

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: P563277

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563277
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-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8232.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

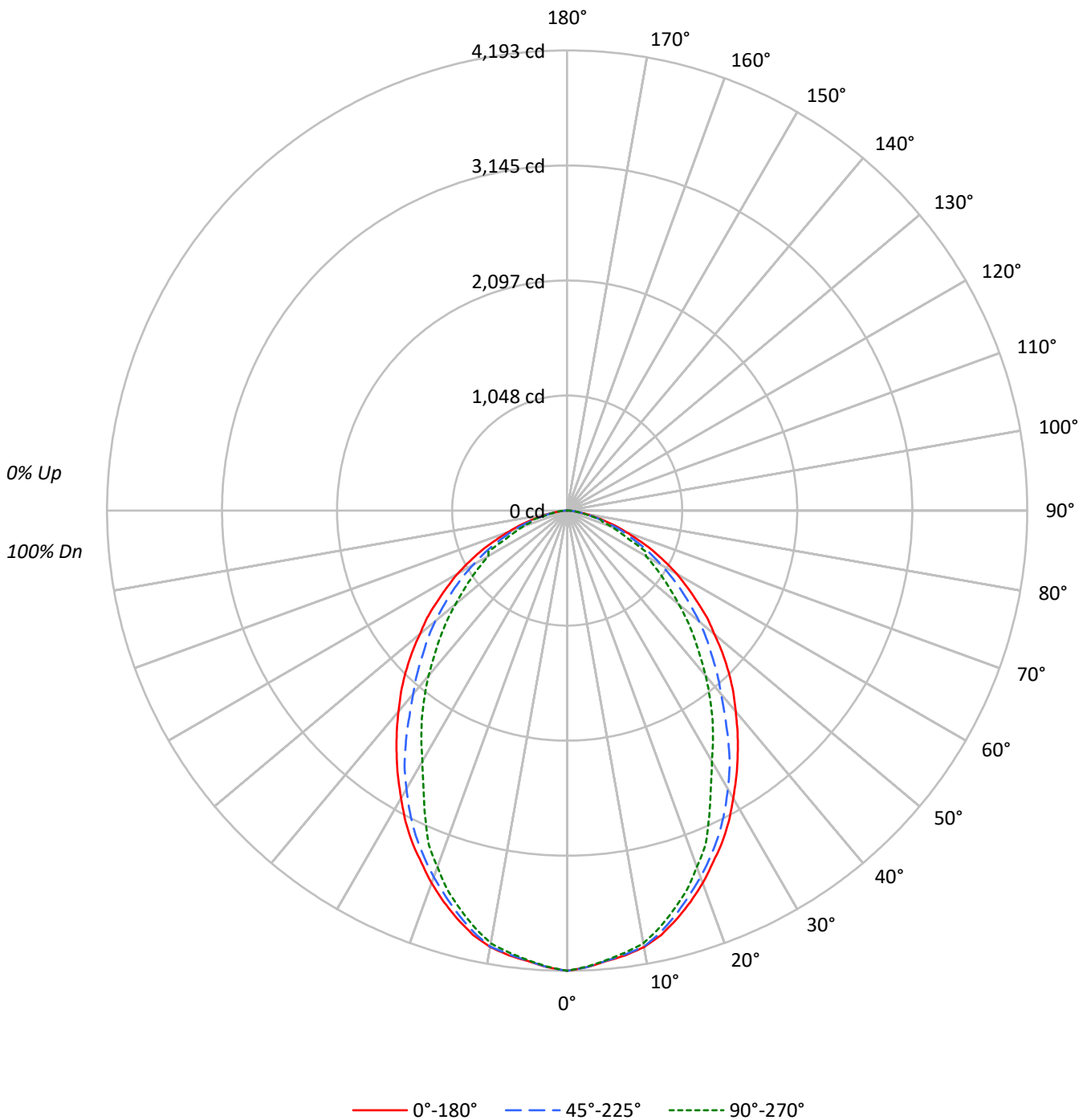
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5642	5642	5642
5°	5565	5559	5552
10°	5517	5510	5471
15°	5368	5314	5240
20°	5171	5088	4949
25°	4959	4851	4548
30°	4700	4549	4097
35°	4451	4204	3790
40°	4198	3832	3448
45°	3957	3542	3118
50°	3663	3288	2780
55°	3389	2979	2490
60°	3105	2661	2231
65°	2732	2330	1975
70°	2250	2041	1678
75°	1789	1563	1638
80°	1202	1127	1051
85°	749	898	1048

