

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: P474415

Luminaire Tested: **24CZ2-50-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474415  
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-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

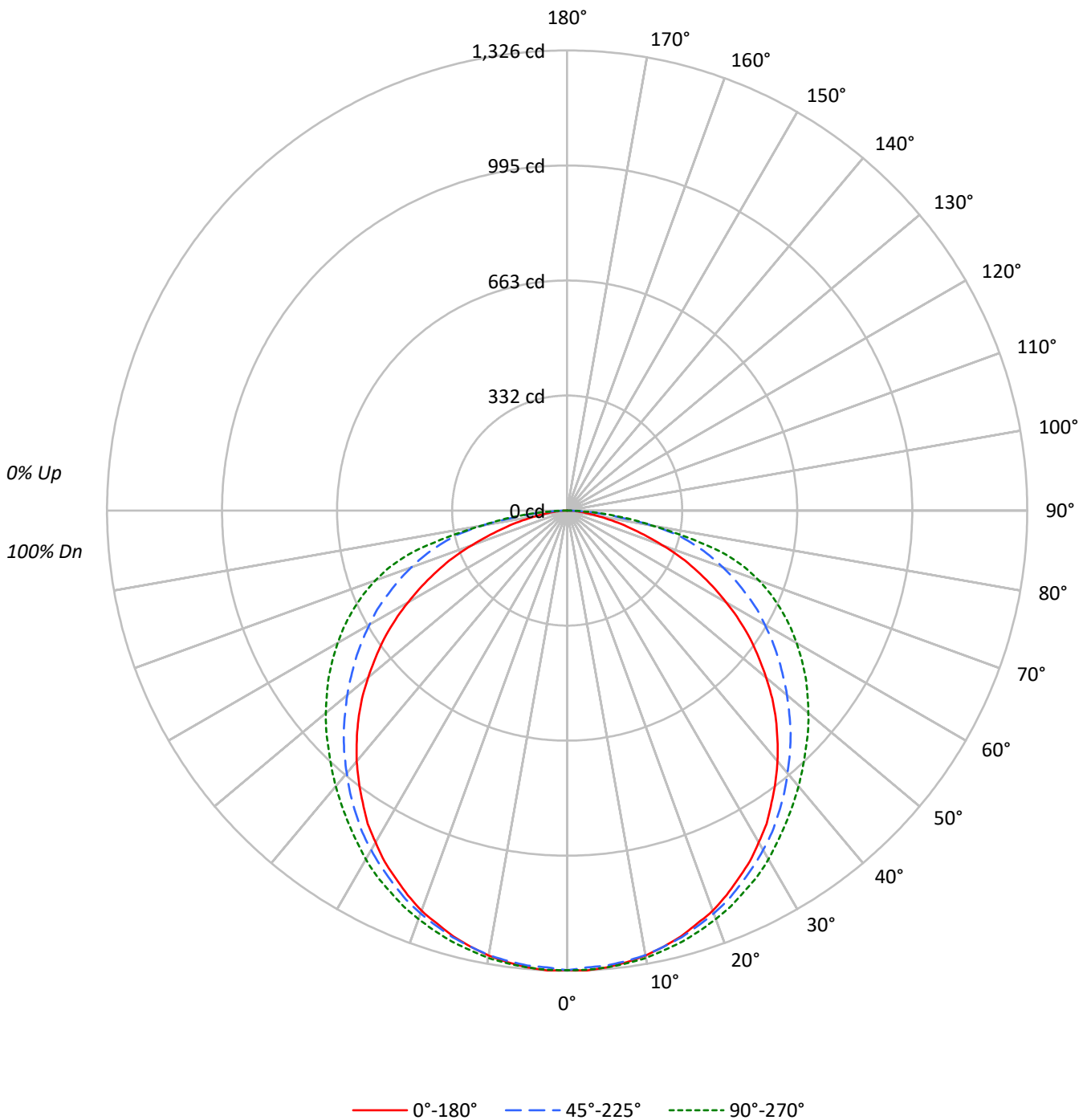
Lumens per Lamp: N/A  
Luminaire Lumens: 4082.1 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1782	1782	1782
5°	1784	1777	1784
10°	1779	1777	1788
15°	1769	1774	1790
20°	1757	1769	1794
25°	1735	1761	1796
30°	1715	1755	1803
35°	1687	1746	1805
40°	1657	1735	1822
45°	1619	1733	1850
50°	1567	1732	1900
55°	1511	1744	1968
60°	1425	1770	2056
65°	1317	1812	2171
70°	1149	1875	2313
75°	933	1972	2390
80°	689	1934	1934
85°	528	1425	1609



