

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: P474515

Luminaire Tested: **24CZ2-50-HRP-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474515  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50-HRP-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

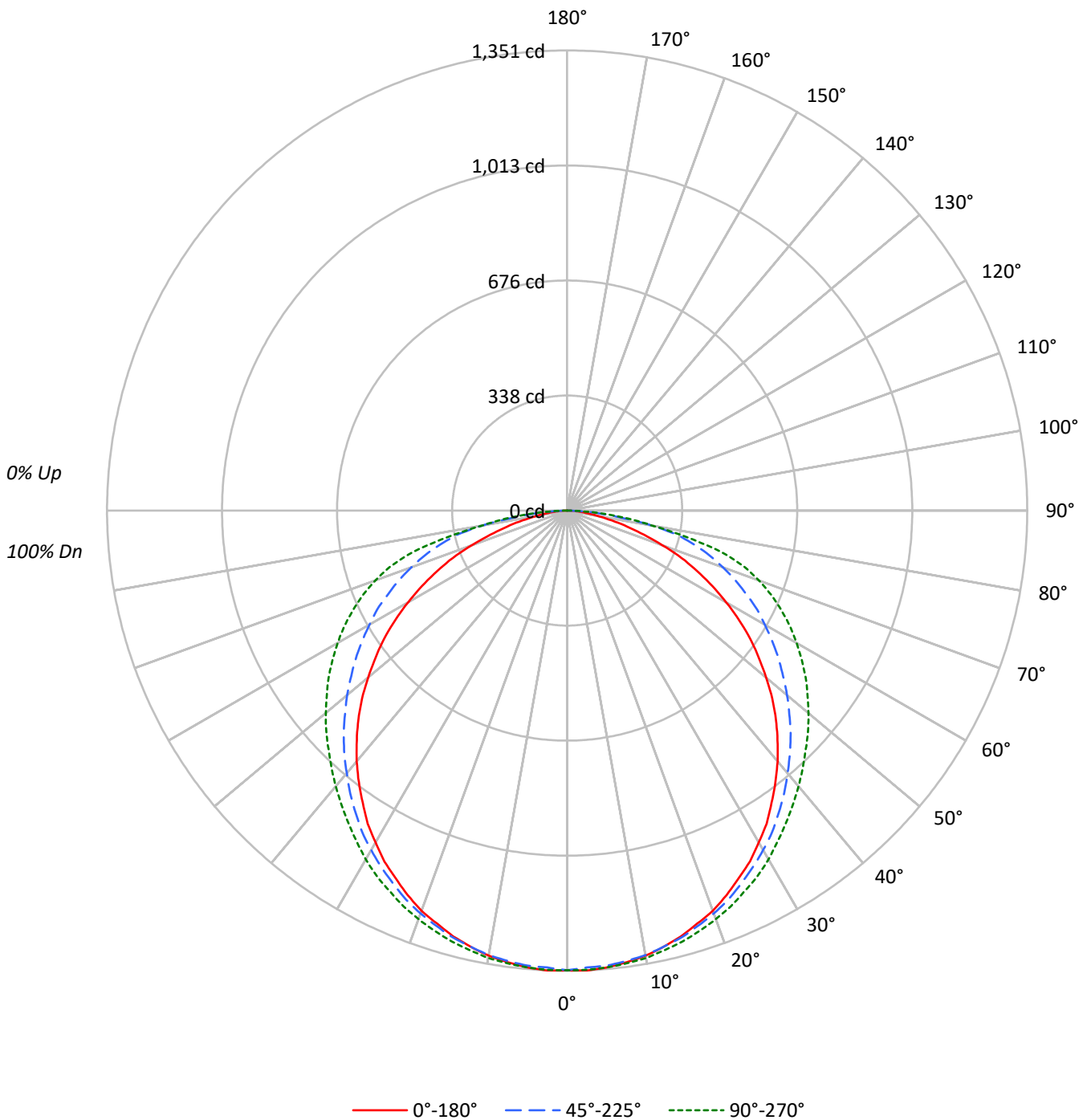
Lumens per Lamp: N/A  
Luminaire Lumens: 4159.7 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 39.8  
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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

