

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: P709006

Luminaire Tested: **24APR-67-160L830-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709006
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-67-160L830-UNV
Description: ArcMed Patient Recessed 2x4 Fixture Ambient and Exam Light
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

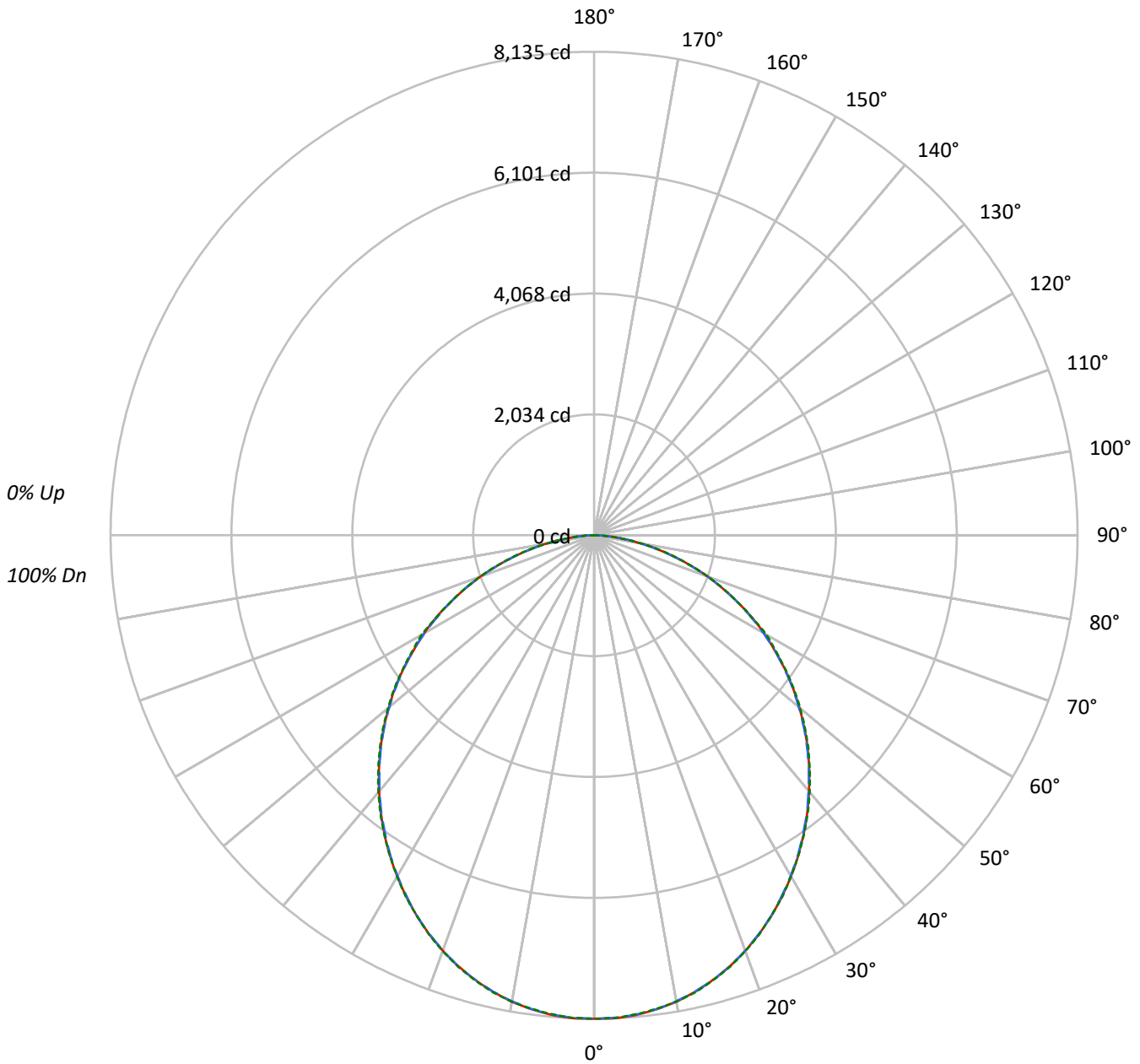
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21953.2 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 181.5
Input Voltage (V): 120
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: 25 FT

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Luminous Intensity Polar Plot



