

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: P474041

Luminaire Tested: **24CZ2-85VHE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474041  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-85VHE-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**

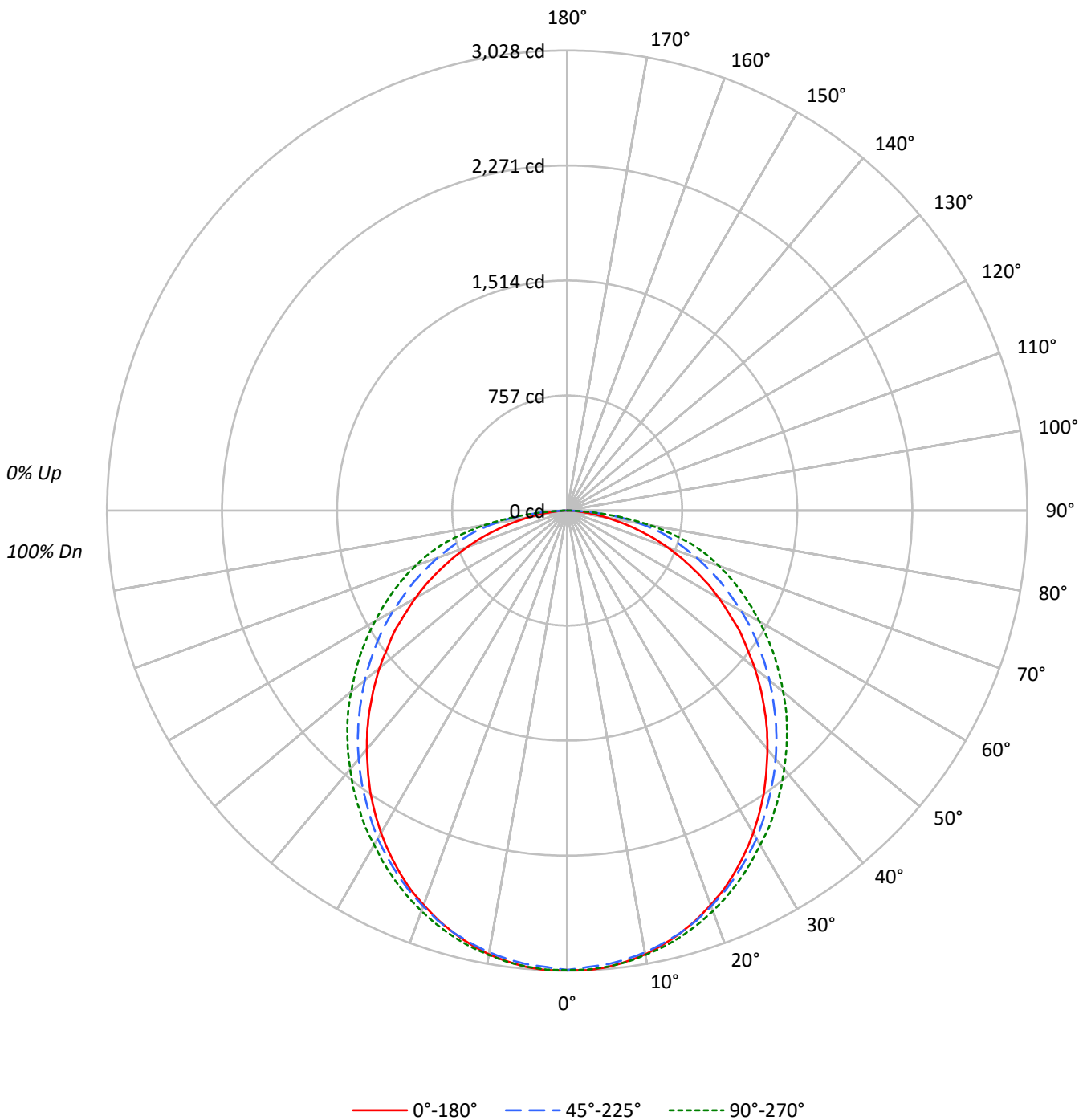
Lumens per Lamp: N/A  
Luminaire Lumens: 8661.9 lumens  
Efficiency: N/A  
Efficacy: 145.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 59.7  
Input Voltage (V): 120  
Input Current (Ain): 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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4068	4068	4068
5°	4074	4049	4070
10°	4051	4034	4057
15°	4009	4007	4041
20°	3954	3966	4015
25°	3889	3922	3984
30°	3806	3873	3946
35°	3711	3805	3924
40°	3601	3749	3901
45°	3492	3690	3893
50°	3374	3639	3884
55°	3254	3594	3905
60°	3105	3561	3932
65°	2940	3547	4027
70°	2743	3565	4170
75°	2441	3669	4393
80°	1995	3748	4289
85°	1406	3273	3339



