

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: P474473

Luminaire Tested: **24CZ2-50HE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474473
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50HE-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4262.9 lumens
Efficiency: N/A
Efficacy: 110.4 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

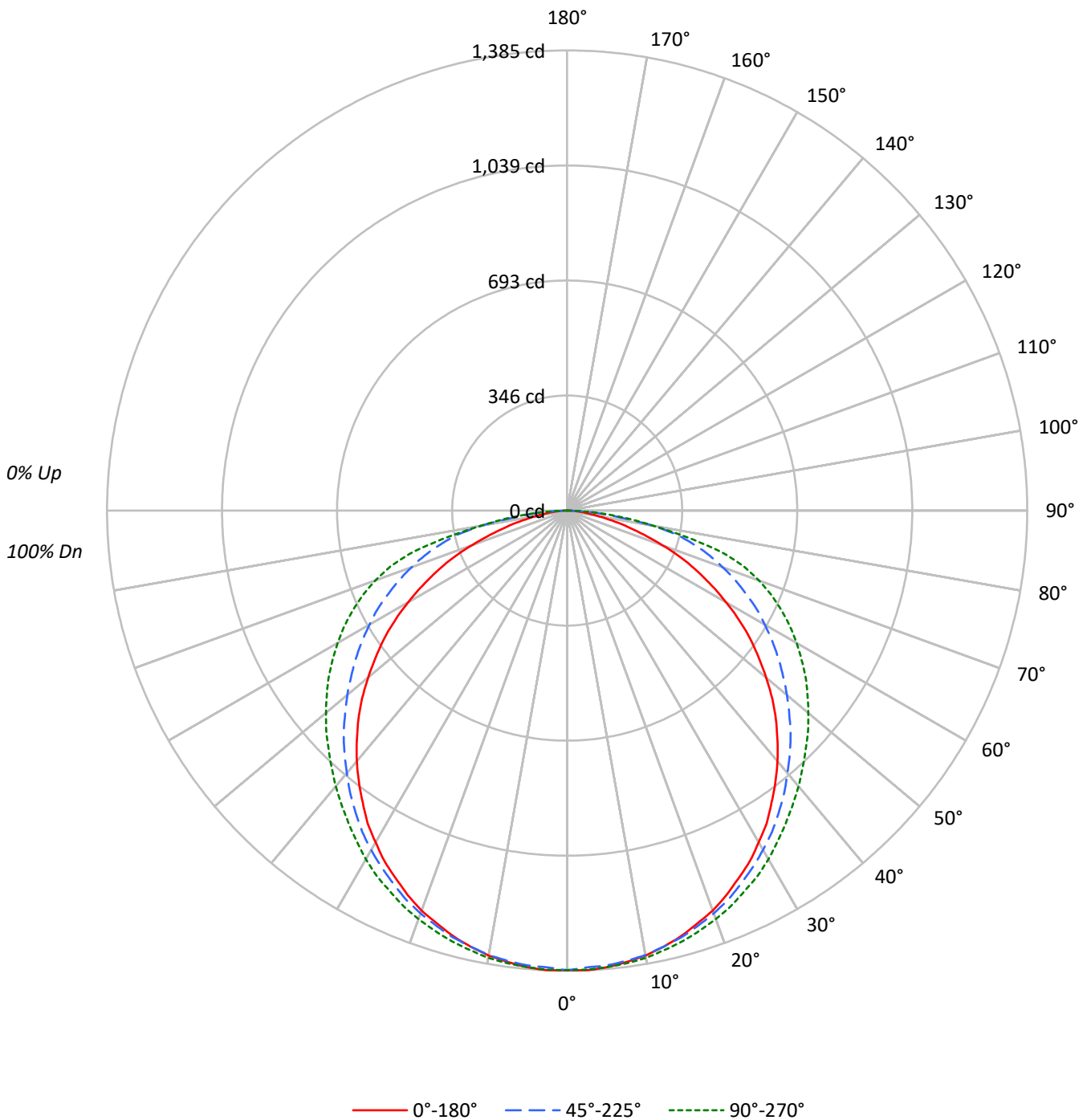
Input Watts (W): 38.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474473

