

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: P294851

Luminaire Tested: **22CZ2-39HE-HRP-UNV-L930-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: P294851
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: 22CZ2-39HE-HRP-UNV-L930-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (196) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2610.7 lumens
Efficiency: N/A
Efficacy: 86.2 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

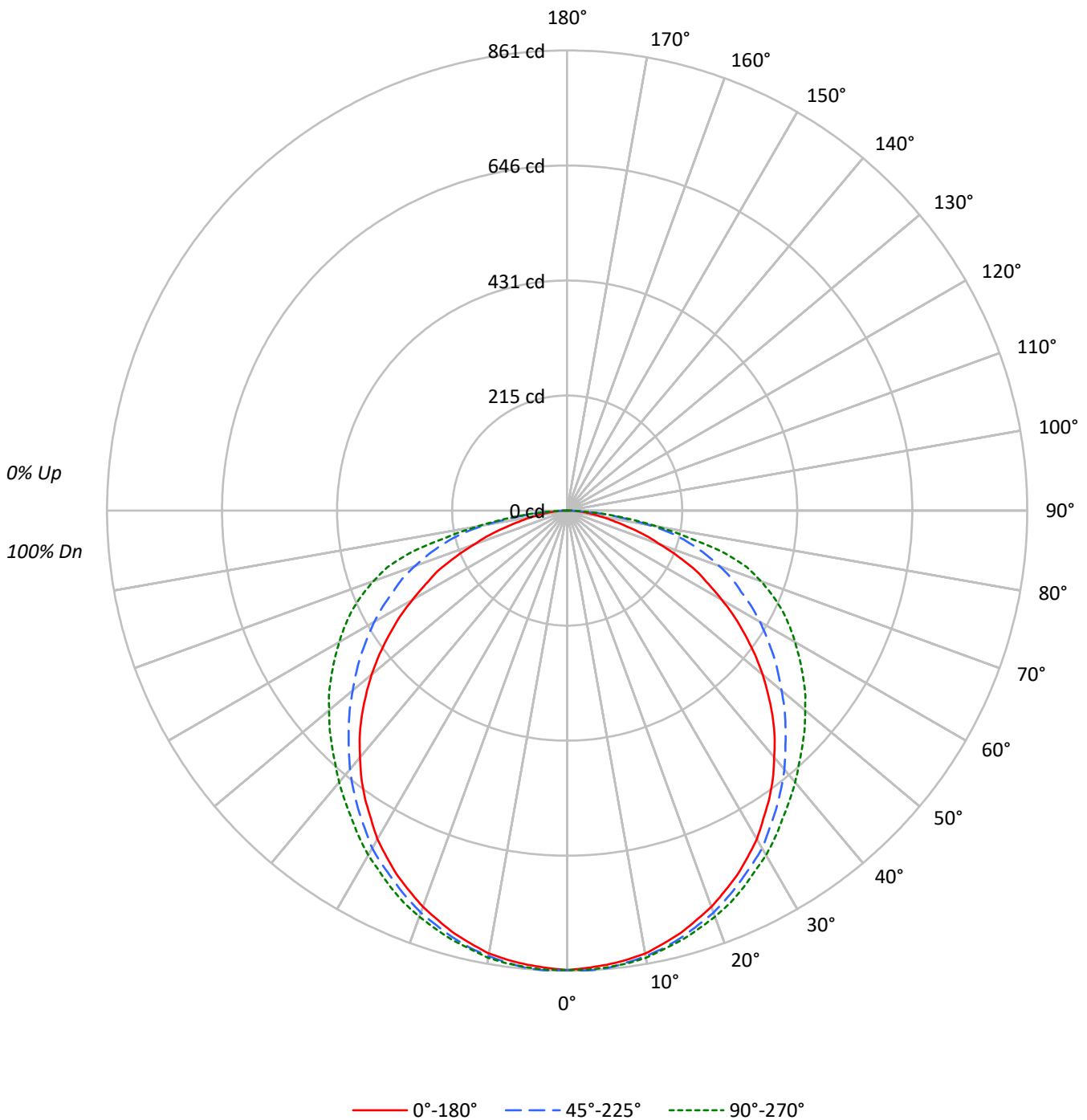
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2313	2313	2313
5°	2304	2322	2318
10°	2300	2313	2322
15°	2280	2303	2317
20°	2259	2292	2316
25°	2235	2274	2313
30°	2206	2267	2313
35°	2164	2240	2310
40°	2118	2222	2331
45°	2068	2200	2369
50°	1999	2192	2434
55°	1909	2210	2526
60°	1799	2243	2650
65°	1699	2286	2832
70°	1452	2384	3032
75°	1215	2483	3150
80°	995	2399	2628
85°	865	1778	1933



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	3.1
10°-20°	233.1	8.9
20°-30°	353.2	13.5
30°-40°	426.5	16.3
40°-50°	448.2	17.2
50°-60°	421.7	16.2
60°-70°	351.6	13.5
70°-80°	232.9	8.9
80°-90°	62.1	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°	667.8	25.6
0°-40°	1094.3	41.9
0°-60°	1964.1	75.2
0°-90°	2610.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2610.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	853	855	860	860	858	81
15°	818	822	827	830	832	231
25°	753	758	766	776	779	347
35°	659	665	682	697	703	412
45°	544	552	578	608	622	419
55°	407	425	471	519	538	364
65°	267	290	359	418	445	260
75°	117	163	239	288	303	127
85°	28	43	58	63	63	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	859.7	859.7	859.7	859.7	859.7
2.5°	856.4	858.0	861.3	861.3	859.7
5°	853.1	854.7	859.7	859.7	858.0
7.5°	848.1	849.8	853.1	856.4	854.7
10°	841.6	843.2	846.5	849.8	849.8
12.5°	830.0	831.7	838.3	839.9	839.9
15°	818.5	821.8	826.7	830.0	831.7
17.5°	803.7	807.0	813.6	820.1	820.1
20°	788.9	792.2	800.4	807.0	808.6
22.5°	770.7	775.7	783.9	792.2	795.4
25°	752.6	757.6	765.8	775.7	779.0
27.5°	731.2	736.2	747.7	759.2	760.9
30°	709.8	714.7	729.6	739.5	744.4
32.5°	683.5	690.0	704.9	719.7	724.6
35°	658.8	665.3	681.8	696.6	703.2
37.5°	632.4	639.0	657.1	675.2	683.5
40°	602.8	611.0	632.4	652.2	663.7
42.5°	574.8	583.0	604.4	630.8	642.3
45°	543.5	551.7	578.1	607.7	622.5
47.5°	510.5	520.4	551.7	587.9	602.8
50°	477.6	489.1	523.7	564.9	581.3
52.5°	443.0	457.8	497.4	541.8	561.6
55°	406.8	424.9	471.0	518.8	538.5
57.5°	372.2	388.7	443.0	494.1	515.5
60°	334.3	355.7	416.7	469.4	492.4
62.5°	298.1	321.1	388.7	444.7	469.4
65°	266.8	289.9	359.0	418.3	444.7
67.5°	225.6	256.9	334.3	390.3	416.7
70°	184.5	227.3	303.0	360.7	385.4
72.5°	153.2	194.3	271.7	329.4	352.4
75°	116.9	163.0	238.8	288.2	303.0
77.5°	87.3	135.0	204.2	228.9	230.6
80°	64.2	103.8	154.8	163.0	169.6
82.5°	44.5	72.5	100.5	110.3	113.6
85°	28.0	42.8	57.6	62.6	62.6
87.5°	14.8	16.5	19.8	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)