

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: P473852

Luminaire Tested: **24CZ2-140VHE-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473852  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-140VHE-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

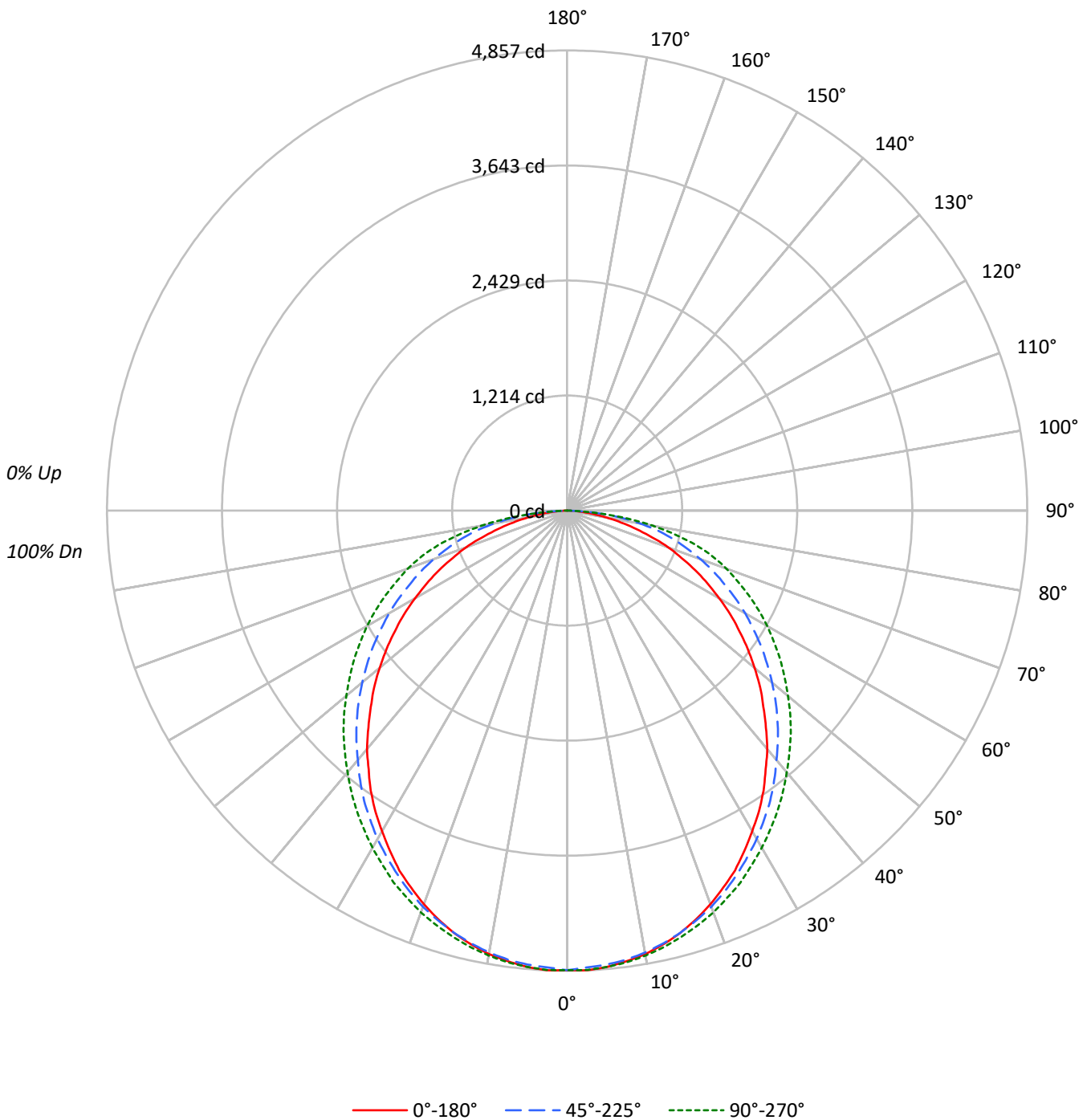
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14036.8 lumens  
Efficiency: N/A  
Efficacy: 139.7 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): 100.5  
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°	6526	6526	6526
5°	6530	6496	6530
10°	6494	6472	6516
15°	6428	6425	6488
20°	6332	6371	6461
25°	6221	6292	6430
30°	6070	6218	6384
35°	5934	6138	6358
40°	5771	6038	6333
45°	5575	5976	6352
50°	5407	5910	6370
55°	5208	5868	6442
60°	4992	5840	6560
65°	4758	5819	6729
70°	4478	5879	7039
75°	3937	6001	7321
80°	3286	6044	7063
85°	2345	5181	5252



