

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: P473888

Luminaire Tested: **24CZ2-70VHE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473888  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-70VHE-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

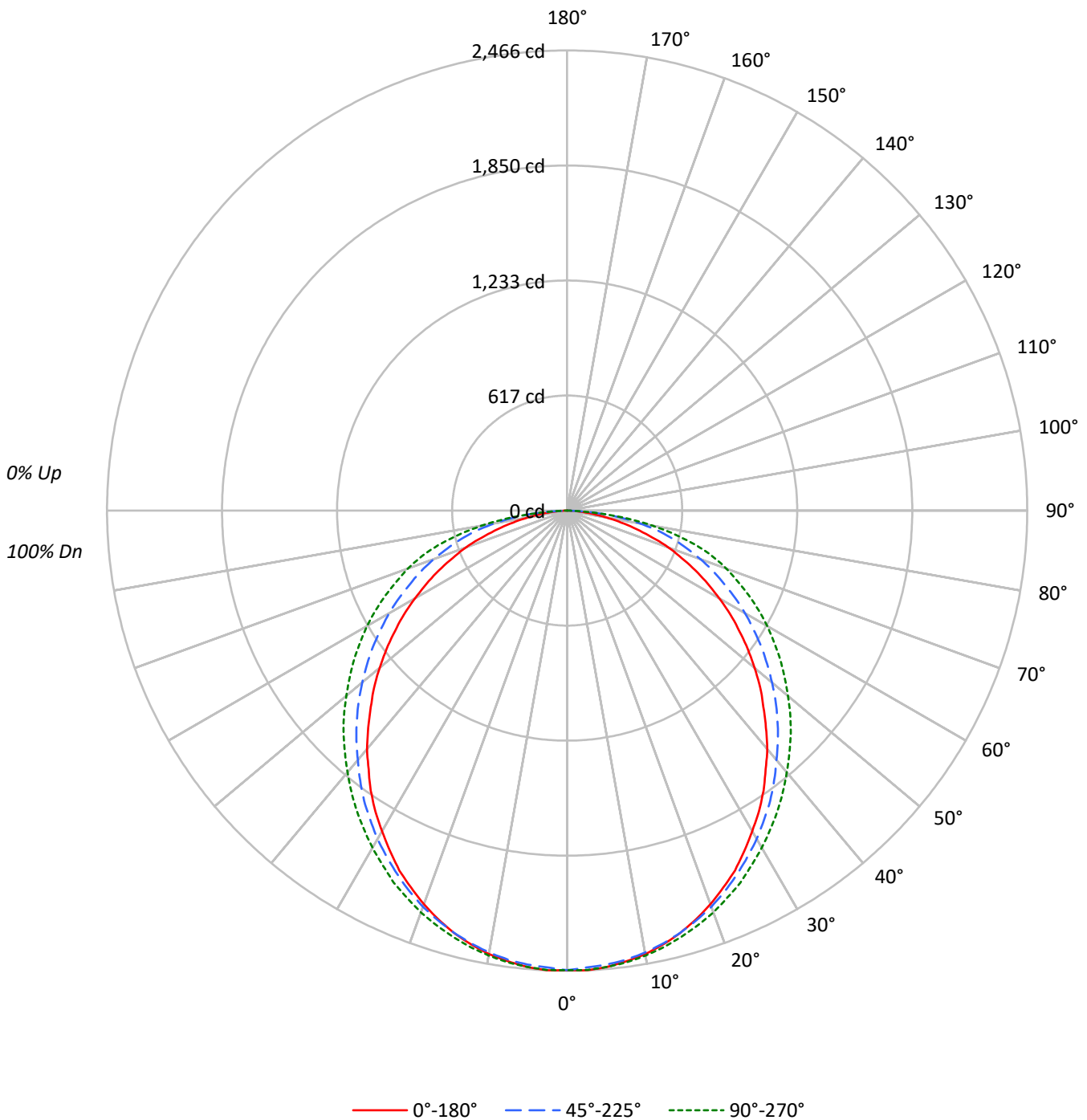
Lumens per Lamp: N/A  
Luminaire Lumens: 7126.7 lumens  
Efficiency: N/A  
Efficacy: 149.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 47.8  
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°	3314	3314	3314
5°	3315	3298	3315
10°	3297	3286	3308
15°	3264	3262	3294
20°	3215	3235	3281
25°	3159	3195	3265
30°	3082	3157	3241
35°	3013	3117	3228
40°	2930	3066	3215
45°	2831	3034	3225
50°	2745	3000	3234
55°	2644	2979	3271
60°	2534	2965	3331
65°	2415	2954	3416
70°	2274	2985	3574
75°	1999	3046	3717
80°	1668	3069	3586
85°	1190	2631	2666



