

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: P474590

Luminaire Tested: **24CZ2-80VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474590
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-80VHE-SQR-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7351.8 lumens
Efficiency: N/A
Efficacy: 130.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

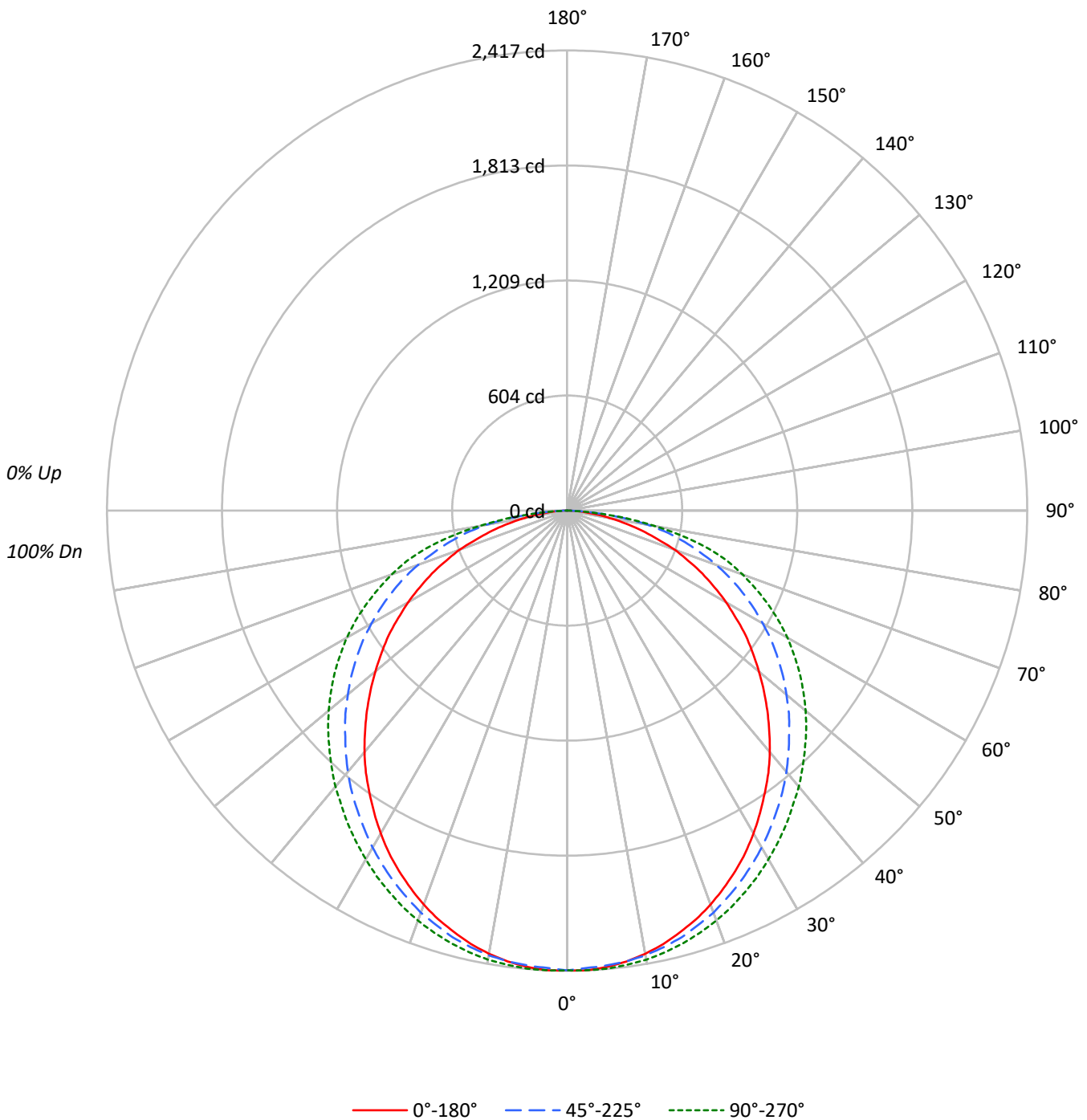
Input Watts (W): 56.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474590

CATALOG NUMBER: 24CZ2-80VHE-SQR-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474590

