

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P489154

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-20-120-EDD-90**

Issue Date: 3/11/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced
by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
 Report Number: P489154
 TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2101-115-8)
 Test Lab: INNOVATION CENTER
 Issue Date: 3/11/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: FAIL-SAFE
 Catalog Number: CLM-24-2-INS-A19156-LD4-4LO-20-120-EDD-90
 Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
 Light Source: -
 Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

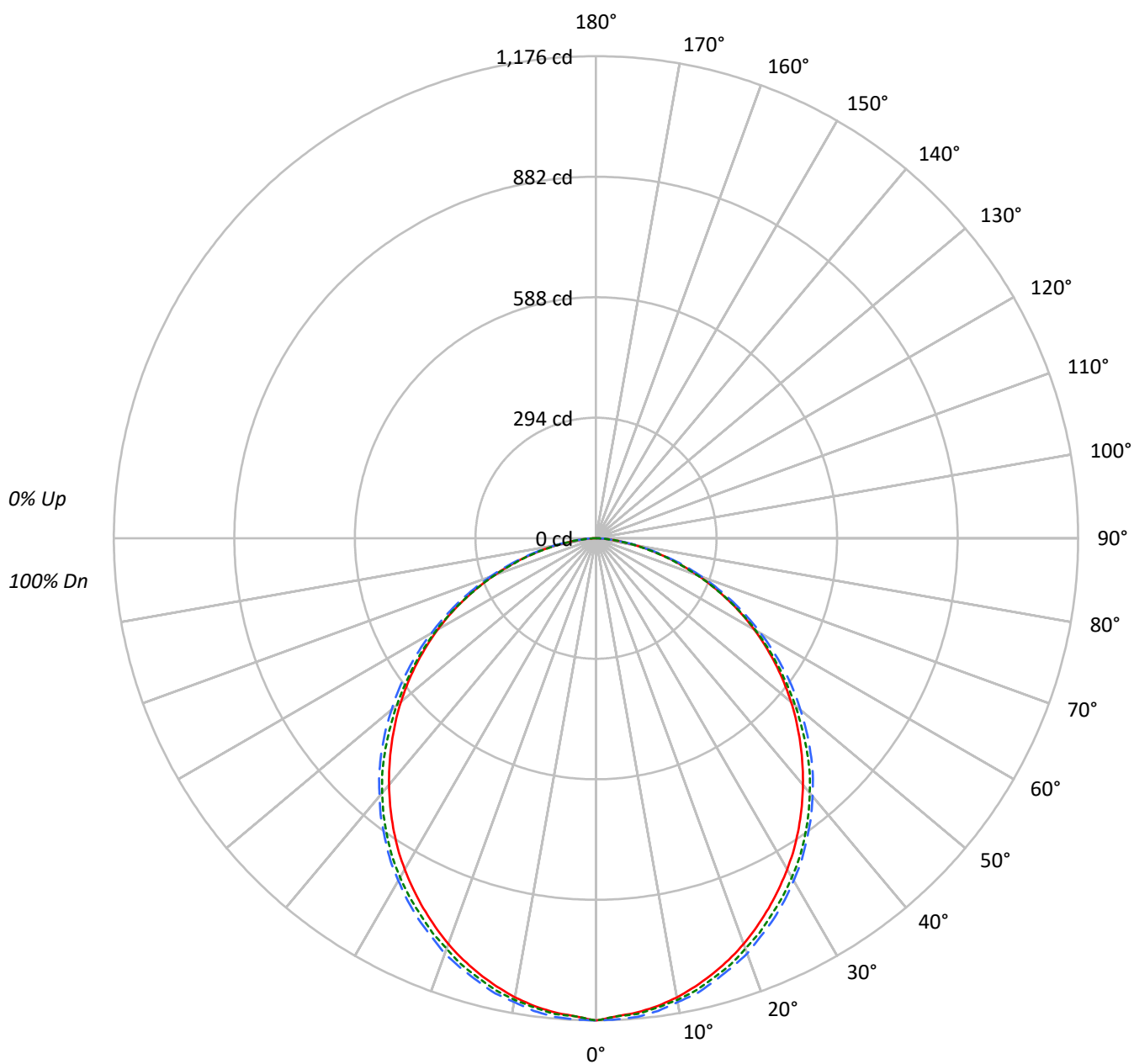
Lumens per Lamp: N/A
 Luminaire Lumens: 3092.6 lumens
 Efficiency: N/A
 Efficacy: 66.1 lumens/watt
 Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
 Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
 CIE Type: Direct

