

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: P474652

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

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474652  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-140VHE-SQR-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

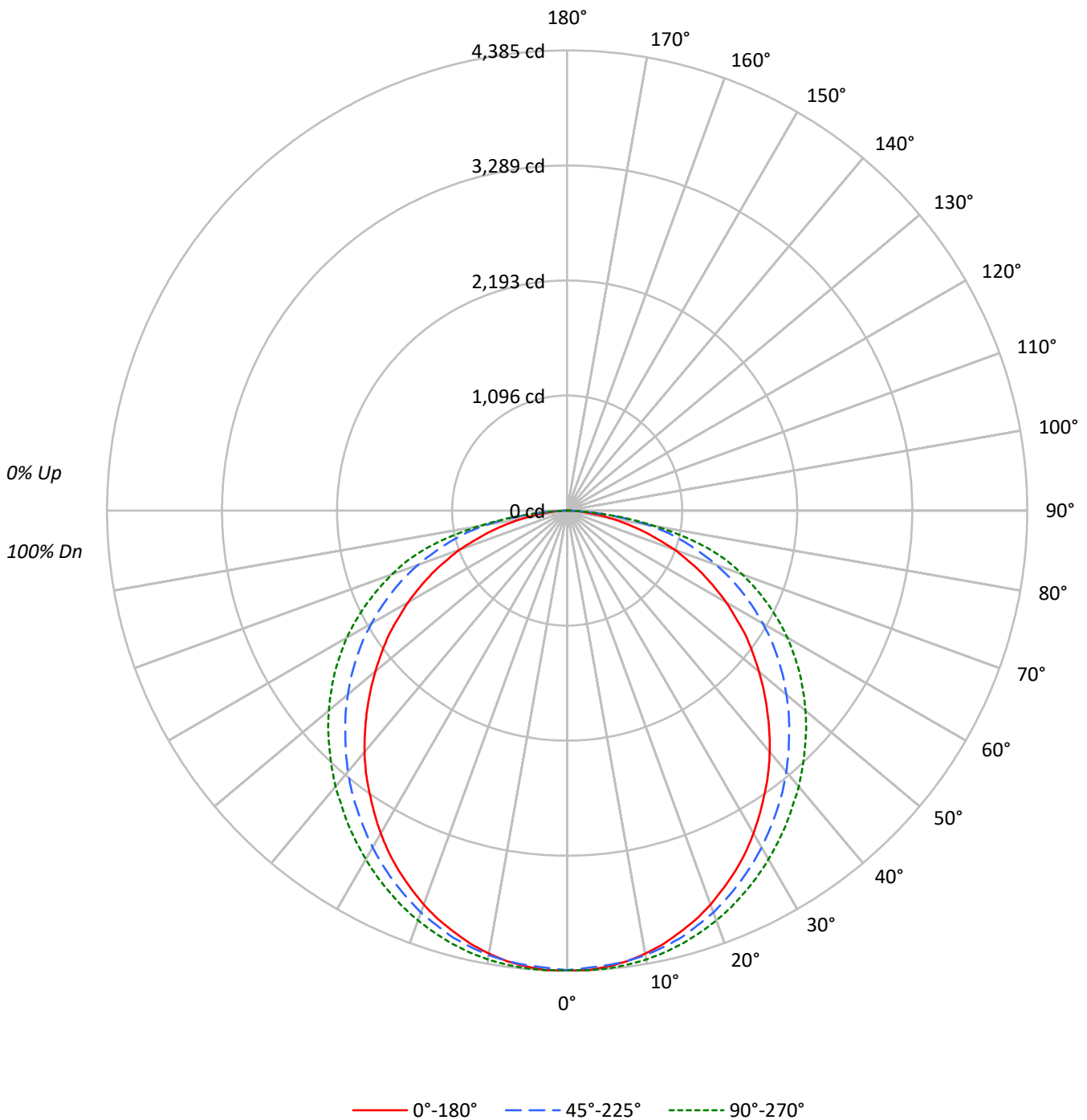
Lumens per Lamp: N/A  
Luminaire Lumens: 13335.9 lumens  
Efficiency: N/A  
Efficacy: 132.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 100.5  
Input Voltage (V): 120  
Input Current (Ain): 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	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	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	53	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°	11788	11788	11788
5°	11787	11752	11833
10°	11713	11754	11870
15°	11586	11729	11889
20°	11440	11672	11903
25°	11254	11589	11905
30°	11036	11519	11923
35°	10786	11450	11969
40°	10553	11414	12065
45°	10265	11384	12195
50°	9990	11417	12416
55°	9756	11495	12694
60°	9425	11581	13049
65°	9049	11721	13444
70°	8582	11885	13980
75°	7687	12050	14443
80°	6471	12084	13107
85°	4801	9142	8617



