

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: P563270

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563270
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-LD4-3LO-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

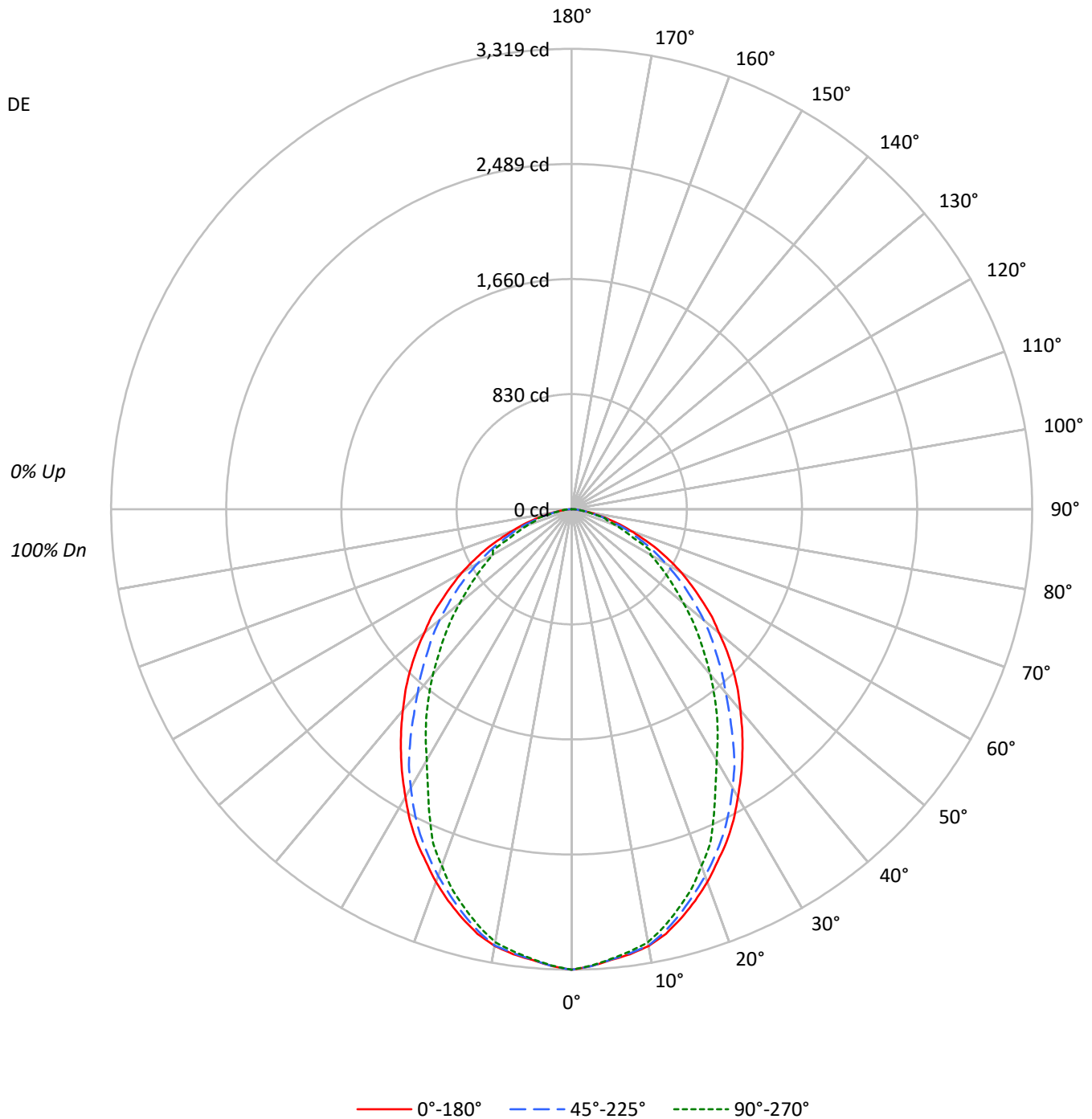
Lumens per Lamp: N/A
Luminaire Lumens: 6516.0 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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	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°	4466	4466	4466
5°	4405	4400	4395
10°	4367	4362	4330
15°	4249	4207	4148
20°	4093	4027	3917
25°	3925	3840	3600
30°	3720	3601	3243
35°	3523	3328	3000
40°	3323	3033	2730
45°	3132	2804	2468
50°	2900	2602	2201
55°	2682	2358	1971
60°	2457	2106	1766
65°	2162	1845	1564
70°	1781	1615	1328
75°	1416	1237	1297
80°	951	892	832
85°	593	710	829

