

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: P474046

Luminaire Tested: **24CZ2-110VHE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474046
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11259.9 lumens
Efficiency: N/A
Efficacy: 146.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

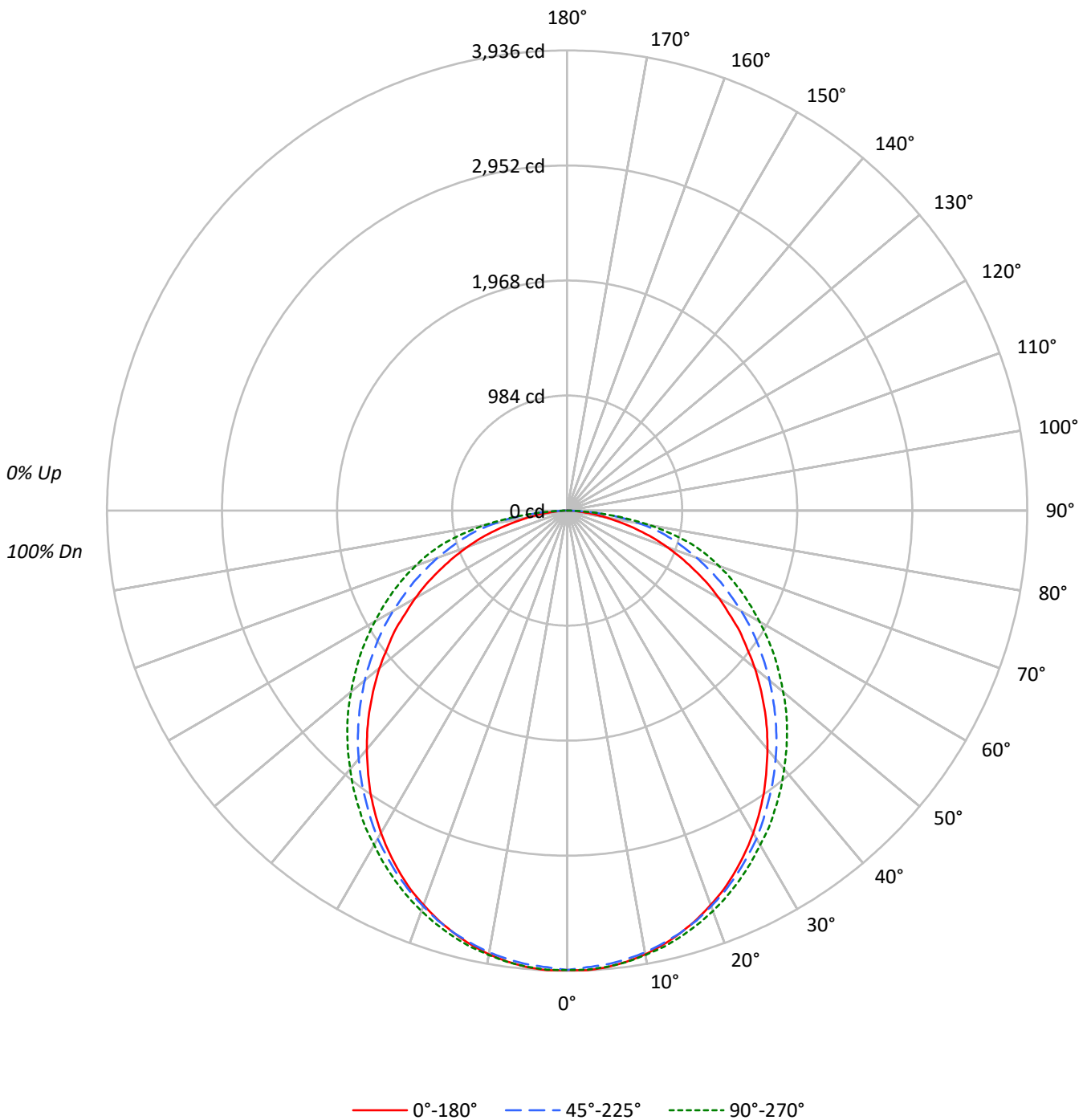
Input Watts (W): 77
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83					83			
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32					32			
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5288	5288	5288
5°	5296	5263	5291
10°	5266	5243	5274
15°	5212	5209	5253
20°	5140	5156	5220
25°	5055	5099	5179
30°	4948	5034	5129
35°	4824	4946	5101
40°	4681	4873	5071
45°	4540	4797	5061
50°	4386	4731	5048
55°	4230	4673	5076
60°	4036	4628	5111
65°	3821	4611	5235
70°	3565	4635	5421
75°	3173	4769	5711
80°	2594	4872	5575
85°	1828	4255	4340