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	415.1	3.1
10°-20°	1189.7	8.9
20°-30°	1800.9	13.5
30°-40°	2178.6	16.3
40°-50°	2299.7	17.2
50°-60°	2168.6	16.3
60°-70°	1787.9	13.4
70°-80°	1172.9	8.8
80°-90°	322.5	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°	3405.7	25.5
0°-40°	5584.4	41.9
0°-60°	10052.7	75.4
0°-90°	13335.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13335.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4380	4380	4380	4380	4380	
5°	4363	4363	4351	4380	4380	414
15°	4159	4182	4210	4259	4268	1173
25°	3790	3837	3903	3984	4010	1745
35°	3283	3368	3486	3605	3643	2055
45°	2697	2819	2991	3151	3204	2082
55°	2079	2226	2450	2633	2706	1852
65°	1421	1592	1841	2037	2111	1403
75°	739	929	1159	1342	1389	781
85°	156	268	296	288	279	193
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4380.4	4380.4	4380.4	4380.4	4380.4
2.5°	4384.7	4380.4	4361.2	4386.8	4384.7
5°	4363.4	4363.4	4350.6	4380.4	4380.4
7.5°	4333.6	4335.7	4331.4	4365.5	4365.5
10°	4286.7	4295.2	4301.6	4339.9	4344.2
12.5°	4231.3	4246.2	4259.0	4305.9	4310.1
15°	4158.8	4182.3	4210.0	4259.0	4267.5
17.5°	4084.3	4112.0	4141.8	4205.7	4216.4
20°	3994.8	4026.8	4075.8	4139.7	4156.7
22.5°	3894.7	3939.4	3990.5	4067.2	4088.5
25°	3790.3	3837.1	3903.2	3984.1	4009.7
27.5°	3677.3	3732.7	3807.3	3901.0	3928.7
30°	3551.6	3615.6	3707.2	3807.3	3837.1
32.5°	3419.5	3494.1	3596.4	3707.2	3741.3
35°	3283.2	3368.4	3485.6	3604.9	3643.3
37.5°	3149.0	3234.2	3372.7	3498.4	3534.6
40°	3004.1	3097.8	3249.1	3383.3	3434.5
42.5°	2850.7	2961.5	3121.3	3270.4	3319.4
45°	2697.3	2818.7	2991.3	3151.1	3204.4
47.5°	2541.8	2676.0	2865.6	3027.5	3089.3
50°	2386.2	2529.0	2727.1	2901.8	2965.7
52.5°	2228.6	2377.7	2592.9	2778.2	2835.8
55°	2079.4	2226.4	2450.1	2633.4	2705.8
57.5°	1906.8	2073.0	2309.5	2494.9	2565.2
60°	1751.3	1913.2	2151.9	2347.9	2424.6
62.5°	1583.0	1749.2	2000.6	2196.6	2271.2
65°	1421.1	1591.5	1840.8	2036.8	2111.4
67.5°	1246.4	1425.3	1681.0	1870.6	1943.1
70°	1090.8	1259.2	1510.6	1704.4	1776.9
72.5°	901.2	1093.0	1333.7	1525.5	1604.3
75°	739.3	928.9	1159.0	1342.3	1389.1
77.5°	568.9	758.5	986.4	1105.8	1137.7
80°	417.6	596.6	779.8	843.7	845.8
82.5°	281.2	438.9	543.3	575.3	571.0
85°	155.5	268.5	296.1	287.6	279.1
87.5°	63.9	89.5	72.4	51.1	40.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)