CATALOG NUMBER: 24CZ2-80VHE-SQR-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	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6498	6498	6498
5°	6498	6479	6523
10°	6457	6480	6544
15°	6387	6466	6554
20°	6307	6434	6562
25°	6204	6389	6563
30°	6084	6350	6573
35°	5946	6312	6598
40°	5818	6292	6651
45°	5659	6275	6723
50°	5507	6294	6845
55°	5378	6337	6998
60°	5196	6385	7194
65°	4988	6462	7412
70°	4732	6552	7707
75°	4238	6643	7962
80°	3567	6662	7226
85°	2646	5042	4752



TEST NUMBER: P474590

CATALOG NUMBER: 24CZ2-80VHE-SQR-UNV-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.9	3.1
10°-20°	655.8	8.9
20°-30°	992.8	13.5
30°-40°	1201.0	16.3
40°-50°	1267.8	17.2
50°-60°	1195.5	16.3
60°-70°	985.6	13.4
70°-80°	646.6	8.8
80°-90°	177.8	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°	1877.5	25.5
0°-40°	3078.6	41.9
0°-60°	5541.8	75.4
0°-90°	7351.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7351.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2415	2415	2415	2415	2415	
5°	2405	2405	2398	2415	2415	228
15°	2293	2306	2321	2348	2353	647
25°	2090	2115	2152	2196	2210	962
35°	1810	1857	1922	1987	2008	1133
45°	1487	1554	1649	1737	1766	1148
55°	1146	1227	1351	1452	1492	1021
65°	783	877	1015	1123	1164	774
75°	408	512	639	740	766	431
85°	86	148	163	159	154	106
90°	0	0	0	0	0	



TEST NUMBER: P474590

CATALOG NUMBER: 24CZ2-80VHE-SQR-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2414.8	2414.8	2414.8	2414.8	2414.8
2.5°	2417.2	2414.8	2404.3	2418.4	2417.2
5°	2405.4	2405.4	2398.4	2414.8	2414.8
7.5°	2389.0	2390.2	2387.8	2406.6	2406.6
10°	2363.2	2367.9	2371.4	2392.5	2394.9
12.5°	2332.6	2340.8	2347.9	2373.7	2376.1
15°	2292.7	2305.6	2320.9	2347.9	2352.6
17.5°	2251.6	2266.9	2283.3	2318.5	2324.4
20°	2202.3	2219.9	2246.9	2282.1	2291.5
22.5°	2147.1	2171.7	2199.9	2242.2	2253.9
25°	2089.5	2115.3	2151.7	2196.4	2210.5
27.5°	2027.2	2057.8	2098.9	2150.6	2165.8
30°	1958.0	1993.2	2043.7	2098.9	2115.3
32.5°	1885.1	1926.2	1982.6	2043.7	2062.5
35°	1810.0	1856.9	1921.5	1987.3	2008.5
37.5°	1736.0	1782.9	1859.3	1928.6	1948.6
40°	1656.1	1707.8	1791.2	1865.2	1893.4
42.5°	1571.5	1632.6	1720.7	1802.9	1829.9
45°	1487.0	1553.9	1649.0	1737.1	1766.5
47.5°	1401.2	1475.2	1579.8	1669.0	1703.1
50°	1315.5	1394.2	1503.4	1599.7	1635.0
52.5°	1228.6	1310.8	1429.4	1531.6	1563.3
55°	1146.3	1227.4	1350.7	1451.7	1491.7
57.5°	1051.2	1142.8	1273.2	1375.4	1414.1
60°	965.5	1054.7	1186.3	1294.3	1336.6
62.5°	872.7	964.3	1102.9	1210.9	1252.1
65°	783.4	877.4	1014.8	1122.9	1164.0
67.5°	687.1	785.8	926.7	1031.2	1071.2
70°	601.4	694.2	832.7	939.6	979.6
72.5°	496.8	602.5	735.3	841.0	884.4
75°	407.6	512.1	638.9	740.0	765.8
77.5°	313.6	418.1	543.8	609.6	627.2
80°	230.2	328.9	429.9	465.1	466.3
82.5°	155.0	242.0	299.5	317.1	314.8
85°	85.7	148.0	163.3	158.6	153.9
87.5°	35.2	49.3	39.9	28.2	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)