

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: P474963

Luminaire Tested: **22CZ2-110VHE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474963
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-S-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11454.6 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

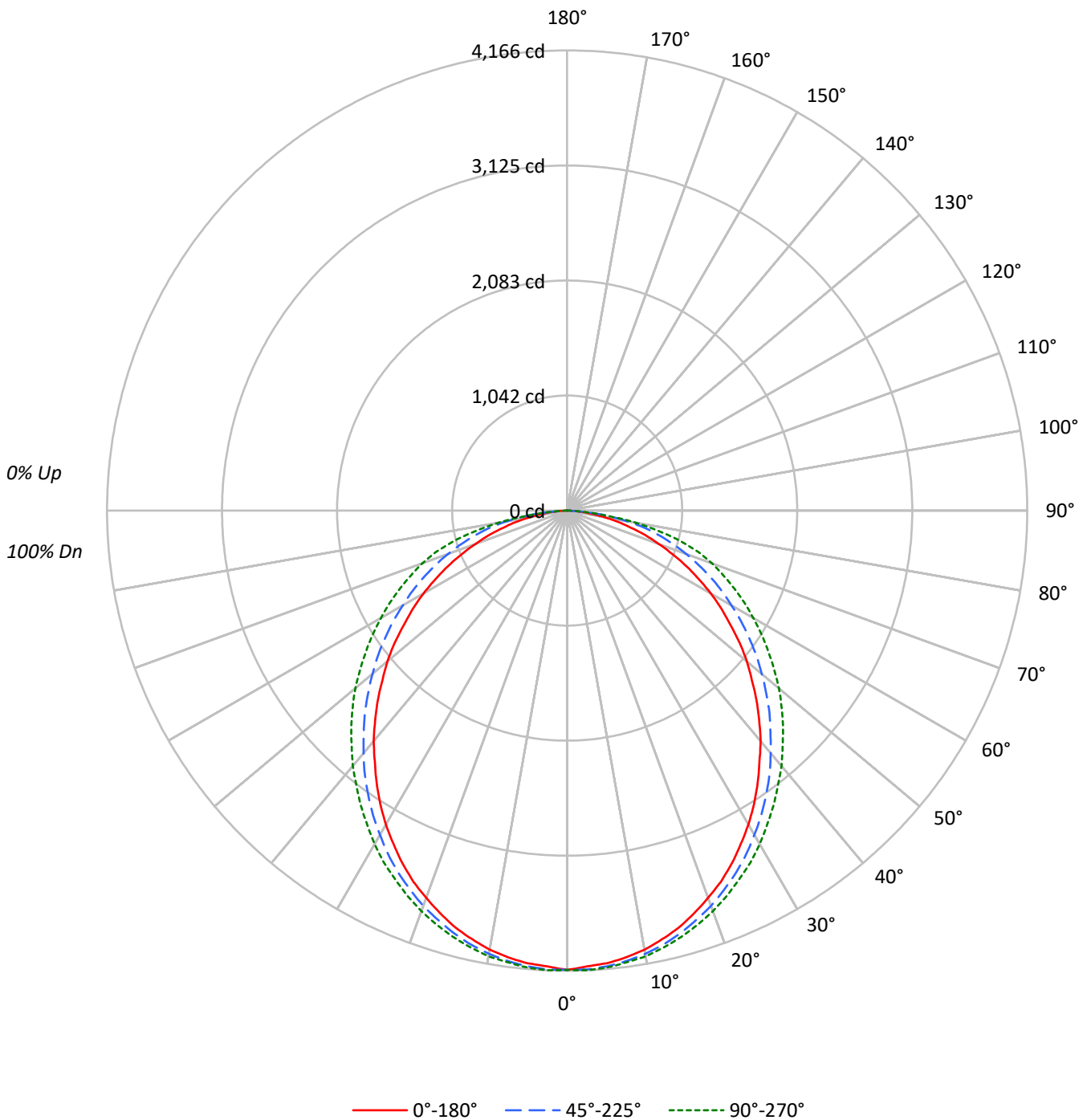
Input Watts (W): 84.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	88	86	83
2	99	90	83	77	96	88	82	77	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63		72	66	61		69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53		64	58	53		62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46		57	51	46		56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	36		46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26		37	31	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11189	11189	11189
5°	11112	11187	11217
10°	11029	11135	11195
15°	10889	11036	11128
20°	10685	10907	11050
25°	10469	10741	10938
30°	10198	10534	10836
35°	9880	10317	10700
40°	9572	10069	10604
45°	9220	9853	10518
50°	8889	9632	10479
55°	8466	9442	10430
60°	8086	9249	10473
65°	7590	9143	10626
70°	6936	9029	10970
75°	6226	8963	10980
80°	5241	8463	9751
85°	3937	5734	5308



