

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: P34511

Luminaire Tested: **MAO-G-24-2-LD4-2-HI**

Test Date: 10/05/15

**Test Information**

Test Method: LM-79-08  
Report Number: P34511  
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-24-2-LD4-2-HI  
Description: FAILSAFE MAO LED 2X2 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: 3961.7 lumens  
Efficiency: N/A  
Efficacy: 88.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

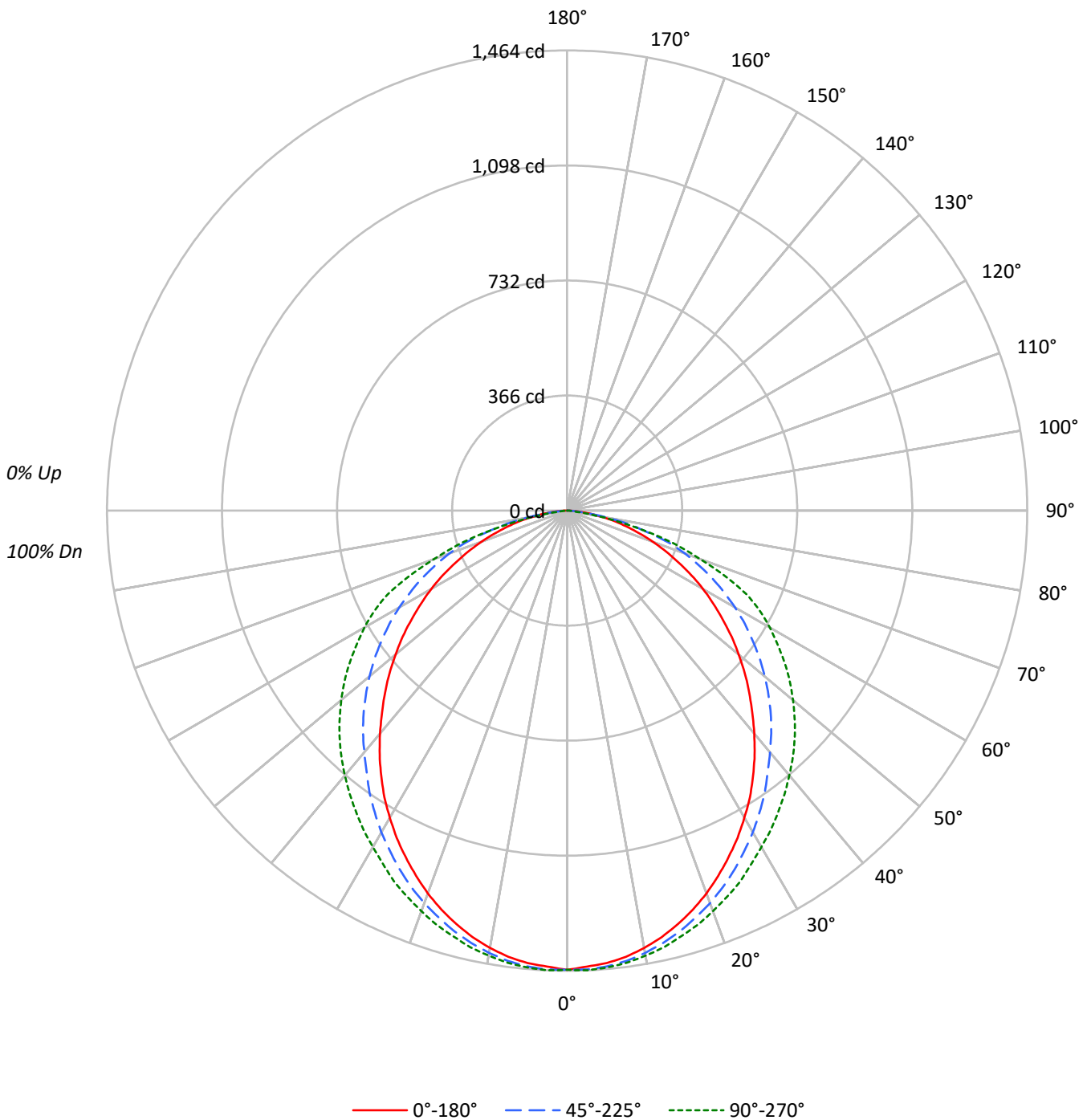
Input Watts (W): 45  
Input Voltage (V): 120.0  
Input Current (Ain): 0.376  
Voltage Rise (V): NR  
Power Factor: 0.9993  
Total Harmonic Distortion (THDi): 7.45%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: 5 HR  
Ambient Temperature (°C): 25.0  
Test Distance: 25 FT