CATALOG NUMBER: 24CZ2-50HE-HRP-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474473

CATALOG NUMBER: 24CZ2-50HE-HRP-UNV-L840-CD1-U

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°	1861	1861	1861
5°	1863	1856	1863
10°	1858	1856	1868
15°	1847	1852	1869
20°	1835	1847	1873
25°	1812	1839	1876
30°	1791	1833	1883
35°	1762	1823	1885
40°	1730	1812	1903
45°	1691	1810	1932
50°	1636	1808	1984
55°	1578	1821	2056
60°	1489	1849	2147
65°	1375	1892	2267
70°	1201	1958	2415
75°	974	2060	2496
80°	720	2019	2019
85°	551	1487	1680



TEST NUMBER: P474473

CATALOG NUMBER: 24CZ2-50HE-HRP-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.0	3.1
10°-20°	376.3	8.8
20°-30°	572.8	13.4
30°-40°	695.5	16.3
40°-50°	734.8	17.2
50°-60°	693.4	16.3
60°-70°	576.5	13.5
70°-80°	379.3	8.9
80°-90°	103.4	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°	1080.1	25.3
0°-40°	1775.6	41.7
0°-60°	3203.8	75.2
0°-90°	4262.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4262.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1383	1383	1383	1383	1383	
5°	1380	1380	1374	1380	1380	131
15°	1326	1328	1330	1342	1342	374
25°	1221	1228	1239	1260	1264	563
35°	1073	1085	1110	1139	1148	671
45°	889	907	951	998	1016	684
55°	673	701	776	850	876	599
65°	432	482	594	682	712	427
75°	187	273	396	469	480	202
85°	36	79	96	107	109	44
90°	0	0	0	0	0	



TEST NUMBER: P474473

CATALOG NUMBER: 24CZ2-50HE-HRP-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1383.1	1383.1	1383.1	1383.1	1383.1
2.5°	1384.9	1383.1	1376.0	1383.1	1383.1
5°	1379.6	1379.6	1374.1	1379.6	1379.6
7.5°	1370.6	1370.6	1367.0	1374.1	1374.1
10°	1359.8	1359.8	1358.2	1367.0	1367.0
12.5°	1343.9	1345.6	1343.9	1354.5	1354.5
15°	1326.0	1327.8	1329.6	1342.1	1342.1
17.5°	1302.9	1306.4	1310.0	1324.1	1326.0
20°	1281.4	1283.1	1290.2	1306.4	1308.2
22.5°	1252.9	1258.2	1267.2	1283.1	1288.6
25°	1220.6	1227.8	1238.6	1260.0	1263.5
27.5°	1190.4	1195.7	1210.0	1233.3	1240.4
30°	1152.9	1161.8	1179.6	1202.9	1211.8
32.5°	1117.1	1126.1	1147.5	1172.5	1179.6
35°	1072.6	1085.1	1110.0	1138.6	1147.5
37.5°	1029.8	1042.2	1072.6	1104.7	1115.5
40°	985.1	999.4	1031.6	1069.0	1083.3
42.5°	936.9	956.5	992.2	1033.2	1049.4
45°	888.7	906.7	951.2	997.5	1015.5
47.5°	837.1	858.5	906.7	962.0	983.4
50°	781.8	808.5	863.8	924.4	947.7
52.5°	726.4	756.7	819.1	886.9	912.0
55°	672.8	701.3	776.3	849.5	876.3
57.5°	614.0	649.7	731.8	810.2	837.1
60°	553.2	592.5	687.1	769.1	797.7
62.5°	492.5	537.2	644.2	726.4	756.7
65°	431.9	481.9	594.4	681.8	712.2
67.5°	372.9	428.2	547.9	635.4	665.6
70°	305.2	374.8	497.8	583.6	614.0
72.5°	242.7	323.1	449.7	530.1	556.8
75°	187.4	273.1	396.2	469.3	480.1
77.5°	137.4	223.1	340.9	365.8	367.6
80°	92.9	178.4	260.6	257.0	260.6
82.5°	60.6	133.9	164.1	183.9	185.5
85°	35.7	78.6	96.3	107.2	108.8
87.5°	17.8	26.7	33.9	35.7	39.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)