

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: P473941

Luminaire Tested: **24CZ2-85VHE-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473941  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-85VHE-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

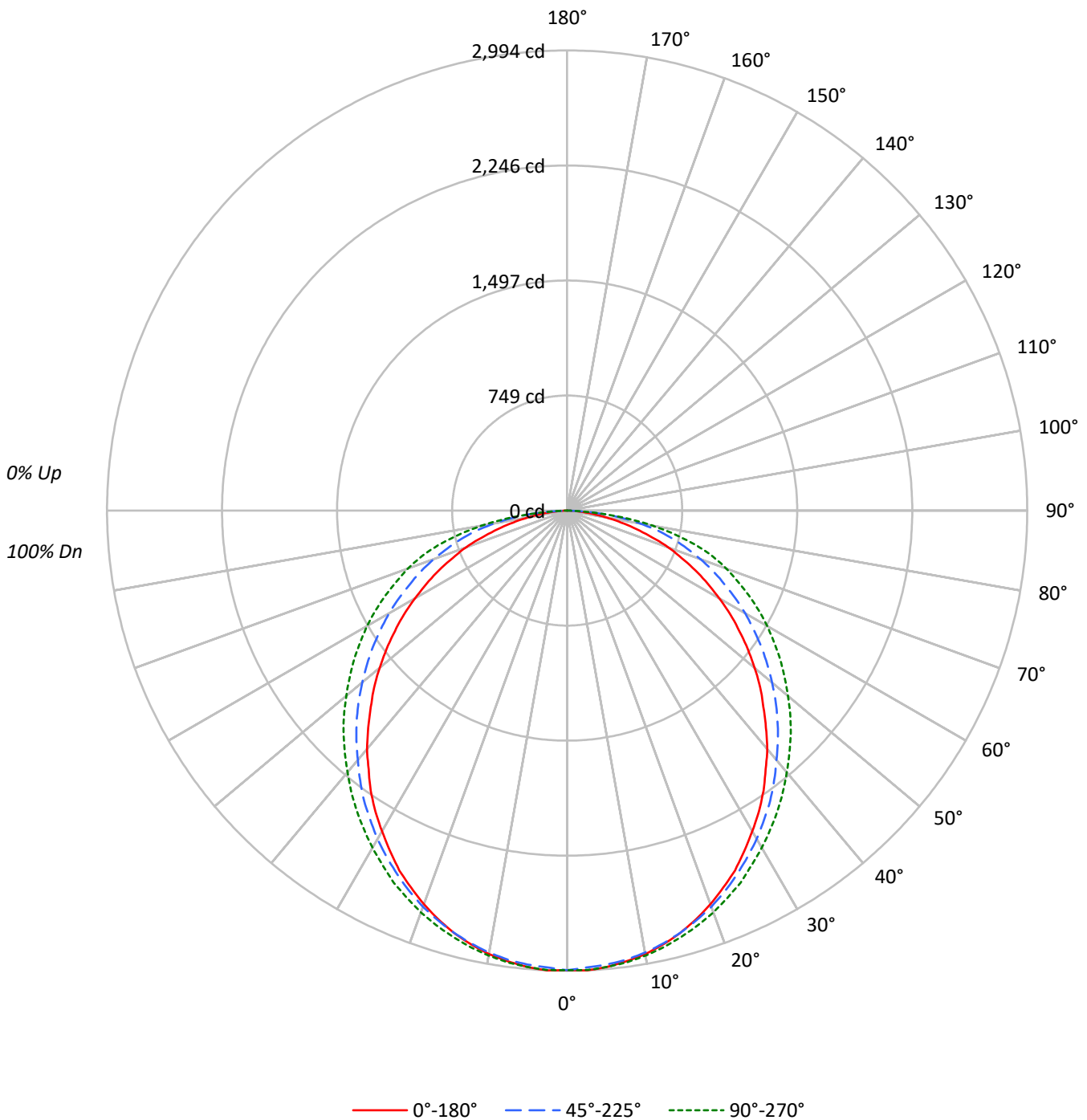
Lumens per Lamp: N/A  
Luminaire Lumens: 8653.2 lumens  
Efficiency: N/A  
Efficacy: 144.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	4023	4023	4023
5°	4025	4005	4025
10°	4003	3990	4017
15°	3963	3961	4000
20°	3903	3927	3983
25°	3835	3879	3964
30°	3742	3833	3936
35°	3658	3784	3920
40°	3558	3722	3904
45°	3437	3684	3916
50°	3333	3643	3927
55°	3210	3617	3971
60°	3077	3600	4044
65°	2933	3587	4148
70°	2761	3624	4339
75°	2427	3699	4513
80°	2025	3726	4355
85°	1447	3194	3237