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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	95	92		94	91	89		90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76		82	78	74		79	76	72	70
3	90	80	72	65	88	78	71	65	75	69	64		73	67	62		70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54		65	58	53		62	57	53	51
5	76	63	54	48	74	62	54	47	60	53	47		58	51	46		56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41		52	46	41		51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36		48	41	36		46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32		44	37	32		43	37	32	30
9	57	43	35	29	55	43	35	29	42	34	29		40	34	29		39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27		37	31	26		37	31	26	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3932	3932	3932
5°	3903	3933	3941
10°	3861	3905	3929
15°	3794	3861	3906
20°	3711	3806	3883
25°	3611	3741	3866
30°	3505	3673	3841
35°	3387	3600	3847
40°	3253	3527	3864
45°	3117	3486	3897
50°	2981	3437	3927
55°	2834	3378	3964
60°	2686	3321	4010
65°	2496	3241	4011
70°	2290	3131	3525
75°	2017	2745	2828
80°	1658	2015	1503
85°	1204	834	463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.9	3.5
10°-20°	390.3	9.9
20°-30°	580.2	14.6
30°-40°	687.2	17.3
40°-50°	708.5	17.9
50°-60°	647.3	16.3
60°-70°	502.9	12.7
70°-80°	263.6	6.7
80°-90°	43.7	1.1
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°	1108.4	28.0
0°-40°	1795.6	45.3
0°-60°	3151.4	79.5
0°-90°	3961.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3961.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1461	1461	1461	1461	1461	
5°	1445	1449	1456	1459	1459	137
15°	1362	1370	1386	1400	1402	384
25°	1216	1229	1260	1290	1302	560
35°	1031	1049	1096	1147	1171	645
45°	819	847	916	988	1024	632
55°	604	645	720	805	845	541
65°	392	435	509	593	630	389
75°	194	223	264	278	272	207
85°	39	42	27	19	15	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1461	1461	1461	1461	1461
2.5°	1452	1455	1461	1464	1464
5°	1445	1449	1456	1459	1459
7.5°	1432	1436	1445	1451	1451
10°	1413	1419	1429	1437	1438
12.5°	1390	1397	1409	1420	1423
15°	1362	1370	1386	1400	1402
17.5°	1331	1340	1358	1376	1382
20°	1296	1306	1329	1350	1356
22.5°	1257	1269	1296	1322	1330
25°	1216	1229	1260	1290	1302
27.5°	1174	1188	1221	1256	1268
30°	1128	1143	1182	1220	1236
32.5°	1082	1097	1139	1183	1205
35°	1031	1049	1096	1147	1171
37.5°	980	1001	1048	1111	1136
40°	926	949	1004	1073	1100
42.5°	872	897	961	1032	1063
45°	819	847	916	988	1024
47.5°	767	794	869	946	982
50°	712	742	821	903	938
52.5°	660	697	772	855	893
55°	604	645	720	805	845
57.5°	551	594	670	756	794
60°	499	540	617	704	745
62.5°	446	488	562	649	692
65°	392	435	509	593	630
67.5°	340	380	453	531	543
70°	291	325	398	443	448
72.5°	241	274	338	356	367
75°	194	223	264	278	272
77.5°	152	175	200	190	180
80°	107	124	130	112	97
82.5°	71	81	69	45	30
85°	39	42	27	19	15
87.5°	15	16	12	9	8
90°	0	0	0	0	0

(END OF REPORT)