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.8	3.3
10°-20°	814.1	9.4
20°-30°	1220.3	14.1
30°-40°	1453.4	16.8
40°-50°	1498.6	17.3
50°-60°	1367.5	15.8
60°-70°	1093.5	12.6
70°-80°	714.2	8.2
80°-90°	214.5	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°	2320.2	26.8
0°-40°	3773.6	43.6
0°-60°	6639.7	76.7
0°-90°	8661.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8661.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3023	3023	3023	3023	3023	
5°	3016	3011	2998	3016	3013	286
15°	2878	2880	2877	2901	2901	811
25°	2619	2624	2642	2680	2683	1206
35°	2259	2275	2316	2375	2389	1411
45°	1835	1868	1939	2020	2046	1415
55°	1387	1427	1532	1633	1665	1236
65°	923	986	1114	1224	1265	916
75°	470	548	706	820	845	499
85°	91	164	212	216	216	116
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3023.4	3023.4	3023.4	3023.4	3023.4
2.5°	3027.7	3023.4	3007.7	3026.2	3023.4
5°	3016.3	3010.6	2997.8	3016.3	3013.4
7.5°	2993.5	2990.7	2977.9	2999.2	2996.4
10°	2965.1	2962.2	2952.3	2973.6	2969.3
12.5°	2925.2	2923.8	2916.7	2942.3	2939.4
15°	2878.3	2879.7	2876.8	2901.0	2901.0
17.5°	2824.2	2822.8	2828.5	2858.4	2855.5
20°	2761.6	2763.0	2770.1	2804.3	2804.3
22.5°	2696.2	2694.7	2710.4	2744.5	2747.4
25°	2619.3	2623.6	2642.1	2680.5	2683.3
27.5°	2536.8	2543.9	2566.7	2610.8	2615.1
30°	2450.0	2458.6	2492.7	2534.0	2539.6
32.5°	2354.7	2373.2	2404.5	2457.1	2471.4
35°	2259.4	2275.0	2316.3	2374.6	2388.8
37.5°	2154.1	2179.7	2226.6	2290.7	2309.2
40°	2050.2	2075.8	2134.2	2201.0	2220.9
42.5°	1944.9	1972.0	2038.8	2114.2	2135.6
45°	1835.4	1868.1	1939.2	2020.3	2045.9
47.5°	1723.0	1761.4	1838.2	1926.4	1954.9
50°	1612.0	1650.4	1738.6	1829.7	1855.3
52.5°	1492.5	1540.9	1634.8	1732.9	1758.5
55°	1387.2	1427.0	1532.3	1633.3	1664.6
57.5°	1263.4	1317.5	1429.9	1532.3	1562.2
60°	1153.9	1203.7	1323.2	1427.0	1461.2
62.5°	1042.9	1094.1	1213.6	1331.7	1363.0
65°	923.4	986.0	1114.0	1223.6	1264.8
67.5°	809.6	875.0	1005.9	1122.6	1165.3
70°	697.2	764.0	906.3	1025.8	1060.0
72.5°	586.2	655.9	803.9	920.5	960.4
75°	469.5	547.8	705.7	819.5	845.1
77.5°	360.0	446.8	606.1	682.9	701.4
80°	257.5	352.8	483.7	539.2	553.5
82.5°	169.3	261.8	361.4	391.3	387.0
85°	91.1	163.6	212.0	216.3	216.3
87.5°	35.6	65.4	66.9	51.2	48.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)