

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: METALUX

Report Number: P295049

Luminaire Tested: **24CZ2-50-HRP-UNV-L940-CD1-U**

Issue Date: 12/2/2019

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: P295049
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50-HRP-UNV-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (84) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

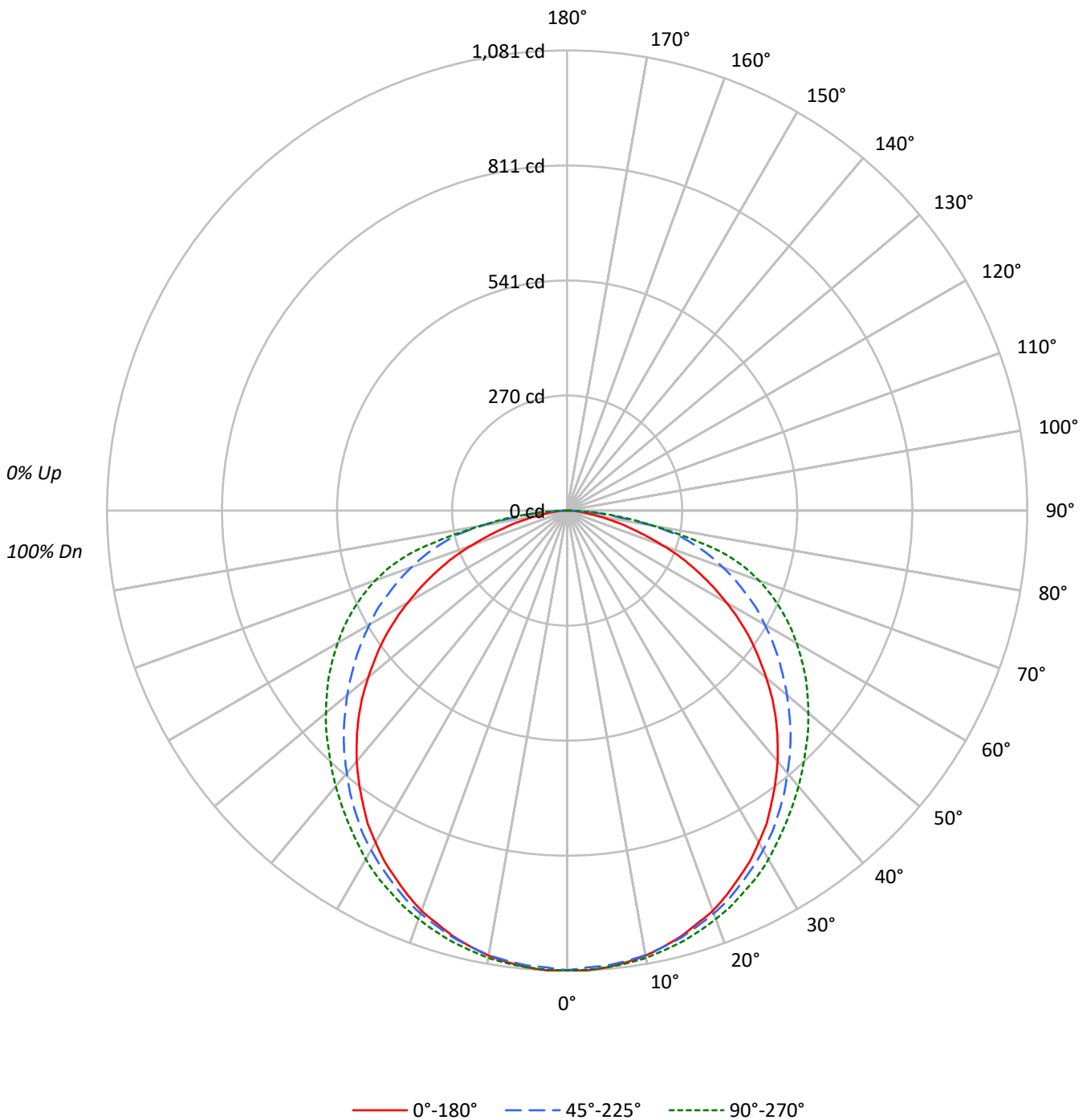
Lumens per Lamp: N/A
Luminaire Lumens: 3328.0 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 48.6
Input Voltage (V): NR
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