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

	0°	45°	90°
0°	1816	1816	1816
5°	1818	1811	1818
10°	1813	1811	1822
15°	1802	1807	1824
20°	1790	1803	1828
25°	1768	1794	1830
30°	1748	1788	1837
35°	1719	1779	1839
40°	1688	1768	1857
45°	1650	1766	1885
50°	1597	1764	1936
55°	1540	1777	2006
60°	1453	1804	2095
65°	1342	1847	2212
70°	1172	1911	2357
75°	950	2010	2436
80°	702	1970	1970
85°	539	1451	1639



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.8	3.1
10°-20°	367.1	8.8
20°-30°	558.9	13.4
30°-40°	678.7	16.3
40°-50°	717.0	17.2
50°-60°	676.6	16.3
60°-70°	562.6	13.5
70°-80°	370.1	8.9
80°-90°	100.9	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°	1053.9	25.3
0°-40°	1732.6	41.7
0°-60°	3126.2	75.2
0°-90°	4159.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4159.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1346	1346	1341	1346	1346	128
15°	1294	1296	1297	1310	1310	365
25°	1191	1198	1209	1230	1233	549
35°	1047	1059	1083	1111	1120	655
45°	867	885	928	973	991	668
55°	656	684	758	829	855	585
65°	422	470	580	665	695	417
75°	183	266	387	458	468	197
85°	35	77	94	105	106	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1349.6	1349.6	1349.6	1349.6	1349.6
2.5°	1351.4	1349.6	1342.6	1349.6	1349.6
5°	1346.2	1346.2	1340.9	1346.2	1346.2
7.5°	1337.5	1337.5	1333.9	1340.9	1340.9
10°	1326.9	1326.9	1325.3	1333.9	1333.9
12.5°	1311.4	1313.0	1311.4	1321.7	1321.7
15°	1293.9	1295.6	1297.4	1309.6	1309.6
17.5°	1271.3	1274.7	1278.3	1292.1	1293.9
20°	1250.4	1252.0	1259.0	1274.7	1276.5
22.5°	1222.5	1227.7	1236.5	1252.0	1257.4
25°	1191.1	1198.1	1208.6	1229.5	1232.9
27.5°	1161.6	1166.8	1180.7	1203.4	1210.4
30°	1125.0	1133.7	1151.0	1173.7	1182.5
32.5°	1090.1	1098.9	1119.8	1144.1	1151.0
35°	1046.7	1058.8	1083.1	1111.0	1119.8
37.5°	1004.8	1017.0	1046.7	1077.9	1088.5
40°	961.2	975.2	1006.6	1043.1	1057.0
42.5°	914.2	933.3	968.2	1008.2	1024.0
45°	867.2	884.7	928.2	973.4	990.9
47.5°	816.8	837.7	884.7	938.7	959.6
50°	762.8	788.9	842.9	902.1	924.8
52.5°	708.9	738.4	799.3	865.4	889.9
55°	656.5	684.4	757.5	829.0	855.1
57.5°	599.1	634.0	714.0	790.5	816.8
60°	539.8	578.2	670.4	750.5	778.4
62.5°	480.6	524.2	628.6	708.9	738.4
65°	421.5	470.2	580.0	665.2	694.9
67.5°	363.9	417.9	534.6	620.0	649.5
70°	297.8	365.7	485.8	569.4	599.1
72.5°	236.8	315.3	438.8	517.3	543.4
75°	182.8	266.5	386.6	457.9	468.5
77.5°	134.1	217.7	332.6	356.9	358.7
80°	90.6	174.1	254.3	250.8	254.3
82.5°	59.2	130.7	160.1	179.4	181.1
85°	34.9	76.7	94.0	104.6	106.2
87.5°	17.3	26.1	33.1	34.9	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)