

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: P563078

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563078
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-LD4-3HI-35-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10703.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

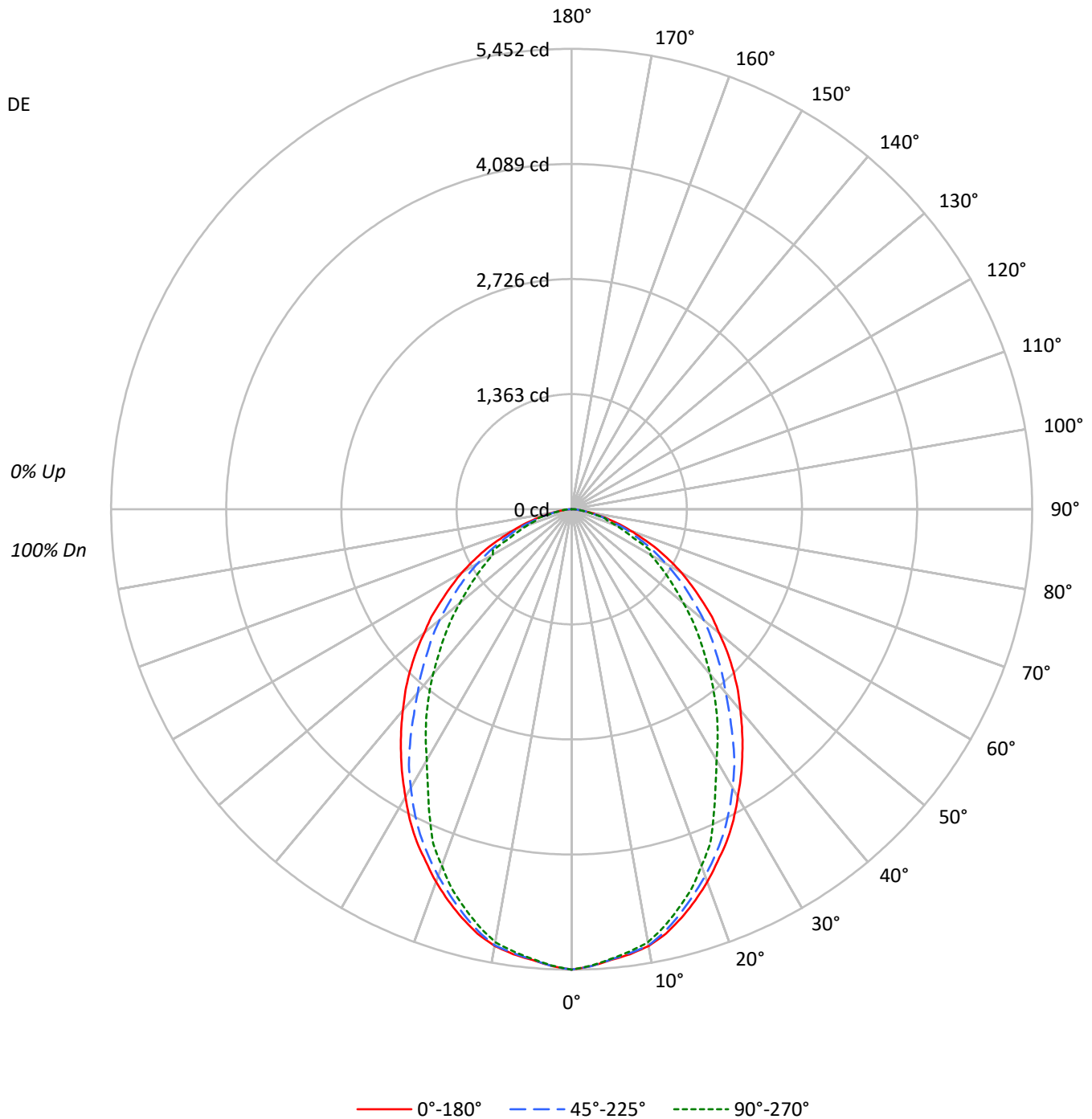
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563078