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.7	3.4
10°-20°	1115.3	9.7
20°-30°	1662.9	14.5
30°-40°	1962.2	17.1
40°-50°	1999.1	17.5
50°-60°	1802.9	15.7
60°-70°	1415.9	12.4
70°-80°	885.2	7.7
80°-90°	218.2	1.9
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°	3171.0	27.7
0°-40°	5133.2	44.8
0°-60°	8935.3	78.0
0°-90°	11454.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11454.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4158	4158	4158	4158	4158	
5°	4114	4122	4141	4150	4152	390
15°	3908	3922	3961	3989	3994	1100
25°	3526	3545	3618	3670	3684	1622
35°	3008	3049	3141	3227	3257	1881
45°	2423	2464	2589	2714	2764	1869
55°	1805	1863	2012	2168	2223	1619
65°	1192	1256	1436	1597	1669	1177
75°	599	682	862	1009	1056	640
85°	128	164	186	183	172	155
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4158.0	4158.0	4158.0	4158.0	4158.0
2.5°	4130.3	4138.6	4158.0	4166.3	4166.3
5°	4113.7	4122.0	4141.4	4149.7	4152.5
7.5°	4080.4	4091.5	4113.7	4124.8	4124.8
10°	4036.1	4049.9	4074.9	4091.5	4097.0
12.5°	3975.1	3991.7	4025.0	4044.4	4049.9
15°	3908.5	3922.4	3961.2	3988.9	3994.5
17.5°	3822.6	3844.8	3886.4	3922.4	3930.7
20°	3731.1	3756.1	3808.7	3850.3	3858.6
22.5°	3636.9	3656.3	3714.5	3764.4	3775.5
25°	3526.0	3545.4	3617.5	3670.1	3684.0
27.5°	3404.0	3437.3	3509.4	3570.4	3592.5
30°	3282.1	3315.3	3390.2	3462.2	3487.2
32.5°	3149.0	3185.0	3271.0	3345.8	3370.8
35°	3007.6	3049.2	3140.7	3226.6	3257.1
37.5°	2860.7	2907.8	3010.4	3101.9	3135.1
40°	2724.9	2758.2	2866.3	2971.6	3018.7
42.5°	2572.4	2616.8	2724.9	2844.1	2888.4
45°	2422.7	2464.3	2589.1	2713.8	2763.7
47.5°	2267.5	2320.2	2444.9	2583.5	2633.4
50°	2123.4	2167.7	2300.8	2447.7	2503.1
52.5°	1968.1	2015.3	2159.4	2311.9	2361.8
55°	1804.6	1862.8	2012.5	2167.7	2223.2
57.5°	1654.9	1710.3	1868.3	2029.1	2087.3
60°	1502.4	1557.9	1718.6	1882.2	1946.0
62.5°	1341.7	1405.4	1580.0	1738.1	1810.1
65°	1192.0	1255.7	1435.9	1596.7	1668.8
67.5°	1034.0	1108.8	1289.0	1458.1	1530.2
70°	881.5	970.2	1147.6	1313.9	1394.3
72.5°	745.7	817.7	1003.5	1178.1	1244.6
75°	598.8	681.9	862.1	1009.0	1056.1
77.5°	474.0	546.1	718.0	815.0	845.5
80°	338.2	418.6	546.1	604.3	629.2
82.5°	224.5	291.1	371.5	382.5	377.0
85°	127.5	163.5	185.7	183.0	171.9
87.5°	49.9	55.4	41.6	24.9	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)