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.8	3.3
10°-20°	663.1	9.3
20°-30°	994.8	14.0
30°-40°	1187.7	16.7
40°-50°	1230.2	17.3
50°-60°	1132.5	15.9
60°-70°	913.6	12.8
70°-80°	596.9	8.4
80°-90°	175.0	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°	1890.7	26.5
0°-40°	3078.4	43.2
0°-60°	5441.2	76.3
0°-90°	7126.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7126.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2463	2463	2463	2463	2463	
5°	2455	2452	2442	2456	2455	233
15°	2343	2343	2342	2365	2365	660
25°	2128	2132	2152	2191	2199	978
35°	1834	1850	1897	1949	1965	1146
45°	1488	1524	1595	1666	1695	1150
55°	1127	1176	1270	1363	1394	1009
65°	759	811	928	1034	1073	750
75°	385	457	586	687	715	410
85°	77	134	170	181	173	96
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2462.7	2462.7	2462.7	2462.7	2462.7
2.5°	2466.2	2462.7	2450.1	2465.1	2463.9
5°	2454.7	2452.4	2442.0	2455.8	2454.7
7.5°	2436.3	2435.1	2427.1	2442.0	2442.0
10°	2413.2	2410.9	2405.2	2422.5	2421.3
12.5°	2381.0	2379.9	2376.4	2397.1	2396.0
15°	2343.0	2343.0	2341.9	2364.9	2364.9
17.5°	2297.0	2298.1	2302.7	2329.2	2330.3
20°	2245.1	2249.7	2259.0	2288.9	2291.2
22.5°	2186.4	2195.6	2208.3	2241.7	2245.1
25°	2127.7	2132.3	2151.9	2191.0	2199.1
27.5°	2056.3	2067.8	2093.2	2133.5	2141.5
30°	1983.8	1999.9	2032.1	2073.6	2086.3
32.5°	1912.4	1926.2	1964.2	2011.4	2026.4
35°	1834.1	1850.2	1897.4	1949.2	1965.4
37.5°	1747.8	1773.1	1822.6	1882.5	1899.7
40°	1668.3	1691.3	1745.5	1812.2	1830.7
42.5°	1577.4	1606.1	1671.8	1739.7	1762.7
45°	1487.6	1524.4	1594.6	1666.0	1694.8
47.5°	1403.5	1433.4	1516.3	1596.9	1622.3
50°	1311.4	1345.9	1433.4	1518.6	1545.1
52.5°	1220.4	1261.9	1350.5	1440.3	1469.1
55°	1127.2	1175.5	1269.9	1363.2	1394.3
57.5°	1037.4	1085.7	1183.6	1282.6	1314.8
60°	941.8	993.6	1101.8	1197.4	1237.7
62.5°	849.7	901.5	1015.5	1119.1	1157.1
65°	758.7	810.6	928.0	1033.9	1073.1
67.5°	664.3	720.7	846.2	948.7	986.7
70°	578.0	632.1	758.7	868.1	908.4
72.5°	479.0	543.4	672.4	780.6	818.6
75°	384.6	457.1	586.0	687.4	715.0
77.5°	297.0	369.6	498.5	574.5	591.8
80°	215.3	289.0	396.1	449.0	462.8
82.5°	139.3	215.3	286.7	322.4	327.0
85°	77.1	133.6	170.4	180.8	172.7
87.5°	27.6	50.7	49.5	40.3	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)