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563078

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-87-EDD-90

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	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°	7336	7336	7336
5°	7236	7227	7219
10°	7173	7165	7113
15°	6980	6909	6813
20°	6723	6615	6435
25°	6447	6307	5914
30°	6110	5915	5327
35°	5787	5466	4928
40°	5458	4982	4484
45°	5145	4605	4054
50°	4763	4275	3615
55°	4406	3874	3238
60°	4037	3460	2900
65°	3552	3030	2569
70°	2926	2653	2182
75°	2326	2032	2130
80°	1563	1465	1368
85°	973	1167	1362

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5145 cd/sqm



TEST NUMBER: P563078

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	507.5	4.7
10°-20°	1392.8	13.0
20°-30°	1928.2	18.0
30°-40°	2056.1	19.2
40°-50°	1875.7	17.5
50°-60°	1469.5	13.7
60°-70°	957.7	8.9
70°-80°	424.3	4.0
80°-90°	91.1	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°	3828.6	35.8
0°-40°	5884.6	55.0
0°-60°	9229.8	86.2
0°-90°	10703.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10703.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5452	5452	5452	5452	5452	
5°	5357	5351	5351	5345	5345	509
15°	5011	5011	4960	4910	4891	1409
25°	4343	4318	4248	4097	3983	1994
35°	3523	3498	3328	3076	3000	2203
45°	2704	2647	2420	2219	2130	2083
55°	1878	1822	1651	1456	1380	1685
65°	1116	1053	952	971	807	1099
75°	448	416	391	372	410	480
85°	63	69	76	82	88	87
90°	0	0	0	0	0	



TEST NUMBER: P563078

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5452.0	5452.0	5452.0	5452.0	5452.0
2.5°	5414.1	5414.1	5414.1	5407.8	5407.8
5°	5357.4	5351.1	5351.1	5344.8	5344.8
7.5°	5313.3	5307.0	5300.7	5294.4	5281.8
10°	5250.3	5250.3	5244.0	5212.5	5206.2
12.5°	5149.4	5143.1	5117.9	5073.8	5061.2
15°	5010.8	5010.8	4960.3	4909.9	4891.0
17.5°	4859.5	4853.2	4790.2	4739.7	4714.5
20°	4695.6	4683.0	4620.0	4538.1	4493.9
22.5°	4512.8	4512.8	4437.2	4330.1	4285.9
25°	4342.7	4317.5	4248.1	4096.9	3983.4
27.5°	4147.3	4109.5	4033.8	3819.5	3687.2
30°	3933.0	3914.1	3806.9	3529.6	3428.8
32.5°	3731.3	3699.8	3586.3	3296.4	3214.5
35°	3523.3	3498.1	3327.9	3075.8	3000.2
37.5°	3315.3	3283.8	3069.5	2867.8	2773.3
40°	3107.3	3069.5	2836.3	2653.5	2552.7
42.5°	2911.9	2861.5	2634.6	2439.2	2325.8
45°	2703.9	2647.2	2420.3	2218.6	2130.4
47.5°	2495.9	2445.5	2237.5	2029.5	1928.7
50°	2275.3	2231.2	2042.1	1834.1	1727.0
52.5°	2092.5	2023.2	1840.4	1632.4	1544.2
55°	1878.2	1821.5	1651.3	1456.0	1380.3
57.5°	1682.9	1626.1	1468.6	1285.8	1222.8
60°	1500.1	1418.1	1285.8	1128.2	1077.8
62.5°	1298.4	1235.4	1121.9	989.5	1052.6
65°	1115.6	1052.6	951.7	970.6	806.8
67.5°	913.9	882.4	794.2	705.9	680.7
70°	743.7	705.9	674.4	579.9	554.7
72.5°	592.5	554.7	510.5	460.1	441.2
75°	447.5	416.0	390.8	371.9	409.7
77.5°	308.8	296.2	277.3	258.4	252.1
80°	201.7	195.4	189.1	182.8	176.5
82.5°	119.8	119.8	119.8	119.8	119.8
85°	63.0	69.3	75.6	81.9	88.2
87.5°	37.8	37.8	44.1	50.4	56.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)