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3132 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.0	4.7
10°-20°	847.9	13.0
20°-30°	1173.9	18.0
30°-40°	1251.7	19.2
40°-50°	1142.0	17.5
50°-60°	894.6	13.7
60°-70°	583.1	8.9
70°-80°	258.3	4.0
80°-90°	55.5	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°	2330.8	35.8
0°-40°	3582.6	55.0
0°-60°	5619.1	86.2
0°-90°	6516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3319	3319	3319	3319	3319	
5°	3262	3258	3258	3254	3254	310
15°	3051	3051	3020	2989	2978	858
25°	2644	2628	2586	2494	2425	1214
35°	2145	2130	2026	1872	1826	1341
45°	1646	1612	1474	1351	1297	1268
55°	1144	1109	1005	886	840	1026
65°	679	641	579	591	491	669
75°	272	253	238	226	249	292
85°	38	42	46	50	54	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3319.2	3319.2	3319.2	3319.2	3319.2
2.5°	3296.1	3296.1	3296.1	3292.3	3292.3
5°	3261.6	3257.8	3257.8	3253.9	3253.9
7.5°	3234.7	3230.9	3227.1	3223.2	3215.6
10°	3196.4	3196.4	3192.5	3173.4	3169.5
12.5°	3135.0	3131.1	3115.8	3088.9	3081.3
15°	3050.6	3050.6	3019.9	2989.2	2977.7
17.5°	2958.5	2954.6	2916.3	2885.6	2870.2
20°	2858.7	2851.0	2812.7	2762.8	2735.9
22.5°	2747.4	2747.4	2701.4	2636.1	2609.3
25°	2643.8	2628.5	2586.3	2494.2	2425.1
27.5°	2524.9	2501.8	2455.8	2325.3	2244.8
30°	2394.4	2382.9	2317.7	2148.8	2087.4
32.5°	2271.6	2252.4	2183.4	2006.8	1957.0
35°	2145.0	2129.6	2026.0	1872.5	1826.5
37.5°	2018.4	1999.2	1868.7	1745.9	1688.4
40°	1891.7	1868.7	1726.7	1615.5	1554.1
42.5°	1772.8	1742.1	1603.9	1485.0	1415.9
45°	1646.2	1611.6	1473.5	1350.7	1297.0
47.5°	1519.5	1488.8	1362.2	1235.6	1174.2
50°	1385.2	1358.4	1243.2	1116.6	1051.4
52.5°	1273.9	1231.7	1120.5	993.8	940.1
55°	1143.5	1108.9	1005.3	886.4	840.3
57.5°	1024.5	990.0	894.1	782.8	744.4
60°	913.2	863.4	782.8	686.9	656.2
62.5°	790.5	752.1	683.0	602.4	640.8
65°	679.2	640.8	579.4	590.9	491.2
67.5°	556.4	537.2	483.5	429.8	414.4
70°	452.8	429.8	410.6	353.0	337.7
72.5°	360.7	337.7	310.8	280.1	268.6
75°	272.4	253.3	237.9	226.4	249.4
77.5°	188.0	180.3	168.8	157.3	153.5
80°	122.8	119.0	115.1	111.3	107.4
82.5°	72.9	72.9	72.9	72.9	72.9
85°	38.4	42.2	46.0	49.9	53.7
87.5°	23.0	23.0	26.9	30.7	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)