

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: P475141

Luminaire Tested: **22CZ2-39-HRP-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475141
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39-HRP-UNV-L835-CD1-U
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3194.0 lumens
Efficiency: N/A
Efficacy: 109.0 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): 29.3
Input Voltage (V): 120
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°	2830	2830	2830
5°	2819	2841	2836
10°	2813	2830	2841
15°	2790	2818	2835
20°	2764	2804	2833
25°	2734	2782	2830
30°	2698	2774	2830
35°	2647	2740	2826
40°	2590	2718	2852
45°	2530	2692	2898
50°	2446	2682	2977
55°	2335	2704	3091
60°	2201	2743	3243
65°	2078	2797	3465
70°	1776	2917	3710
75°	1488	3038	3854
80°	1220	2935	3216
85°	1056	2177	2362



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.7	3.1
10°-20°	285.1	8.9
20°-30°	432.1	13.5
30°-40°	521.8	16.3
40°-50°	548.3	17.2
50°-60°	515.9	16.2
60°-70°	430.1	13.5
70°-80°	285.0	8.9
80°-90°	75.9	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°	816.9	25.6
0°-40°	1338.7	41.9
0°-60°	2402.9	75.2
0°-90°	3194.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3194.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1044	1046	1052	1052	1050	99
15°	1001	1005	1011	1016	1018	282
25°	921	927	937	949	953	424
35°	806	814	834	852	860	504
45°	665	675	707	743	762	512
55°	498	520	576	635	659	445
65°	326	354	439	512	544	318
75°	143	200	292	353	371	155
85°	34	52	70	76	76	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1051.7	1051.7	1051.7	1051.7	1051.7
2.5°	1047.8	1049.7	1053.8	1053.8	1051.7
5°	1043.7	1045.6	1051.7	1051.7	1049.7
7.5°	1037.6	1039.8	1043.7	1047.8	1045.6
10°	1029.6	1031.6	1035.7	1039.8	1039.8
12.5°	1015.5	1017.5	1025.5	1027.6	1027.6
15°	1001.3	1005.4	1011.4	1015.5	1017.5
17.5°	983.3	987.2	995.2	1003.4	1003.4
20°	965.2	969.1	979.2	987.2	989.2
22.5°	942.9	949.0	959.1	969.1	973.2
25°	920.9	926.9	936.9	949.0	953.1
27.5°	894.5	900.6	914.8	928.9	930.8
30°	868.3	874.4	892.6	904.7	910.7
32.5°	836.1	844.1	862.3	880.5	886.5
35°	805.9	814.1	834.2	852.3	860.3
37.5°	773.7	781.7	803.9	826.2	836.1
40°	737.4	747.5	773.7	797.9	811.9
42.5°	703.2	713.3	739.5	771.7	785.8
45°	664.9	674.9	707.3	743.4	761.6
47.5°	624.5	636.6	674.9	719.4	737.4
50°	584.3	598.4	640.7	691.1	711.2
52.5°	541.9	560.1	608.5	663.0	687.0
55°	497.6	519.9	576.3	634.7	658.9
57.5°	455.3	475.6	541.9	604.4	630.6
60°	409.0	435.1	509.7	574.1	602.5
62.5°	364.7	393.0	475.6	544.1	574.1
65°	326.4	354.5	439.2	511.7	544.1
67.5°	276.0	314.3	409.0	477.5	509.7
70°	225.7	278.0	370.7	441.2	471.5
72.5°	187.4	237.8	332.5	402.9	431.2
75°	143.1	199.5	292.2	352.6	370.7
77.5°	106.8	165.2	249.9	280.1	282.1
80°	78.7	126.9	189.4	199.5	207.5
82.5°	54.5	88.6	123.0	134.9	139.0
85°	34.2	52.3	70.5	76.5	76.5
87.5°	18.2	20.1	24.2	24.2	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)