

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: P474073

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474073
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50HE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

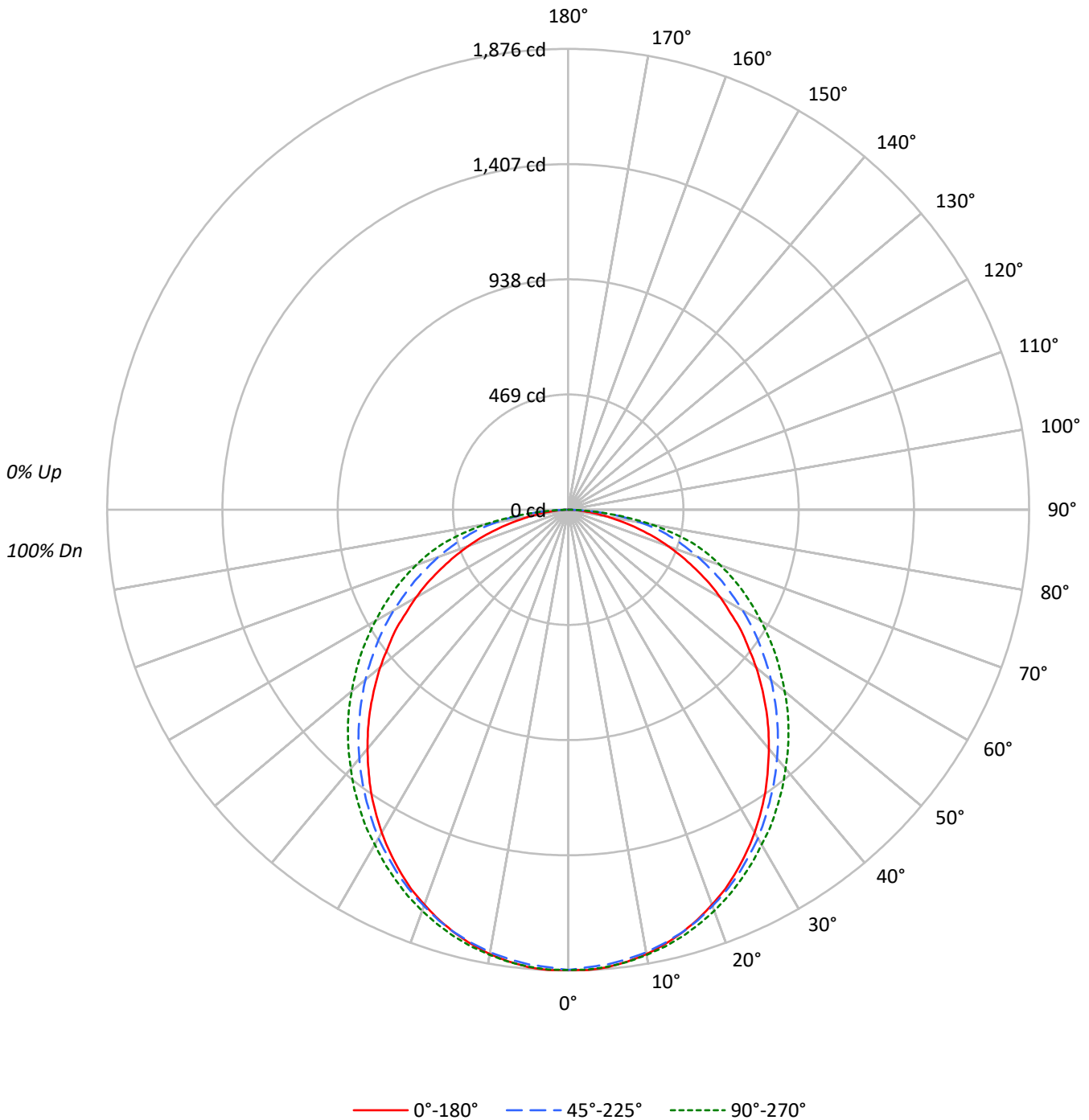
Lumens per Lamp: N/A
Luminaire Lumens: 5367.4 lumens
Efficiency: N/A
Efficacy: 139.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2521	2521	2521
5°	2524	2509	2522
10°	2510	2499	2514
15°	2484	2483	2504
20°	2450	2458	2488
25°	2410	2431	2469
30°	2359	2400	2445
35°	2300	2358	2431
40°	2231	2323	2417
45°	2164	2287	2412
50°	2091	2255	2406
55°	2016	2227	2420
60°	1924	2206	2436
65°	1822	2198	2495
70°	1699	2209	2584
75°	1512	2273	2722
80°	1237	2323	2658
85°	871	2029	2069



