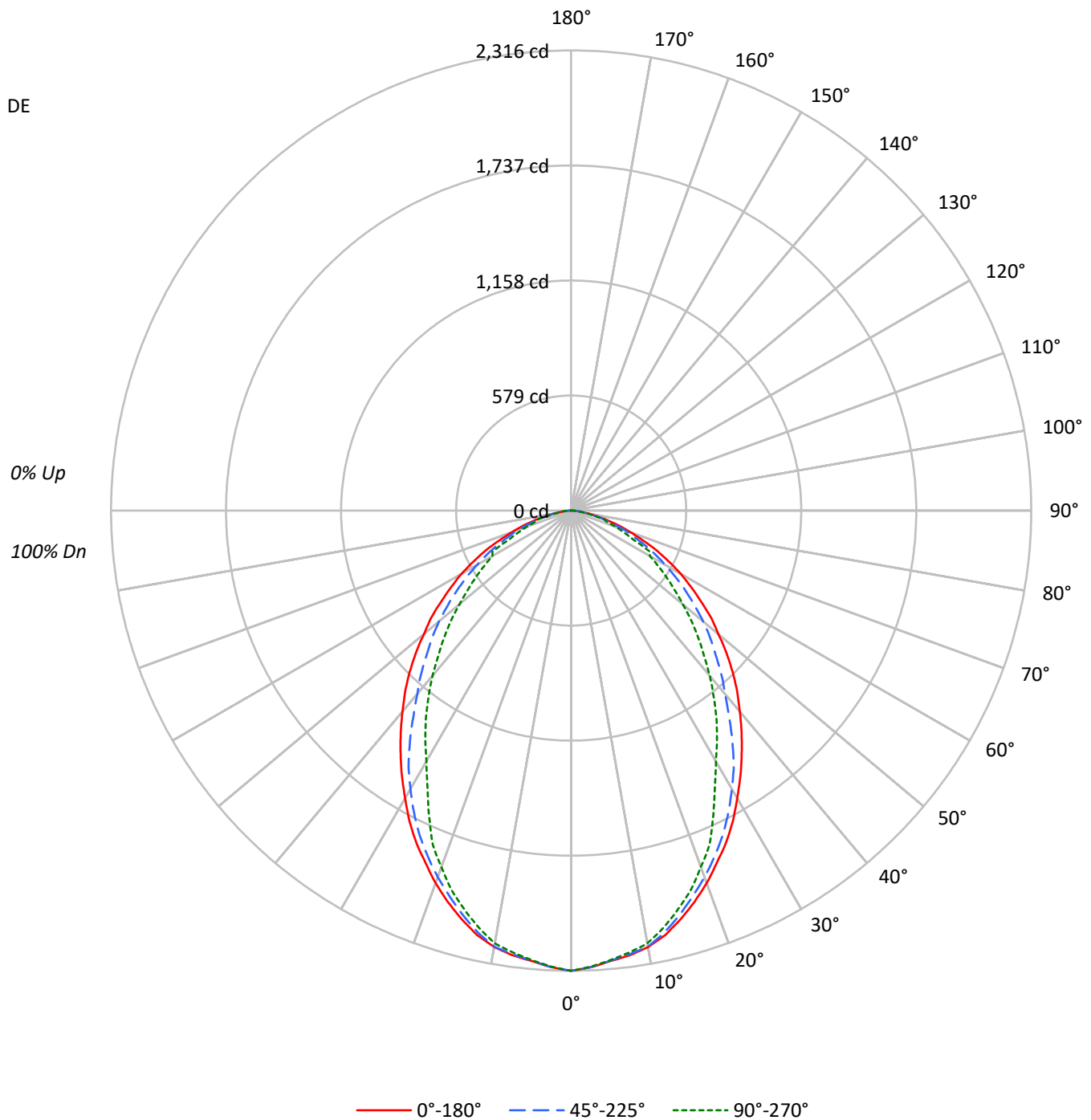
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	3116	3116	3116
5°	3074	3070	3067
10°	3047	3044	3022
15°	2965	2935	2894
20°	2856	2810	2734
25°	2739	2679	2512
30°	2596	2513	2263
35°	2459	2322	2094
40°	2319	2116	1905
45°	2186	1956	1722
50°	2023	1816	1536
55°	1872	1646	1376
60°	1715	1470	1232
65°	1509	1287	1091
70°	1243	1127	927
75°	988	863	905
80°	664	622	581
85°	414	496	579

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2186 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.6	4.7
10°-20°	591.7	13.0
20°-30°	819.2	18.0
30°-40°	873.5	19.2
40°-50°	796.9	17.5
50°-60°	624.3	13.7
60°-70°	406.9	8.9
70°-80°	180.3	4.0
80°-90°	38.7	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°	1626.5	35.8
0°-40°	2500.0	55.0
0°-60°	3921.1	86.2
0°-90°	4547.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4547.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2316	2316	2316	2316	2316	
5°	2276	2273	2273	2271	2271	216
15°	2129	2129	2107	2086	2078	598
25°	1845	1834	1805	1740	1692	847
35°	1497	1486	1414	1307	1275	936
45°	1149	1125	1028	942	905	885
55°	798	774	702	618	586	716
65°	474	447	404	412	343	467
75°	190	177	166	158	174	204
85°	27	30	32	35	38	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2316.2	2316.2	2316.2	2316.2	2316.2
2.5°	2300.1	2300.1	2300.1	2297.4	2297.4
5°	2276.0	2273.3	2273.3	2270.7	2270.7
7.5°	2257.3	2254.6	2251.9	2249.2	2243.9
10°	2230.5	2230.5	2227.8	2214.4	2211.8
12.5°	2187.7	2185.0	2174.3	2155.5	2150.2
15°	2128.7	2128.7	2107.3	2085.9	2077.9
17.5°	2064.5	2061.8	2035.0	2013.6	2002.9
20°	1994.9	1989.5	1962.7	1927.9	1909.2
22.5°	1917.2	1917.2	1885.1	1839.6	1820.8
25°	1844.9	1834.2	1804.7	1740.5	1692.3
27.5°	1761.9	1745.8	1713.7	1622.7	1566.4
30°	1670.9	1662.8	1617.3	1499.5	1456.7
32.5°	1585.2	1571.8	1523.6	1400.4	1365.6
35°	1496.8	1486.1	1413.8	1306.7	1274.6
37.5°	1408.5	1395.1	1304.0	1218.3	1178.2
40°	1320.1	1304.0	1204.9	1127.3	1084.5
42.5°	1237.1	1215.7	1119.3	1036.3	988.1
45°	1148.7	1124.6	1028.2	942.5	905.1
47.5°	1060.4	1038.9	950.6	862.2	819.4
50°	966.6	947.9	867.6	779.2	733.7
52.5°	889.0	859.5	781.9	693.5	656.0
55°	797.9	773.8	701.5	618.5	586.4
57.5°	714.9	690.8	623.9	546.2	519.5
60°	637.3	602.5	546.2	479.3	457.9
62.5°	551.6	524.8	476.6	420.4	447.2
65°	473.9	447.2	404.3	412.4	342.7
67.5°	388.3	374.9	337.4	299.9	289.2
70°	316.0	299.9	286.5	246.3	235.6
72.5°	251.7	235.6	216.9	195.5	187.4
75°	190.1	176.7	166.0	158.0	174.0
77.5°	131.2	125.9	117.8	109.8	107.1
80°	85.7	83.0	80.3	77.7	75.0
82.5°	50.9	50.9	50.9	50.9	50.9
85°	26.8	29.5	32.1	34.8	37.5
87.5°	16.1	16.1	18.7	21.4	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)