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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1453	1453	1453
5°	1455	1449	1455
10°	1451	1449	1458
15°	1442	1446	1459
20°	1432	1442	1462
25°	1415	1435	1464
30°	1398	1431	1470
35°	1375	1423	1472
40°	1351	1414	1485
45°	1320	1413	1509
50°	1277	1411	1549
55°	1232	1422	1605
60°	1162	1443	1676
65°	1074	1477	1770
70°	937	1529	1886
75°	761	1608	1948
80°	561	1576	1576
85°	431	1161	1312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	3.1
10°-20°	293.7	8.8
20°-30°	447.2	13.4
30°-40°	543.0	16.3
40°-50°	573.7	17.2
50°-60°	541.3	16.3
60°-70°	450.1	13.5
70°-80°	296.1	8.9
80°-90°	80.7	2.4
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°	843.2	25.3
0°-40°	1386.2	41.7
0°-60°	2501.1	75.2
0°-90°	3328.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3328.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1080	1080	1080	1080	1080	
5°	1077	1077	1073	1077	1077	102
15°	1035	1037	1038	1048	1048	292
25°	953	959	967	984	986	440
35°	837	847	867	889	896	524
45°	694	708	743	779	793	534
55°	525	548	606	663	684	468
65°	337	376	464	532	556	333
75°	146	213	309	366	375	158
85°	28	61	75	84	85	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1079.8	1079.8	1079.8	1079.8	1079.8
2.5°	1081.2	1079.8	1074.2	1079.8	1079.8
5°	1077.0	1077.0	1072.8	1077.0	1077.0
7.5°	1070.0	1070.0	1067.2	1072.8	1072.8
10°	1061.7	1061.7	1060.3	1067.2	1067.2
12.5°	1049.1	1050.5	1049.1	1057.5	1057.5
15°	1035.2	1036.6	1038.0	1047.7	1047.7
17.5°	1017.1	1019.9	1022.6	1033.8	1035.2
20°	1000.4	1001.7	1007.3	1019.9	1021.2
22.5°	978.1	982.2	989.2	1001.7	1005.9
25°	953.0	958.6	966.9	983.6	986.4
27.5°	929.3	933.5	944.6	962.7	968.3
30°	900.0	907.0	920.9	939.0	946.0
32.5°	872.2	879.1	895.9	915.4	920.9
35°	837.3	847.1	866.6	888.9	895.9
37.5°	803.9	813.7	837.3	862.4	870.8
40°	769.1	780.2	805.3	834.6	845.7
42.5°	731.5	746.8	774.6	806.7	819.2
45°	693.8	707.8	742.6	778.8	792.8
47.5°	653.4	670.2	707.8	751.0	767.7
50°	610.2	631.1	674.3	721.7	739.8
52.5°	567.1	590.7	639.5	692.4	711.9
55°	525.3	547.5	606.1	663.2	684.1
57.5°	479.3	507.1	571.2	632.5	653.4
60°	431.9	462.6	536.4	600.5	622.8
62.5°	384.5	419.4	503.0	567.1	590.7
65°	337.2	376.2	464.0	532.2	555.9
67.5°	291.2	334.4	427.7	496.0	519.7
70°	238.2	292.6	388.7	455.6	479.3
72.5°	189.5	252.2	351.1	413.8	434.7
75°	146.3	213.2	309.3	366.4	374.8
77.5°	107.3	174.2	266.1	285.6	287.0
80°	72.4	139.3	203.4	200.6	203.4
82.5°	47.4	104.5	128.2	143.5	144.9
85°	27.9	61.3	75.2	83.6	85.0
87.5°	13.9	20.9	26.5	27.9	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)