

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: P473857

Luminaire Tested: **24CZ2-165VHE-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473857
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-165VHE-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16532.8 lumens
Efficiency: N/A
Efficacy: 135.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

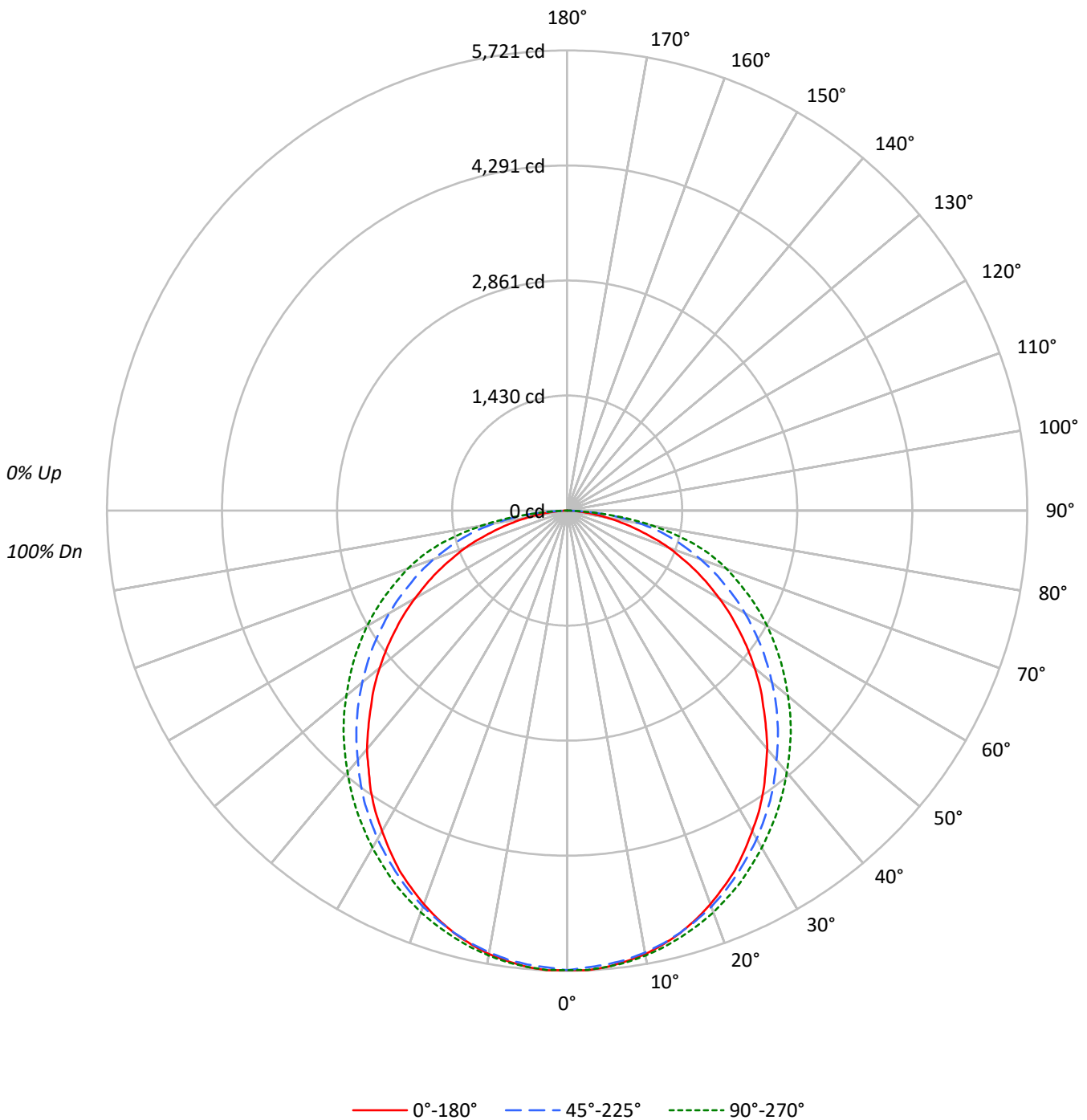
Input Watts (W): 122.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7687	7687	7687
5°	7691	7651	7691
10°	7649	7623	7674
15°	7571	7567	7642
20°	7457	7503	7610
25°	7328	7411	7574
30°	7150	7324	7519
35°	6989	7230	7489
40°	6798	7112	7459
45°	6566	7039	7481
50°	6368	6961	7503
55°	6134	6911	7587
60°	5879	6878	7726
65°	5604	6854	7925
70°	5275	6924	8290
75°	4638	7067	8622
80°	3870	7119	8319
85°	2763	6103	6184



