

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: P34265

Luminaire Tested: **MNAE-G-48-LD4-AMB/LO-40**

Test Date: 07/30/15

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: P34265
Test Lab: INNOVATION CENTER-P3
Test Date: 07/30/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MNAE-G-48-LD4-AMB/LO-40
Description: FAILSAFE MNAE 4' RECESSED LED FIXTURE WITH A LOW AMBIENT LIGHT LEVEL
Light Source: (84) COOPER LIGHTING 4000K LEDS
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OT50W

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
	AS-5443-2	Good	REFLECTOR
	AS-5443-3	Good	DRIVER
	AS-5443-4	Good	UPPER MODULE
	AS-5443-5	Good	LENS
	AS-5443-6	Good	DRIVER 2
	AS-5443-7	Good	TRIM RING

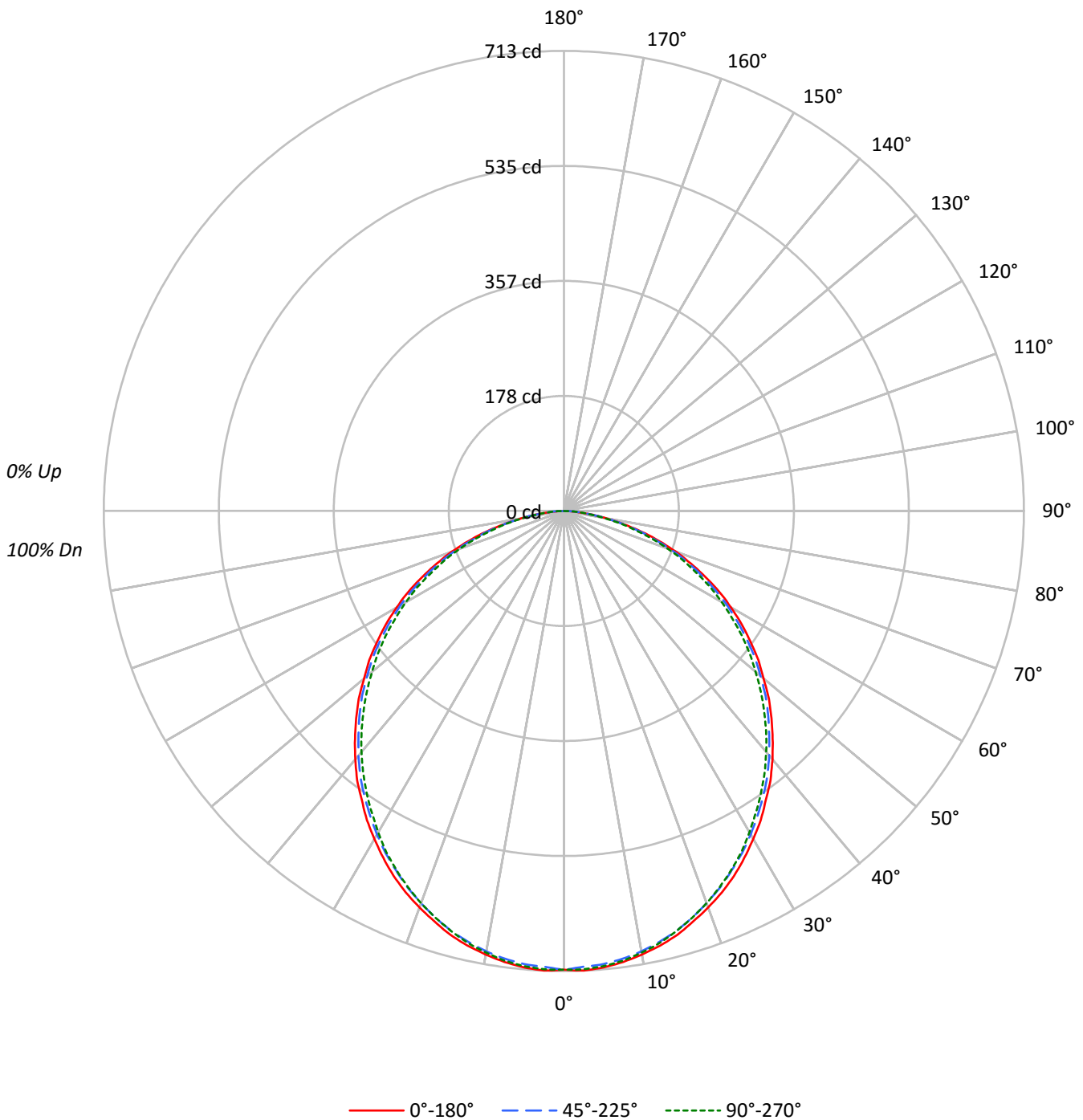
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1926.8 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 3.67' x H: 0')
CIE Type: Direct

