

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: P473868

Luminaire Tested: **24CZ2-65-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473868  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6534.8 lumens  
Efficiency: N/A  
Efficacy: 128.1 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

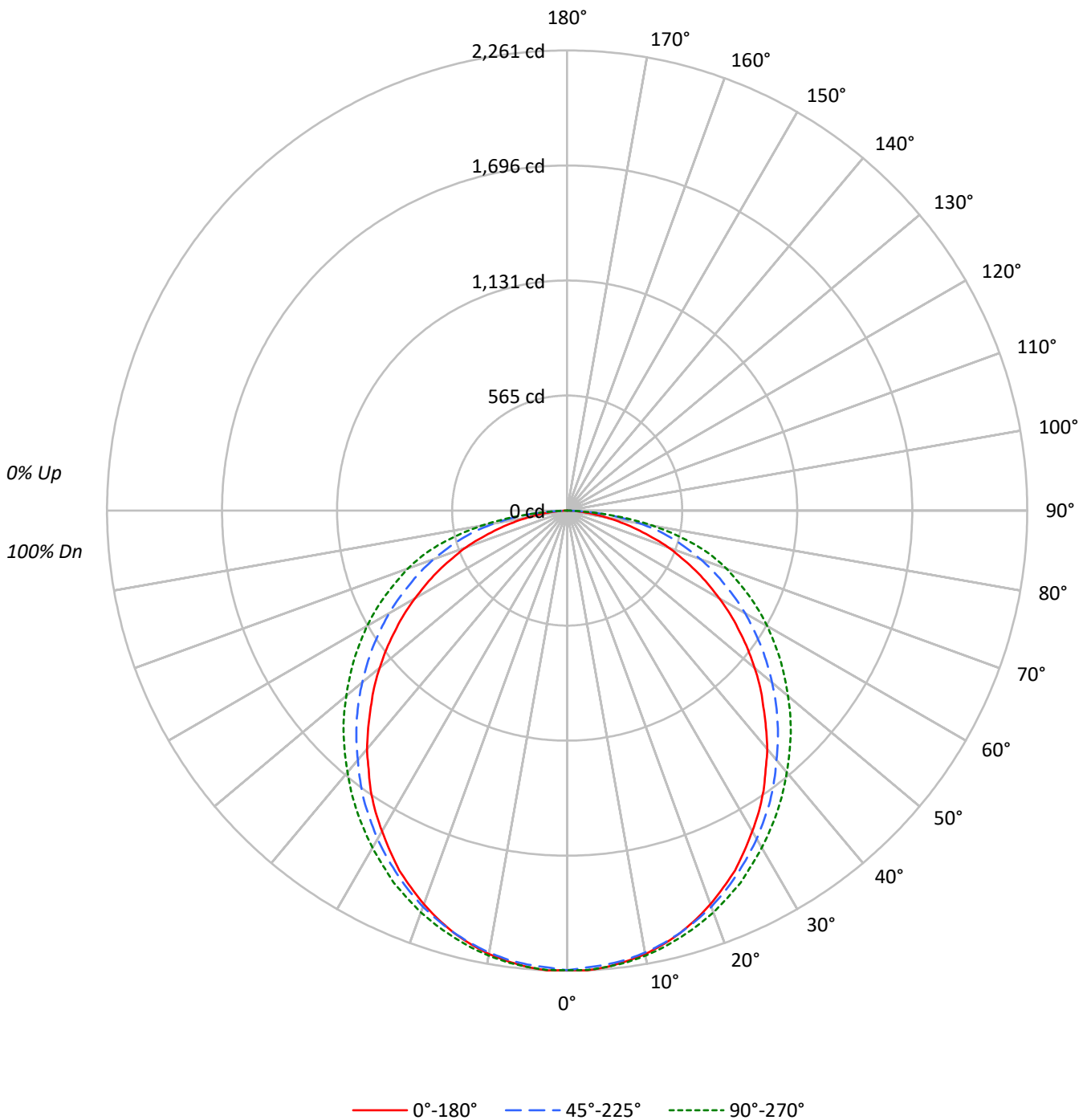
Input Watts (W): 51  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3038	3038	3038
5°	3040	3024	3040
10°	3023	3013	3033
15°	2993	2991	3020
20°	2948	2966	3008
25°	2896	2929	2994
30°	2826	2895	2972
35°	2762	2858	2960
40°	2687	2811	2948
45°	2595	2782	2957
50°	2517	2751	2966
55°	2424	2731	2999
60°	2324	2719	3054
65°	2215	2709	3132
70°	2085	2737	3277
75°	1833	2794	3408
80°	1530	2814	3288
85°	1091	2411	2445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.5	3.3
10°-20°	608.0	9.3
20°-30°	912.2	14.0
30°-40°	1089.0	16.7
40°-50°	1128.1	17.3
50°-60°	1038.5	15.9
60°-70°	837.7	12.8
70°-80°	547.3	8.4
80°-90°	160.5	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°	1733.7	26.5
0°-40°	2822.7	43.2
0°-60°	4989.3	76.3
0°-90°	6534.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6534.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2258	2258	2258	2258	2258	
5°	2251	2249	2239	2252	2251	214
15°	2148	2148	2147	2168	2168	605
25°	1951	1955	1973	2009	2016	897
35°	1682	1696	1740	1787	1802	1051
45°	1364	1398	1462	1528	1554	1054
55°	1034	1078	1164	1250	1278	925
65°	696	743	851	948	984	688
75°	353	419	537	630	656	376
