

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: P474377

Luminaire Tested: **24CZ2-70HE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474377
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70HE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5642.8 lumens
Efficiency: N/A
Efficacy: 114.5 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

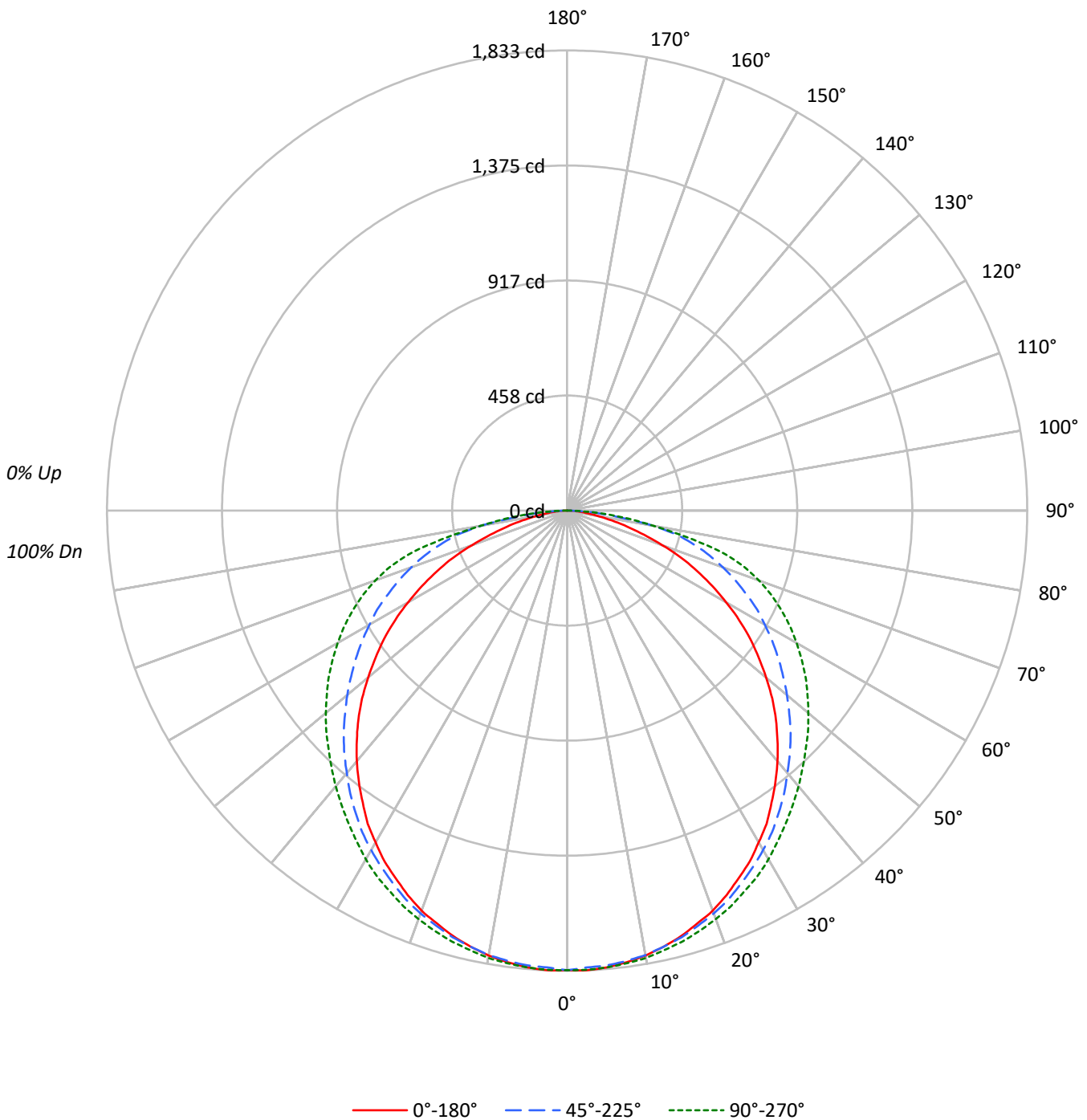
Input Watts (W): 49.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474377

CATALOG NUMBER: 24CZ2-70HE-HRP-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474377

