

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: P474365

Luminaire Tested: **24CZ2-50-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474365  
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-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

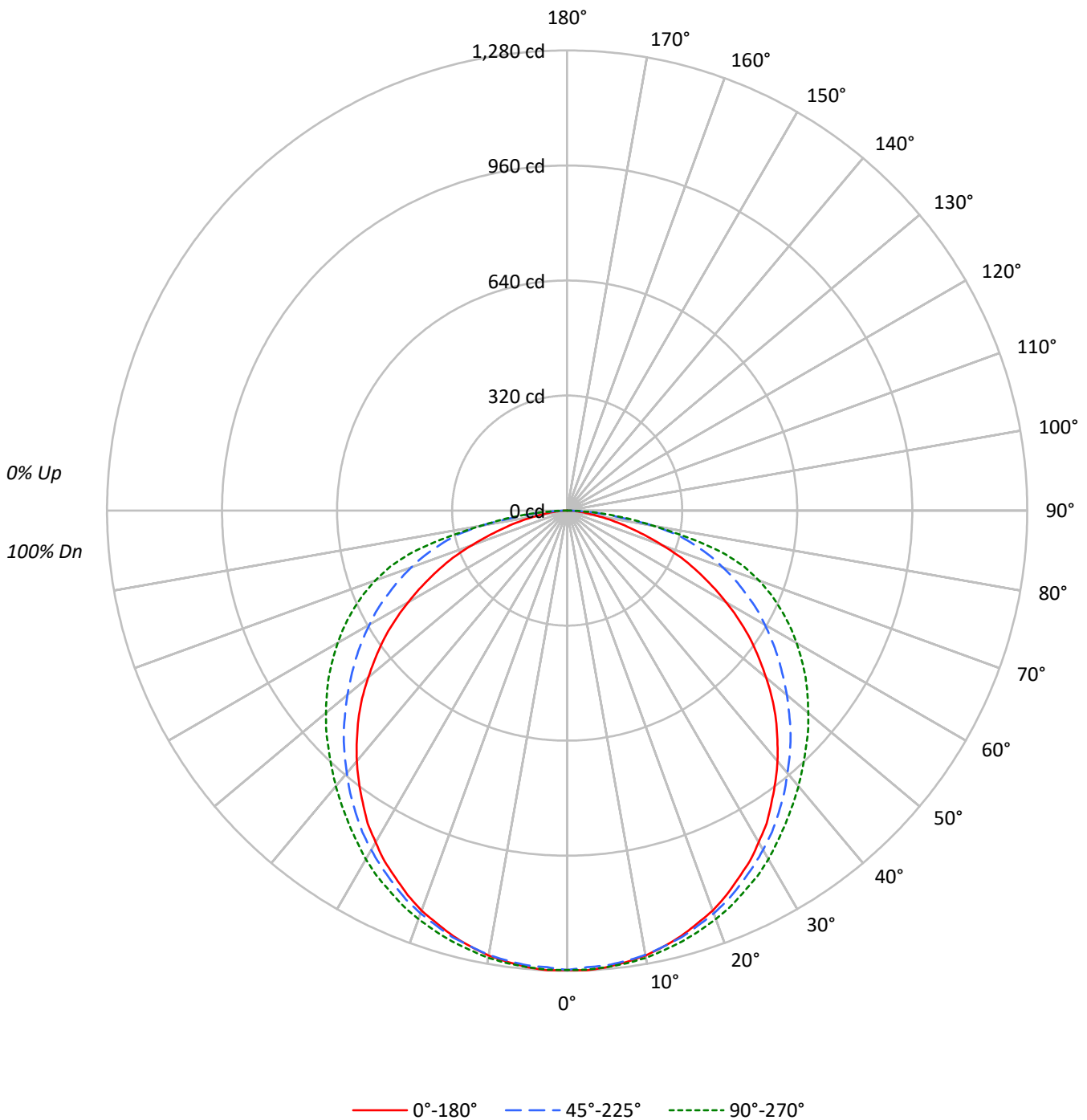
Lumens per Lamp: N/A  
Luminaire Lumens: 3939.3 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1720	1720	1720
5°	1722	1715	1722
10°	1717	1715	1726
15°	1707	1712	1728
20°	1696	1707	1731
25°	1675	1699	1733
30°	1655	1693	1740
35°	1628	1685	1742
40°	1599	1674	1758
45°	1563	1673	1786
50°	1512	1671	1833
55°	1458	1683	1900
60°	1376	1709	1984
65°	1271	1749	2095
70°	1109	1810	2232
75°	900	1903	2306
80°	665	1867	1867
85°	509	1374	1551