0% Up
100% Dn

— 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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	94	98	94	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70	70	70	70
3	90	80	72	65	88	78	71	65	75	69	63	73	67	62	70	65	61	59	59	59	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51	51	51	51
5	76	63	54	48	74	62	54	47	60	53	47	58	52	46	56	51	46	44	44	44	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38	38	38	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34	34	34	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30	30	30	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27	27	27	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10945	10945	10945
5°	10946	10936	10929
10°	10889	10879	10888
15°	10786	10786	10798
20°	10653	10647	10662
25°	10487	10482	10482
30°	10297	10281	10298
35°	10096	10069	10109
40°	9882	9863	9915
45°	9671	9651	9703
50°	9440	9415	9476
55°	9182	9158	9213
60°	8879	8858	9013
65°	8475	8477	8500
70°	8010	7967	8019
75°	7307	7250	7299
80°	6308	6230	6272
85°	4922	4872	4861



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	768.8	3.5
10°-20°	2183.5	9.9
20°-30°	3251.8	14.8
30°-40°	3841.8	17.5
40°-50°	3919.3	17.9
50°-60°	3497.1	15.9
60°-70°	2636.5	12.0
70°-80°	1478.2	6.7
80°-90°	376.1	1.7
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°	6204.2	28.3
0°-40°	10046.0	45.8
0°-60°	17462.4	79.5
0°-90°	21953.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	21953.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8135	8135	8135	8135	8135	
5°	8104	8100	8097	8098	8092	769
15°	7744	7739	7744	7749	7752	2183
25°	7064	7055	7061	7067	7061	3253
35°	6146	6138	6130	6148	6154	3845
45°	5082	5079	5072	5087	5100	3920
55°	3914	3906	3904	3916	3928	3496
65°	2662	2649	2663	2670	2670	2641
75°	1406	1381	1395	1387	1404	1488
85°	319	307	316	315	315	381
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8134.9	8134.9	8134.9	8134.9	8134.9
2.5°	8134.9	8131.0	8127.9	8127.1	8128.6
5°	8104.4	8100.5	8096.6	8098.2	8091.9
7.5°	8045.8	8046.6	8043.5	8044.3	8037.2
10°	7970.0	7966.1	7963.0	7970.0	7969.3
12.5°	7867.7	7860.7	7863.8	7874.7	7875.5
15°	7743.5	7738.8	7743.5	7748.9	7752.1
17.5°	7602.0	7598.1	7603.6	7604.4	7610.6
20°	7440.3	7435.6	7435.6	7443.4	7446.6
22.5°	7261.4	7254.4	7255.9	7261.4	7265.3
25°	7063.7	7055.1	7060.6	7066.9	7060.6
27.5°	6850.4	6845.8	6840.3	6848.1	6858.3
30°	6627.8	6618.4	6617.6	6623.1	6628.5
32.5°	6392.6	6381.7	6381.7	6388.7	6393.4
35°	6146.5	6137.9	6130.1	6148.1	6154.3
37.5°	5892.6	5882.4	5881.6	5892.6	5902.7
40°	5626.1	5617.5	5615.2	5634.0	5644.9
42.5°	5357.4	5351.9	5346.4	5365.2	5373.8
45°	5082.4	5079.2	5072.2	5087.0	5099.5
47.5°	4799.5	4789.4	4787.0	4804.2	4816.7
50°	4509.7	4505.8	4497.9	4513.6	4526.9
52.5°	4215.9	4211.2	4205.7	4219.8	4233.9
55°	3914.3	3905.7	3904.2	3915.9	3927.6
57.5°	3600.2	3593.2	3604.1	3615.1	3624.5
60°	3299.4	3283.0	3291.6	3304.1	3349.4
62.5°	2997.1	2968.2	2974.4	3008.8	2989.3
65°	2661.9	2648.6	2662.7	2670.5	2669.7
67.5°	2347.8	2332.2	2353.3	2347.0	2356.4
70°	2036.1	2008.7	2025.1	2027.5	2038.4
72.5°	1714.2	1690.7	1704.8	1711.8	1718.9
75°	1405.6	1381.3	1394.6	1386.8	1404.0
77.5°	1098.5	1083.7	1092.3	1097.7	1111.0
80°	814.1	797.7	804.0	804.7	809.4
82.5°	551.6	539.1	540.7	554.7	549.3
85°	318.8	307.1	315.6	314.9	314.9
87.5°	124.2	114.9	123.4	122.7	121.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)