CATALOG NUMBER: 24CZ2-70HE-HRP-UNV-L830-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°	2463	2463	2463
5°	2467	2457	2467
10°	2459	2456	2472
15°	2445	2452	2475
20°	2429	2445	2479
25°	2399	2434	2483
30°	2371	2426	2492
35°	2332	2413	2495
40°	2290	2398	2519
45°	2238	2396	2558
50°	2166	2393	2626
55°	2089	2410	2721
60°	1970	2447	2841
65°	1820	2505	3001
70°	1589	2592	3197
75°	1289	2726	3304
80°	952	2673	2673
85°	730	1968	2223



TEST NUMBER: P474377

CATALOG NUMBER: 24CZ2-70HE-HRP-UNV-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.4	3.1
10°-20°	498.0	8.8
20°-30°	758.2	13.4
30°-40°	920.6	16.3
40°-50°	972.7	17.2
50°-60°	917.8	16.3
60°-70°	763.1	13.5
70°-80°	502.1	8.9
80°-90°	136.8	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°	1429.7	25.3
0°-40°	2350.3	41.7
0°-60°	4240.8	75.2
0°-90°	5642.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5642.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1831	1831	1831	1831	1831	
5°	1826	1826	1819	1826	1826	173
15°	1755	1758	1760	1776	1776	495
25°	1616	1625	1640	1668	1672	745
35°	1420	1436	1469	1507	1519	889
45°	1176	1200	1259	1320	1344	906
55°	890	928	1028	1124	1160	793
65°	572	638	787	902	943	565
75°	248	362	524	621	636	267
85°	47	104	128	142	144	58
90°	0	0	0	0	0	



TEST NUMBER: P474377

CATALOG NUMBER: 24CZ2-70HE-HRP-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1830.8	1830.8	1830.8	1830.8	1830.8
2.5°	1833.2	1830.8	1821.3	1830.8	1830.8
5°	1826.2	1826.2	1818.9	1826.2	1826.2
7.5°	1814.3	1814.3	1809.4	1818.9	1818.9
10°	1800.0	1800.0	1797.8	1809.4	1809.4
12.5°	1778.9	1781.1	1778.9	1793.0	1793.0
15°	1755.1	1757.6	1760.0	1776.5	1776.5
17.5°	1724.6	1729.2	1734.0	1752.7	1755.1
20°	1696.2	1698.4	1707.9	1729.2	1731.6
22.5°	1658.4	1665.4	1677.3	1698.4	1705.7
25°	1615.7	1625.2	1639.5	1667.9	1672.5
27.5°	1575.7	1582.8	1601.7	1632.5	1641.9
30°	1526.0	1537.9	1561.4	1592.2	1604.1
32.5°	1478.7	1490.6	1519.0	1552.0	1561.4
35°	1419.8	1436.3	1469.3	1507.1	1519.0
37.5°	1363.1	1379.6	1419.8	1462.3	1476.6
40°	1303.9	1322.8	1365.5	1415.0	1433.9
42.5°	1240.2	1266.1	1313.4	1367.7	1389.0
45°	1176.4	1200.2	1259.1	1320.4	1344.2
47.5°	1108.0	1136.4	1200.2	1273.4	1301.7
50°	1034.8	1070.2	1143.4	1223.7	1254.5
52.5°	961.6	1001.6	1084.3	1174.0	1207.2
55°	890.5	928.4	1027.5	1124.5	1159.9
57.5°	812.7	860.0	968.6	1072.4	1108.0
60°	732.2	784.3	909.5	1018.1	1055.9
62.5°	652.0	711.1	852.7	961.6	1001.6
65°	571.7	637.9	786.8	902.4	942.7
67.5°	493.6	566.9	725.2	841.1	881.1
70°	403.9	496.1	659.0	772.5	812.7
72.5°	321.3	427.7	595.2	701.7	737.1
75°	248.0	361.5	524.4	621.2	635.5
77.5°	181.8	295.3	451.2	484.2	486.6
80°	122.9	236.2	345.0	340.2	345.0
82.5°	80.3	177.2	217.2	243.4	245.6
85°	47.3	104.0	127.5	141.8	144.0
87.5°	23.5	35.4	44.9	47.3	51.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)