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.5	3.1
10°-20°	360.3	8.8
20°-30°	548.5	13.4
30°-40°	666.0	16.3
40°-50°	703.6	17.2
50°-60°	664.0	16.3
60°-70°	552.1	13.5
70°-80°	363.2	8.9
80°-90°	99.0	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°	1034.3	25.3
0°-40°	1700.3	41.7
0°-60°	3067.9	75.2
0°-90°	4082.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4082.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1321	1321	1316	1321	1321	125
15°	1270	1272	1273	1285	1285	358
25°	1169	1176	1186	1207	1210	539
35°	1027	1039	1063	1090	1099	643
45°	851	868	911	955	972	655
55°	644	672	743	814	839	574
65°	414	462	569	653	682	409
75°	179	262	379	449	460	193
85°	34	75	92	103	104	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1324.5	1324.5	1324.5	1324.5	1324.5
2.5°	1326.2	1324.5	1317.6	1324.5	1324.5
5°	1321.1	1321.1	1315.9	1321.1	1321.1
7.5°	1312.5	1312.5	1309.0	1315.9	1315.9
10°	1302.2	1302.2	1300.6	1309.0	1309.0
12.5°	1286.9	1288.5	1286.9	1297.1	1297.1
15°	1269.7	1271.5	1273.2	1285.2	1285.2
17.5°	1247.6	1251.0	1254.5	1268.0	1269.7
20°	1227.1	1228.7	1235.5	1251.0	1252.7
22.5°	1199.7	1204.8	1213.4	1228.7	1233.9
25°	1168.9	1175.7	1186.1	1206.6	1209.9
27.5°	1139.9	1145.0	1158.7	1181.0	1187.8
30°	1104.0	1112.6	1129.6	1151.9	1160.5
32.5°	1069.8	1078.4	1098.9	1122.7	1129.6
35°	1027.2	1039.1	1062.9	1090.3	1098.9
37.5°	986.1	998.0	1027.2	1057.8	1068.2
40°	943.3	957.0	987.9	1023.6	1037.3
42.5°	897.2	915.9	950.1	989.4	1004.9
45°	851.0	868.2	910.9	955.2	972.4
47.5°	801.6	822.1	868.2	921.2	941.7
50°	748.6	774.2	827.2	885.3	907.5
52.5°	695.6	724.6	784.4	849.3	873.3
55°	644.2	671.6	743.4	813.5	839.1
57.5°	587.9	622.1	700.7	775.8	801.6
60°	529.7	567.4	657.9	736.5	763.9
62.5°	471.7	514.5	616.9	695.6	724.6
65°	413.6	461.5	569.2	652.8	682.0
67.5°	357.1	410.1	524.6	608.5	637.4
70°	292.2	358.9	476.7	558.8	587.9
72.5°	232.4	309.4	430.6	507.6	533.2
75°	179.4	261.5	379.4	449.4	459.7
77.5°	131.6	213.6	326.4	350.3	352.0
80°	88.9	170.8	249.6	246.1	249.6
82.5°	58.1	128.2	157.2	176.1	177.7
85°	34.2	75.2	92.3	102.6	104.2
87.5°	17.0	25.6	32.4	34.2	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)