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	371.6	3.3
10°-20°	1058.3	9.4
20°-30°	1586.3	14.1
30°-40°	1889.3	16.8
40°-50°	1948.1	17.3
50°-60°	1777.6	15.8
60°-70°	1421.5	12.6
70°-80°	928.5	8.2
80°-90°	278.8	2.5
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°	3016.1	26.8
0°-40°	4905.5	43.6
0°-60°	8631.2	76.7
0°-90°	11259.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11259.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3930	3930	3930	3930	3930	
5°	3921	3914	3897	3921	3917	372
15°	3742	3743	3740	3771	3771	1055
25°	3405	3410	3434	3484	3488	1568
35°	2937	2957	3011	3087	3105	1835
45°	2386	2428	2521	2626	2660	1840
55°	1803	1855	1992	2123	2164	1606
65°	1200	1282	1448	1591	1644	1190
75°	610	712	917	1065	1099	649
85°	118	213	276	281	281	150
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3930.2	3930.2	3930.2	3930.2	3930.2
2.5°	3935.7	3930.2	3909.9	3933.9	3930.2
5°	3920.9	3913.6	3896.9	3920.9	3917.2
7.5°	3891.4	3887.7	3871.0	3898.8	3895.1
10°	3854.4	3850.7	3837.7	3865.5	3859.9
12.5°	3802.6	3800.7	3791.5	3824.8	3821.1
15°	3741.5	3743.4	3739.7	3771.1	3771.1
17.5°	3671.3	3669.4	3676.8	3715.7	3712.0
20°	3589.9	3591.7	3601.0	3645.4	3645.4
22.5°	3504.8	3503.0	3523.3	3567.7	3571.4
25°	3404.9	3410.5	3434.5	3484.5	3488.2
27.5°	3297.7	3306.9	3336.5	3393.8	3399.4
30°	3184.8	3195.9	3240.3	3294.0	3301.4
32.5°	3060.9	3085.0	3125.7	3194.1	3212.6
35°	2937.0	2957.4	3011.0	3086.8	3105.3
37.5°	2800.1	2833.4	2894.5	2977.7	3001.7
40°	2665.1	2698.4	2774.3	2861.2	2887.1
42.5°	2528.3	2563.4	2650.3	2748.4	2776.1
45°	2385.9	2428.4	2520.9	2626.3	2659.6
47.5°	2239.7	2289.7	2389.6	2504.2	2541.2
50°	2095.5	2145.4	2260.1	2378.5	2411.8
52.5°	1940.1	2003.0	2125.1	2252.7	2286.0
55°	1803.3	1855.1	1991.9	2123.2	2163.9
57.5°	1642.4	1712.6	1858.8	1991.9	2030.8
60°	1499.9	1564.7	1720.0	1855.1	1899.4
62.5°	1355.7	1422.3	1577.6	1731.1	1771.8
65°	1200.3	1281.7	1448.2	1590.6	1644.2
67.5°	1052.4	1137.4	1307.6	1459.3	1514.7
70°	906.3	993.2	1178.1	1333.5	1377.9
72.5°	762.0	852.6	1045.0	1196.6	1248.4
75°	610.3	712.1	917.4	1065.3	1098.6
77.5°	467.9	580.7	787.9	887.8	911.8
80°	334.8	458.7	628.8	701.0	719.5
82.5°	220.1	340.3	469.8	508.6	503.1
85°	118.4	212.7	275.6	281.1	281.1
87.5°	46.2	85.1	86.9	66.6	62.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)