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.1	3.3
10°-20°	504.5	9.4
20°-30°	756.2	14.1
30°-40°	900.6	16.8
40°-50°	928.6	17.3
50°-60°	847.4	15.8
60°-70°	677.6	12.6
70°-80°	442.6	8.2
80°-90°	132.9	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°	1437.7	26.8
0°-40°	2338.4	43.6
0°-60°	4114.3	76.7
0°-90°	5367.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5367.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1874	1874	1874	1874	1874	
5°	1869	1866	1858	1869	1867	177
15°	1784	1784	1783	1798	1798	503
25°	1623	1626	1637	1661	1663	747
35°	1400	1410	1435	1471	1480	875
45°	1137	1158	1202	1252	1268	877
55°	860	884	950	1012	1032	766
65°	572	611	690	758	784	567
75°	291	339	437	508	524	309
85°	56	101	131	134	134	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1873.5	1873.5	1873.5	1873.5	1873.5
2.5°	1876.1	1873.5	1863.8	1875.2	1873.5
5°	1869.1	1865.5	1857.6	1869.1	1867.3
7.5°	1854.9	1853.2	1845.2	1858.5	1856.7
10°	1837.3	1835.6	1829.4	1842.6	1840.0
12.5°	1812.6	1811.7	1807.3	1823.2	1821.4
15°	1783.5	1784.4	1782.7	1797.6	1797.6
17.5°	1750.0	1749.2	1752.7	1771.2	1769.4
20°	1711.2	1712.1	1716.5	1737.7	1737.7
22.5°	1670.7	1669.8	1679.5	1700.7	1702.4
25°	1623.1	1625.7	1637.2	1661.0	1662.8
27.5°	1571.9	1576.4	1590.5	1617.8	1620.4
30°	1518.2	1523.5	1544.6	1570.2	1573.7
32.5°	1459.1	1470.6	1490.0	1522.6	1531.4
35°	1400.0	1409.7	1435.3	1471.4	1480.3
37.5°	1334.8	1350.7	1379.7	1419.4	1430.9
40°	1270.4	1286.3	1322.4	1363.9	1376.2
42.5°	1205.2	1221.9	1263.4	1310.1	1323.3
45°	1137.3	1157.6	1201.7	1251.9	1267.8
47.5°	1067.7	1091.5	1139.1	1193.7	1211.4
50°	998.9	1022.7	1077.4	1133.8	1149.6
52.5°	924.8	954.8	1013.0	1073.8	1089.7
55°	859.6	884.3	949.5	1012.1	1031.5
57.5°	782.9	816.4	886.0	949.5	968.0
60°	715.0	745.9	819.9	884.3	905.4
62.5°	646.2	678.0	752.0	825.2	844.6
65°	572.2	611.0	690.3	758.2	783.8
67.5°	501.6	542.2	623.3	695.6	722.1
70°	432.0	473.4	561.6	635.7	656.8
72.5°	363.2	406.4	498.1	570.4	595.1
75°	290.9	339.4	437.3	507.8	523.7
77.5°	223.1	276.8	375.6	423.2	434.6
80°	159.6	218.6	299.8	334.1	343.0
82.5°	104.9	162.2	223.9	242.4	239.8
85°	56.4	101.4	131.4	134.0	134.0
87.5°	22.0	40.6	41.4	31.7	30.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)