 Input Watts (W): 46.8
 Input Voltage (V): NR
 Input Current (A_{in}): 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: 25 FT

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	50	30	10
RCR																													
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100											
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85											
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71											
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60											
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51											
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45											
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39											
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35											
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31											
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28											
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25											

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3165	3165	3165
5°	3136	3166	3146
10°	3107	3139	3124
15°	3064	3114	3092
20°	3016	3088	3051
25°	2957	3043	3008
30°	2898	2996	2968
35°	2832	2945	2917
40°	2759	2886	2849
45°	2681	2817	2764
50°	2601	2727	2655
55°	2506	2624	2543
60°	2400	2499	2422
65°	2262	2348	2263
70°	2081	2164	2057
75°	1832	1915	1804
80°	1489	1554	1472
85°	1037	1105	1078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.8	3.6
10°-20°	313.9	10.2
20°-30°	468.2	15.1
30°-40°	554.9	17.9
40°-50°	561.4	18.2
50°-60°	490.3	15.9
60°-70°	358.3	11.6
70°-80°	190.6	6.2
80°-90°	44.1	1.4
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°	893.0	28.9
0°-40°	1447.8	46.8
0°-60°	2499.6	80.8
0°-90°	3092.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3092.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1161	1163	1172	1175	1165	110
15°	1100	1107	1118	1124	1110	310
25°	996	1008	1025	1029	1013	459
35°	862	876	896	903	888	539
45°	705	717	740	741	726	544
55°	534	545	559	551	542	478
65°	355	362	369	361	355	351
75°	176	180	184	178	174	187
85°	34	34	36	36	35	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1176.3	1176.3	1176.3	1176.3	1176.3
2.5°	1167.1	1170.9	1174.8	1176.6	1167.0
5°	1161.0	1163.2	1171.9	1174.6	1164.7
7.5°	1150.9	1154.3	1162.7	1163.9	1154.4
10°	1137.2	1143.1	1148.7	1154.9	1143.2
12.5°	1119.7	1127.7	1137.2	1138.3	1129.5
15°	1100.0	1107.3	1117.7	1124.5	1109.9
17.5°	1077.9	1085.0	1098.5	1099.7	1090.9
20°	1053.3	1062.1	1078.3	1081.1	1065.3
22.5°	1025.3	1037.2	1050.7	1053.4	1041.7
25°	996.0	1008.3	1025.0	1028.8	1013.2
27.5°	965.4	977.2	995.9	998.6	985.5
30°	932.5	943.6	964.2	968.7	955.3
32.5°	899.2	910.2	933.0	936.8	923.8
35°	862.2	875.7	896.4	902.6	888.1
37.5°	824.4	837.6	861.1	866.7	851.0
40°	785.4	798.3	821.5	826.2	811.1
42.5°	745.4	758.4	783.1	783.9	771.4
45°	704.6	717.1	740.1	740.7	726.2
47.5°	663.2	675.8	696.4	694.0	680.3
50°	621.2	633.3	651.3	646.6	634.2
52.5°	577.9	589.5	606.5	598.9	587.3
55°	534.2	545.0	559.2	551.1	542.1
57.5°	490.2	501.1	512.0	503.8	496.0
60°	445.9	455.4	464.4	456.0	450.0
62.5°	400.8	409.0	416.7	408.7	403.1
65°	355.2	362.4	368.8	361.4	355.4
67.5°	309.8	316.0	321.8	314.2	308.0
70°	264.5	269.8	275.1	267.3	261.5
72.5°	219.7	224.4	229.2	221.6	216.6
75°	176.2	180.3	184.2	177.5	173.5
77.5°	134.7	138.1	140.8	136.5	132.7
80°	96.1	98.7	100.3	98.5	95.0
82.5°	61.8	63.6	64.5	64.3	62.0
85°	33.6	34.2	35.8	36.2	34.9
87.5°	13.0	13.8	14.2	15.3	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)