85°	71	122	156	166	158	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2258.2	2258.2	2258.2	2258.2	2258.2
2.5°	2261.3	2258.2	2246.6	2260.3	2259.2
5°	2250.8	2248.7	2239.2	2251.8	2250.8
7.5°	2233.9	2232.8	2225.4	2239.2	2239.2
10°	2212.8	2210.7	2205.4	2221.2	2220.2
12.5°	2183.2	2182.2	2179.0	2198.0	2196.9
15°	2148.4	2148.4	2147.3	2168.4	2168.4
17.5°	2106.1	2107.2	2111.4	2135.7	2136.8
20°	2058.6	2062.9	2071.3	2098.8	2100.9
22.5°	2004.8	2013.2	2024.9	2055.5	2058.6
25°	1951.0	1955.2	1973.1	2009.0	2016.4
27.5°	1885.5	1896.1	1919.3	1956.2	1963.6
30°	1819.0	1833.8	1863.3	1901.3	1912.9
32.5°	1753.5	1766.2	1801.0	1844.3	1858.1
35°	1681.7	1696.5	1739.8	1787.3	1802.1
37.5°	1602.6	1625.8	1671.2	1726.1	1741.9
40°	1529.7	1550.8	1600.5	1661.7	1678.6
42.5°	1446.3	1472.7	1532.9	1595.2	1616.3
45°	1364.0	1397.8	1462.2	1527.6	1554.0
47.5°	1286.9	1314.4	1390.4	1464.3	1487.5
50°	1202.5	1234.1	1314.4	1392.5	1416.8
52.5°	1119.1	1157.1	1238.3	1320.7	1347.1
55°	1033.5	1077.9	1164.4	1250.0	1278.5
57.5°	951.2	995.5	1085.3	1176.1	1205.6
60°	863.6	911.1	1010.3	1097.9	1134.9
62.5°	779.1	826.6	931.1	1026.2	1061.0
65°	695.7	743.2	850.9	948.0	983.9
67.5°	609.1	660.9	775.9	869.9	904.7
70°	530.0	579.6	695.7	796.0	833.0
72.5°	439.2	498.3	616.5	715.8	750.6
75°	352.6	419.1	537.4	630.3	655.6
77.5°	272.4	338.9	457.1	526.8	542.6
80°	197.4	265.0	363.2	411.7	424.4
82.5°	127.7	197.4	262.9	295.6	299.8
85°	70.7	122.5	156.2	165.7	158.4
87.5°	25.3	46.5	45.4	36.9	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)