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3957 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.3	4.7
10°-20°	1071.2	13.0
20°-30°	1483.1	18.0
30°-40°	1581.4	19.2
40°-50°	1442.7	17.5
50°-60°	1130.2	13.7
60°-70°	736.6	8.9
70°-80°	326.4	4.0
80°-90°	70.1	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°	2944.7	35.8
0°-40°	4526.0	55.0
0°-60°	7098.9	86.2
0°-90°	8232.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8232.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4193	4193	4193	4193	4193	
5°	4121	4116	4116	4111	4111	391
15°	3854	3854	3815	3776	3762	1083
25°	3340	3321	3267	3151	3064	1533
35°	2710	2690	2560	2366	2308	1694
45°	2080	2036	1862	1706	1638	1602
55°	1445	1401	1270	1120	1062	1296
65°	858	810	732	746	620	846
75°	344	320	301	286	315	369
85°	48	53	58	63	68	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4193.3	4193.3	4193.3	4193.3	4193.3
2.5°	4164.2	4164.2	4164.2	4159.3	4159.3
5°	4120.6	4115.7	4115.7	4110.9	4110.9
7.5°	4086.6	4081.8	4076.9	4072.1	4062.4
10°	4038.1	4038.1	4033.3	4009.1	4004.2
12.5°	3960.6	3955.7	3936.3	3902.4	3892.7
15°	3853.9	3853.9	3815.1	3776.4	3761.8
17.5°	3737.6	3732.7	3684.3	3645.5	3626.1
20°	3611.5	3601.8	3553.4	3490.4	3456.4
22.5°	3471.0	3471.0	3412.8	3330.4	3296.4
25°	3340.1	3320.7	3267.4	3151.0	3063.8
27.5°	3189.8	3160.7	3102.5	2937.7	2835.9
30°	3025.0	3010.4	2928.0	2714.7	2637.2
32.5°	2869.8	2845.6	2758.3	2535.4	2472.3
35°	2709.9	2690.5	2559.6	2365.7	2307.5
37.5°	2549.9	2525.7	2360.8	2205.7	2133.0
40°	2389.9	2360.8	2181.5	2040.9	1963.3
42.5°	2239.6	2200.9	2026.3	1876.1	1788.8
45°	2079.7	2036.0	1861.5	1706.4	1638.5
47.5°	1919.7	1880.9	1720.9	1561.0	1483.4
50°	1750.0	1716.1	1570.7	1410.7	1328.3
52.5°	1609.4	1556.1	1415.5	1255.6	1187.7
55°	1444.6	1401.0	1270.1	1119.8	1061.6
57.5°	1294.3	1250.7	1129.5	988.9	940.5
60°	1153.8	1090.7	988.9	867.7	829.0
62.5°	998.6	950.2	862.9	761.1	809.6
65°	858.0	809.6	732.0	746.5	620.5
67.5°	702.9	678.7	610.8	542.9	523.6
70°	572.0	542.9	518.7	446.0	426.6
72.5°	455.7	426.6	392.7	353.9	339.3
75°	344.2	319.9	300.6	286.0	315.1
77.5°	237.5	227.8	213.3	198.8	193.9
80°	155.1	150.3	145.4	140.6	135.7
82.5°	92.1	92.1	92.1	92.1	92.1
85°	48.5	53.3	58.2	63.0	67.9
87.5°	29.1	29.1	33.9	38.8	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)