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	540.1	3.3
10°-20°	1538.3	9.3
20°-30°	2307.8	14.0
30°-40°	2755.3	16.7
40°-50°	2853.9	17.3
50°-60°	2627.3	15.9
60°-70°	2119.4	12.8
70°-80°	1384.8	8.4
80°-90°	406.0	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°	4386.1	26.5
0°-40°	7141.4	43.2
0°-60°	12622.7	76.3
0°-90°	16532.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16532.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5713	5713	5713	5713	5713	
5°	5694	5689	5665	5697	5694	540
15°	5435	5435	5433	5486	5486	1532
25°	4936	4946	4992	5083	5102	2270
35°	4255	4292	4402	4522	4559	2658
45°	3451	3536	3699	3865	3932	2667
55°	2615	2727	2946	3162	3234	2340
65°	1760	1880	2153	2398	2489	1740
75°	892	1060	1360	1594	1659	952
85°	179	310	395	419	401	222
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5713.1	5713.1	5713.1	5713.1	5713.1
2.5°	5721.1	5713.1	5683.7	5718.4	5715.8
5°	5694.4	5689.1	5665.0	5697.1	5694.4
7.5°	5651.7	5649.0	5630.3	5665.0	5665.0
10°	5598.3	5592.9	5579.6	5619.6	5616.9
12.5°	5523.5	5520.8	5512.8	5560.9	5558.2
15°	5435.3	5435.3	5432.7	5486.1	5486.1
17.5°	5328.5	5331.2	5341.8	5403.3	5405.9
20°	5208.3	5219.0	5240.3	5309.8	5315.1
22.5°	5072.1	5093.4	5122.8	5200.3	5208.3
25°	4935.9	4946.5	4992.0	5082.8	5101.5
27.5°	4770.3	4797.0	4855.7	4949.2	4967.9
30°	4602.0	4639.4	4714.2	4810.3	4839.7
32.5°	4436.4	4468.5	4556.6	4666.1	4700.8
35°	4254.8	4292.2	4401.7	4521.9	4559.3
37.5°	4054.5	4113.2	4228.1	4367.0	4407.0
40°	3870.2	3923.6	4049.1	4204.0	4246.8
42.5°	3659.2	3725.9	3878.2	4035.8	4089.2
45°	3450.8	3536.3	3699.2	3864.8	3931.6
47.5°	3255.9	3325.3	3517.6	3704.6	3763.3
50°	3042.2	3122.3	3325.3	3522.9	3584.4
52.5°	2831.2	2927.3	3133.0	3341.3	3408.1
55°	2614.8	2727.0	2946.0	3162.4	3234.5
57.5°	2406.5	2518.7	2745.7	2975.4	3050.2
60°	2184.8	2305.0	2556.1	2777.8	2871.2
62.5°	1971.1	2091.3	2355.8	2596.1	2684.3
65°	1760.1	1880.3	2152.8	2398.5	2489.3
67.5°	1541.1	1672.0	1963.1	2200.8	2289.0
70°	1340.8	1466.3	1760.1	2013.9	2107.4
72.5°	1111.1	1260.7	1559.8	1810.9	1899.0
75°	892.1	1060.4	1359.5	1594.5	1658.6
77.5°	689.1	857.4	1156.5	1332.8	1372.9
80°	499.5	670.4	918.8	1041.7	1073.7
82.5°	323.2	499.5	665.1	747.9	758.5
85°	179.0	309.8	395.3	419.3	400.6
87.5°	64.1	117.5	114.8	93.5	74.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)