

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: P34513

Luminaire Tested: **MAO-G-24-4-LD4-1-HI**

Test Date: 10/05/15

Test Information

Test Method: LM-79-08
Report Number: P34513
Test Lab: INNOVATION CENTER-P3
Test Date: 10/05/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MAO-G-24-4-LD4-1-HI
Description: FAILSAFE MAO LED 2X4 FIXTURE
Light Source: (84) NICHIA ELM 3500K LED
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OT50W/PRG1400C/UNV/DIM/L

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4261.9 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

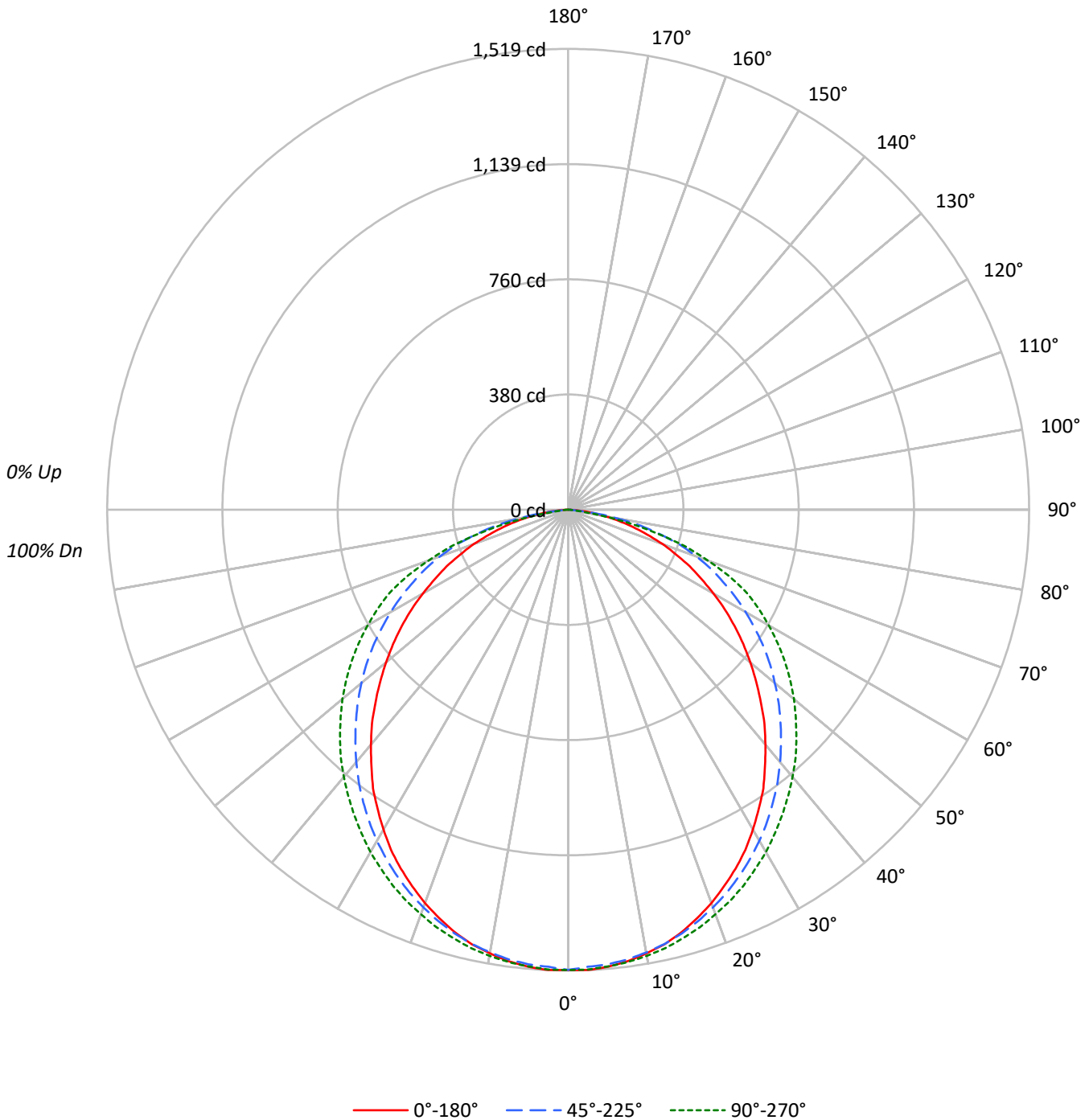
Input Watts (W): 45.3
Input Voltage (V): 120.0
Input Current (Ain): 0.379
Voltage Rise (V): NR
Power Factor: 0.9993
Total Harmonic Distortion (THDi): 8.39%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 5 HR
Ambient Temperature (°C): 25.0
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2041	2041	2041
5°	2042	2031	2041
10°	2029	2025	2040
15°	2009	2014	2036
20°	1976	1997	2032
25°	1937	1979	2029
30°	1891	1958	2024
35°	1841	1933	2019
40°	1776	1907	2020
45°	1709	1882	2023
50°	1639	1861	2033
55°	1569	1841	2043
60°	1488	1816	2053
65°	1407	1792	2069
70°	1302	1766	1924
75°	1149	1638	1596
80°	969	1271	845
85°	695	309	216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.4	3.4
10°-20°	409.1	9.6
20°-30°	615.5	14.4
30°-40°	735.9	17.3
40°-50°	761.2	17.9
50°-60°	695.4	16.3
60°-70°	547.5	12.8
70°-80°	304.3	7.1
80°-90°	49.6	1.2
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°	1168.0	27.4
0°-40°	1903.9	44.7
0°-60°	3360.5	78.8
0°-90°	4261.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4261.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1517	1517	1517	1517	1517	
5°	1512	1510	1504	1513	1511	143
15°	1442	1442	1446	1462	1462	406
25°	1305	1314	1333	1363	1367	601
35°	1121	1137	1177	1219	1229	699
45°	898	930	989	1047	1063	693
55°	669	707	785	849	871	598
65°	442	483	563	629	650	436
75°	221	262	315	319	307	235
85°	45	52	20	16	14	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1517	1517	1517	1517	1517
2.5°	1519	1516	1508	1517	1517
5°	1512	1510	1504	1513	1511
7.5°	1501	1500	1495	1505	1504
10°	1485	1484	1482	1493	1493
12.5°	1467	1466	1466	1479	1480
15°	1442	1442	1446	1462	1462
17.5°	1412	1415	1422	1440	1443
20°	1380	1385	1395	1417	1419
22.5°	1343	1350	1366	1392	1395
25°	1305	1314	1333	1363	1367
27.5°	1264	1273	1298	1329	1335
30°	1217	1228	1260	1294	1303
32.5°	1169	1184	1220	1257	1266
35°	1121	1137	1177	1219	1229
37.5°	1065	1086	1133	1177	1190
40°	1011	1034	1086	1135	1150
42.5°	957	983	1038	1092	1109
45°	898	930	989	1047	1063
47.5°	840	874	940	1000	1017
50°	783	817	889	952	971
52.5°	727	764	839	901	922
55°	669	707	785	849	871
57.5°	612	652	730	796	818
60°	553	595	675	741	763
62.5°	495	541	620	686	708
65°	442	483	563	629	650
67.5°	383	429	508	568	575
70°	331	373	449	489	489
72.5°	272	318	387	403	407
75°	221	262	315	319	307
77.5°	170	210	245	224	208
80°	125	158	164	128	109
82.5°	81	104	87	41	29
85°	45	52	20	16	14
87.5°	17	13	9	8	8
90°	0	0	0	0	0

(END OF REPORT)