

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: P294833

Luminaire Tested: **22CZ2-24HE-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: P294833
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-24HE-HRP-UNV-L940-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (112) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1661.8 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

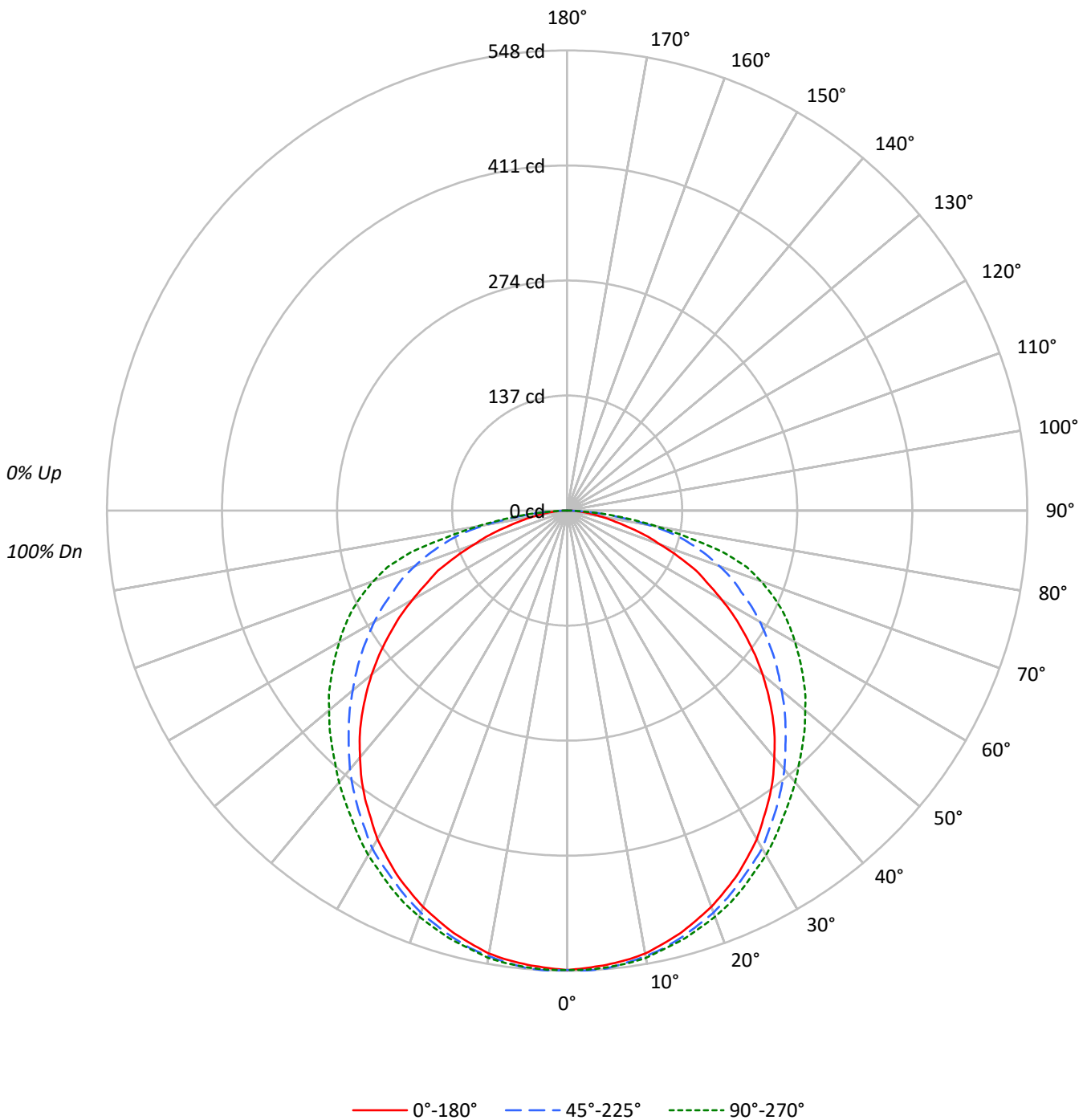
Input Watts (W): 19.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1473	1473	1473
5°	1467	1478	1475
10°	1464	1472	1478
15°	1451	1466	1475
20°	1438	1459	1474
25°	1423	1447	1472
30°	1404	1443	1472
35°	1377	1426	1470
40°	1348	1414	1484
45°	1316	1400	1508
50°	1273	1396	1549
55°	1215	1407	1608
60°	1145	1427	1687
65°	1081	1455	1802
70°	924	1518	1930
75°	774	1580	2006
80°	634	1526	1674
85°	550	1133	1229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.9	3.1
10°-20°	148.3	8.9
20°-30°	224.8	13.5
30°-40°	271.5	16.3
40°-50°	285.3	17.2
50°-60°	268.4	16.2
60°-70°	223.8	13.5
70°-80°	148.3	8.9
80°-90°	39.5	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°	425.0	25.6
0°-40°	696.5	41.9
0°-60°	1250.2	75.2
0°-90°	1661.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1661.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	547	547	547	547	547	
5°	543	544	547	547	546	52
15°	521	523	526	528	529	147
25°	479	482	487	494	496	221
35°	419	424	434	443	448	262
45°	346	351	368	387	396	266
55°	259	270	300	330	343	232
65°	170	184	228	266	283	165
75°	74	104	152	183	193	81
85°	18	27	37	40	40	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	547.2	547.2	547.2	547.2	547.2
2.5°	545.1	546.1	548.2	548.2	547.2
5°	543.0	544.1	547.2	547.2	546.1
7.5°	539.9	540.9	543.0	545.1	544.1
10°	535.7	536.7	538.8	540.9	540.9
12.5°	528.3	529.4	533.6	534.6	534.6
15°	521.0	523.1	526.2	528.3	529.4
17.5°	511.6	513.7	517.8	522.0	522.0
20°	502.1	504.2	509.5	513.7	514.7
22.5°	490.6	493.7	499.0	504.2	506.3
25°	479.1	482.2	487.4	493.7	495.8
27.5°	465.4	468.6	475.9	483.3	484.3
30°	451.8	454.9	464.4	470.7	473.8
32.5°	435.0	439.2	448.7	458.1	461.2
35°	419.3	423.5	434.0	443.4	447.6
37.5°	402.5	406.7	418.3	429.8	435.0
40°	383.7	388.9	402.5	415.1	422.5
42.5°	365.8	371.1	384.7	401.5	408.8
45°	345.9	351.2	367.9	386.8	396.2
47.5°	325.0	331.3	351.2	374.2	383.7
50°	304.0	311.3	333.4	359.6	370.0
52.5°	282.0	291.4	316.6	344.9	357.5
55°	258.9	270.5	299.8	330.2	342.8
57.5°	236.9	247.4	282.0	314.5	328.1
60°	212.8	226.4	265.2	298.8	313.4
62.5°	189.7	204.4	247.4	283.0	298.8
65°	169.8	184.5	228.5	266.3	283.0
67.5°	143.6	163.5	212.8	248.4	265.2
70°	117.4	144.7	192.9	229.6	245.3
72.5°	97.5	123.7	173.0	209.7	224.3
75°	74.4	103.8	152.0	183.4	192.9
77.5°	55.6	86.0	130.0	145.7	146.8
80°	40.9	66.0	98.5	103.8	108.0
82.5°	28.3	46.1	63.9	70.2	72.3
85°	17.8	27.3	36.7	39.8	39.8
87.5°	9.4	10.5	12.6	12.6	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)