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.7	3.3
10°-20°	805.2	9.3
20°-30°	1207.9	14.0
30°-40°	1442.1	16.7
40°-50°	1493.7	17.3
50°-60°	1375.1	15.9
60°-70°	1109.3	12.8
70°-80°	724.8	8.4
80°-90°	212.5	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°	2295.7	26.5
0°-40°	3737.8	43.2
0°-60°	6606.7	76.3
0°-90°	8653.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8653.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2990	2990	2990	2990	2990	
5°	2980	2978	2965	2982	2980	283
15°	2845	2845	2843	2871	2871	802
25°	2583	2589	2613	2660	2670	1188
35°	2227	2246	2304	2367	2386	1391
45°	1806	1851	1936	2023	2058	1396
55°	1369	1427	1542	1655	1693	1225
65°	921	984	1127	1255	1303	911
75°	467	555	712	835	868	498
85°	94	162	207	220	210	116
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2990.2	2990.2	2990.2	2990.2	2990.2
2.5°	2994.4	2990.2	2974.9	2993.0	2991.6
5°	2980.4	2977.6	2965.1	2981.8	2980.4
7.5°	2958.1	2956.7	2946.9	2965.1	2965.1
10°	2930.1	2927.3	2920.3	2941.3	2939.9
12.5°	2891.0	2889.6	2885.4	2910.5	2909.1
15°	2844.8	2844.8	2843.4	2871.4	2871.4
17.5°	2788.9	2790.3	2795.9	2828.1	2829.5
20°	2726.0	2731.6	2742.8	2779.1	2781.9
22.5°	2654.7	2665.9	2681.3	2721.8	2726.0
25°	2583.4	2589.0	2612.8	2660.3	2670.1
27.5°	2496.7	2510.7	2541.5	2590.4	2600.2
30°	2408.7	2428.2	2467.4	2517.7	2533.1
32.5°	2322.0	2338.8	2384.9	2442.2	2460.4
35°	2226.9	2246.5	2303.8	2366.7	2386.3
37.5°	2122.1	2152.9	2213.0	2285.7	2306.6
40°	2025.6	2053.6	2119.3	2200.4	2222.8
42.5°	1915.2	1950.1	2029.8	2112.3	2140.3
45°	1806.2	1850.9	1936.2	2022.8	2057.8
47.5°	1704.1	1740.5	1841.1	1939.0	1969.7
50°	1592.3	1634.2	1740.5	1843.9	1876.1
52.5°	1481.8	1532.2	1639.8	1748.8	1783.8
55°	1368.6	1427.3	1541.9	1655.2	1692.9
57.5°	1259.6	1318.3	1437.1	1557.3	1596.5
60°	1143.5	1206.4	1337.8	1453.9	1502.8
62.5°	1031.7	1094.6	1233.0	1358.8	1404.9
65°	921.3	984.2	1126.8	1255.4	1302.9
67.5°	806.6	875.1	1027.5	1151.9	1198.0
70°	701.8	767.5	921.3	1054.1	1103.0
72.5°	581.5	659.8	816.4	947.8	993.9
75°	466.9	555.0	711.6	834.6	868.1
77.5°	360.7	448.7	605.3	697.6	718.5
80°	261.4	350.9	480.9	545.2	562.0
82.5°	169.2	261.4	348.1	391.4	397.0
85°	93.7	162.2	206.9	219.5	209.7
87.5°	33.6	61.5	60.1	48.9	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)