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	458.5	3.3
10°-20°	1306.1	9.3
20°-30°	1959.4	14.0
30°-40°	2339.3	16.7
40°-50°	2423.1	17.3
50°-60°	2230.7	15.9
60°-70°	1799.4	12.8
70°-80°	1175.7	8.4
80°-90°	344.7	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°	3724.0	26.5
0°-40°	6063.3	43.2
0°-60°	10717.0	76.3
0°-90°	14036.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14036.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4851	4851	4851	4851	4851	
5°	4835	4830	4810	4837	4835	459
15°	4615	4615	4612	4658	4658	1300
25°	4191	4200	4238	4315	4331	1927
35°	3612	3644	3737	3839	3871	2257
45°	2930	3002	3141	3281	3338	2265
55°	2220	2315	2501	2685	2746	1987
65°	1494	1596	1828	2036	2114	1478
75°	757	900	1154	1354	1408	808
85°	152	263	336	356	340	188
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4850.6	4850.6	4850.6	4850.6	4850.6
2.5°	4857.4	4850.6	4825.6	4855.1	4852.9
5°	4834.7	4830.2	4809.8	4837.0	4834.7
7.5°	4798.4	4796.2	4780.3	4809.8	4809.8
10°	4753.1	4748.5	4737.2	4771.2	4769.0
12.5°	4689.6	4687.3	4680.5	4721.3	4719.1
15°	4614.7	4614.7	4612.5	4657.8	4657.8
17.5°	4524.0	4526.3	4535.4	4587.5	4589.8
20°	4422.0	4431.1	4449.2	4508.2	4512.7
22.5°	4306.3	4324.5	4349.4	4415.2	4422.0
25°	4190.7	4199.8	4238.3	4315.4	4331.3
27.5°	4050.1	4072.8	4122.7	4202.0	4217.9
30°	3907.2	3939.0	4002.5	4084.1	4109.1
32.5°	3766.6	3793.8	3868.7	3961.7	3991.1
35°	3612.4	3644.2	3737.2	3839.2	3870.9
37.5°	3442.4	3492.2	3589.8	3707.7	3741.7
40°	3285.9	3331.2	3437.8	3569.3	3605.6
42.5°	3106.7	3163.4	3292.7	3426.5	3471.8
45°	2929.9	3002.4	3140.8	3281.3	3338.0
47.5°	2764.3	2823.3	2986.5	3145.3	3195.2
50°	2582.9	2650.9	2823.3	2991.1	3043.2
52.5°	2403.8	2485.4	2660.0	2836.9	2893.6
55°	2220.1	2315.3	2501.3	2684.9	2746.2
57.5°	2043.2	2138.4	2331.2	2526.2	2589.7
60°	1855.0	1957.0	2170.2	2358.4	2437.8
62.5°	1673.6	1775.6	2000.1	2204.2	2279.0
65°	1494.4	1596.5	1827.8	2036.4	2113.5
67.5°	1308.5	1419.6	1666.8	1868.6	1943.4
70°	1138.4	1245.0	1494.4	1709.8	1789.2
72.5°	943.4	1070.3	1324.3	1537.5	1612.3
75°	757.4	900.3	1154.3	1353.8	1408.2
77.5°	585.1	727.9	981.9	1131.6	1165.6
80°	424.1	569.2	780.1	884.4	911.6
82.5°	274.4	424.1	564.7	635.0	644.0
85°	151.9	263.1	335.6	356.0	340.2
87.5°	54.4	99.8	97.5	79.4	63.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)