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.1	3.1
10°-20°	347.7	8.8
20°-30°	529.3	13.4
30°-40°	642.7	16.3
40°-50°	679.0	17.2
50°-60°	640.7	16.3
60°-70°	532.7	13.5
70°-80°	350.5	8.9
80°-90°	95.5	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°	998.1	25.3
0°-40°	1640.8	41.7
0°-60°	2960.5	75.2
0°-90°	3939.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3939.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1278	1278	1278	1278	1278	
5°	1275	1275	1270	1275	1275	121
15°	1225	1227	1229	1240	1240	346
25°	1128	1135	1145	1164	1168	520
35°	991	1003	1026	1052	1060	620
45°	821	838	879	922	938	632
55°	622	648	717	785	810	554
65°	399	445	549	630	658	394
75°	173	252	366	434	444	187
85°	33	73	89	99	100	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1278.1	1278.1	1278.1	1278.1	1278.1
2.5°	1279.8	1278.1	1271.5	1278.1	1278.1
5°	1274.9	1274.9	1269.8	1274.9	1274.9
7.5°	1266.6	1266.6	1263.2	1269.8	1269.8
10°	1256.6	1256.6	1255.1	1263.2	1263.2
12.5°	1241.9	1243.4	1241.9	1251.7	1251.7
15°	1225.3	1227.0	1228.7	1240.2	1240.2
17.5°	1204.0	1207.2	1210.6	1223.6	1225.3
20°	1184.2	1185.7	1192.3	1207.2	1208.9
22.5°	1157.8	1162.7	1171.0	1185.7	1190.8
25°	1128.0	1134.6	1144.6	1164.4	1167.6
27.5°	1100.0	1104.9	1118.1	1139.6	1146.2
30°	1065.3	1073.6	1090.0	1111.5	1119.8
32.5°	1032.3	1040.6	1060.4	1083.4	1090.0
35°	991.2	1002.7	1025.7	1052.1	1060.4
37.5°	951.6	963.1	991.2	1020.8	1030.8
40°	910.3	923.5	953.3	987.8	1001.0
42.5°	865.8	883.9	916.9	954.8	969.7
45°	821.3	837.8	879.0	921.8	938.4
47.5°	773.5	793.3	837.8	889.0	908.8
50°	722.4	747.1	798.2	854.3	875.8
52.5°	671.3	699.2	756.9	819.6	842.8
55°	621.7	648.1	717.3	785.0	809.8
57.5°	567.4	600.4	676.2	748.6	773.5
60°	511.2	547.6	634.9	710.7	737.1
62.5°	455.1	496.4	595.3	671.3	699.2
65°	399.1	445.3	549.3	630.0	658.1
67.5°	344.6	395.7	506.3	587.2	615.1
70°	282.0	346.3	460.1	539.3	567.4
72.5°	224.3	298.6	415.5	489.8	514.6
75°	173.2	252.4	366.1	433.7	443.6
77.5°	126.9	206.2	315.0	338.0	339.7
80°	85.8	164.9	240.9	237.5	240.9
82.5°	56.0	123.7	151.7	169.9	171.5
85°	33.0	72.6	89.0	99.0	100.5
87.5°	16.4	24.7	31.3	33.0	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)