Input Watts (W): 24.1
Input Voltage (V): 120.0
Input Current (A_{in}): 0.202
Voltage Rise (V): NR
Power Factor: 0.9957
Total Harmonic Distortion (THDi): 7.41%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 13 HR
Ambient Temperature (°C): 25.0
Test Distance: 25 FT

TEST NUMBER: P34265
CATALOG NUMBER: MNAE-G-48-LD4-AMB/LO-40

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	78	96	89	83	78	85	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	52	46	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5566	5566	5566
5°	5579	5540	5564
10°	5548	5509	5525
15°	5511	5462	5462
20°	5448	5390	5390
25°	5390	5312	5303
30°	5306	5234	5198
35°	5218	5151	5094
40°	5140	5058	4987
45°	5037	4960	4860
50°	4920	4847	4725
55°	4818	4722	4599
60°	4681	4572	4431
65°	4483	4353	4186
70°	4234	4074	3937
75°	3781	3660	3478
80°	3111	3066	2930
85°	2066	2245	2245



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.2	3.5
10°-20°	190.6	9.9
20°-30°	284.6	14.8
30°-40°	337.8	17.5
40°-50°	345.7	17.9
50°-60°	309.3	16.1
60°-70°	232.7	12.1
70°-80°	128.1	6.6
80°-90°	30.8	1.6
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°	542.4	28.1
0°-40°	880.2	45.7
0°-60°	1535.2	79.7
0°-90°	1926.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1926.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	710	708	705	708	708	67
15°	680	678	674	676	674	192
25°	624	621	615	616	614	287
35°	546	545	539	536	533	342
45°	455	455	448	443	439	351
55°	353	353	346	340	337	316
65°	242	241	235	230	226	240
75°	125	124	121	118	115	133
85°	23	24	25	25	25	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	711	711	711	711	711
2.5°	713	711	707	711	711
5°	710	708	705	708	708
7.5°	705	704	700	704	703
10°	698	697	693	696	695
12.5°	690	688	684	687	686
15°	680	678	674	676	674
17.5°	667	666	661	663	661
20°	654	652	647	648	647
22.5°	640	637	632	633	631
25°	624	621	615	616	614
27.5°	606	604	598	598	596
30°	587	585	579	578	575
32.5°	568	566	559	558	554
35°	546	545	539	536	533
37.5°	526	524	518	514	511
40°	503	502	495	490	488
42.5°	479	479	471	467	464
45°	455	455	448	443	439
47.5°	431	431	424	418	414
50°	404	405	398	393	388
52.5°	380	381	373	367	363
55°	353	353	346	340	337
57.5°	327	326	319	313	309
60°	299	298	292	286	283
62.5°	272	270	264	258	256
65°	242	241	235	230	226
67.5°	213	212	207	202	200
70°	185	182	178	174	172
72.5°	155	153	149	146	144
75°	125	124	121	118	115
77.5°	96	96	93	90	90
80°	69	69	68	66	65
82.5°	45	45	44	43	43
85°	23	24	25	25	25
87.5°	8	10	12	12	12
90°	0	0	0	0	0

(END OF REPORT)