

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: P474567

Luminaire Tested: **24CZ2-60-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474567
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60-SQR-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

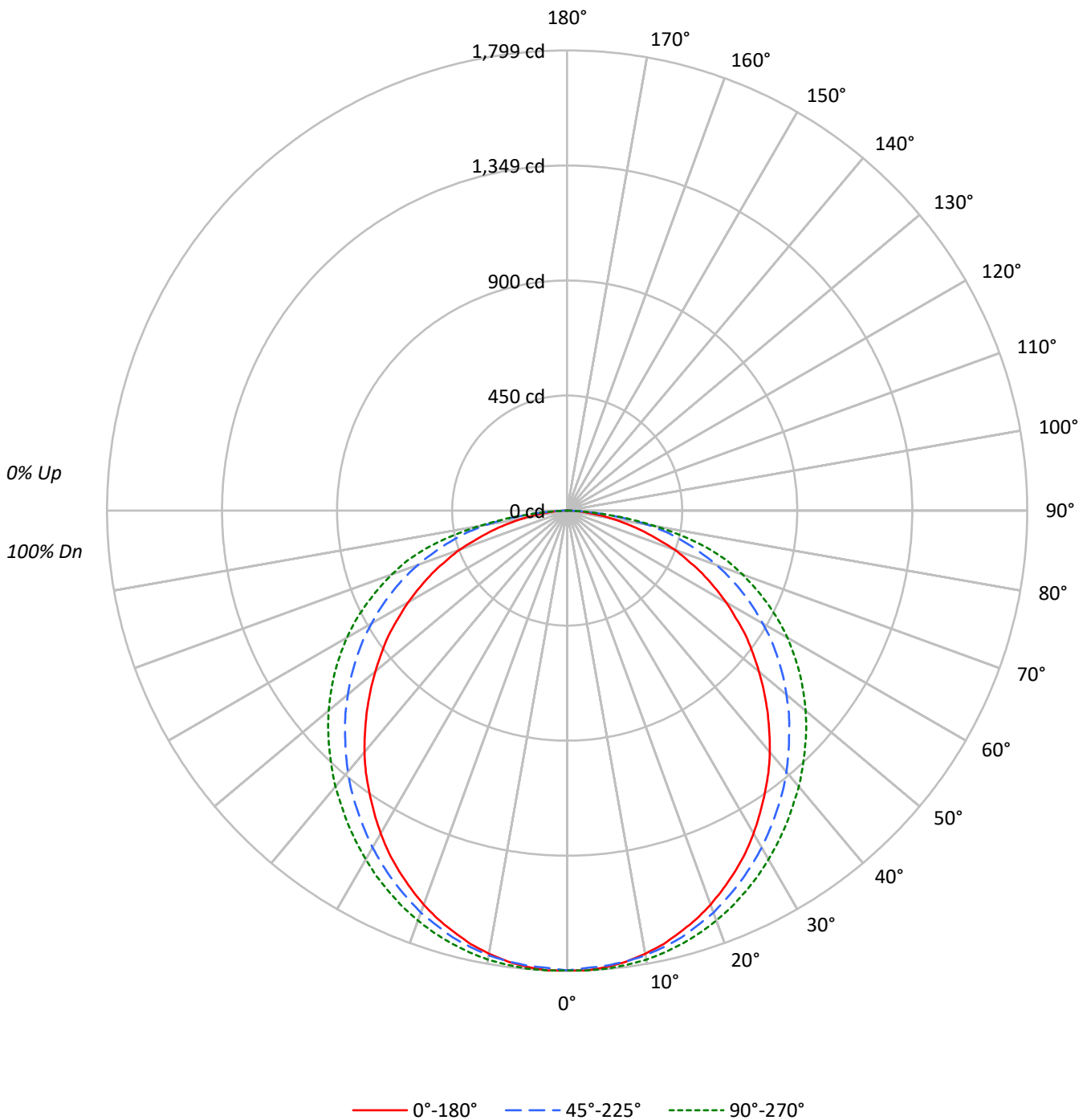
Lumens per Lamp: N/A
Luminaire Lumens: 5472.4 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.3
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



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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	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°	4837	4837	4837
5°	4837	4823	4856
10°	4806	4823	4871
15°	4754	4813	4879
20°	4694	4790	4885
25°	4618	4756	4885
30°	4529	4727	4893
35°	4426	4699	4911
40°	4330	4684	4951
45°	4212	4671	5004
50°	4099	4685	5095
55°	4003	4717	5209
60°	3868	4752	5355
65°	3713	4810	5517
70°	3522	4877	5736
75°	3154	4945	5926
80°	2656	4959	5379
85°	1970	3751	3535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.3	3.1
10°-20°	488.2	8.9
20°-30°	739.0	13.5
30°-40°	894.0	16.3
40°-50°	943.7	17.2
50°-60°	889.9	16.3
60°-70°	733.7	13.4
70°-80°	481.3	8.8
80°-90°	132.3	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°	1397.5	25.5
0°-40°	2291.5	41.9
0°-60°	4125.1	75.4
0°-90°	5472.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5472.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1798	1798	1798	1798	1798	
5°	1790	1790	1785	1798	1798	170
15°	1707	1716	1728	1748	1751	481
25°	1555	1575	1602	1635	1645	716
35°	1347	1382	1430	1479	1495	843
45°	1107	1157	1228	1293	1315	854
55°	853	914	1005	1081	1110	760
65°	583	653	755	836	866	576
75°	303	381	476	551	570	321
85°	64	110	122	118	114	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1797.5	1797.5	1797.5	1797.5	1797.5
2.5°	1799.3	1797.5	1789.6	1800.1	1799.3
5°	1790.5	1790.5	1785.3	1797.5	1797.5
7.5°	1778.3	1779.1	1777.4	1791.4	1791.4
10°	1759.0	1762.5	1765.2	1780.9	1782.6
12.5°	1736.3	1742.4	1747.7	1766.9	1768.7
15°	1706.6	1716.2	1727.6	1747.7	1751.2
17.5°	1676.0	1687.3	1699.6	1725.8	1730.2
20°	1639.3	1652.4	1672.5	1698.7	1705.7
22.5°	1598.2	1616.5	1637.5	1669.0	1677.7
25°	1555.3	1574.6	1601.7	1634.9	1645.4
27.5°	1509.0	1531.7	1562.3	1600.8	1612.2
30°	1457.4	1483.6	1521.2	1562.3	1574.6
32.5°	1403.2	1433.8	1475.8	1521.2	1535.2
35°	1347.3	1382.2	1430.3	1479.3	1495.0
37.5°	1292.2	1327.1	1384.0	1435.6	1450.4
40°	1232.7	1271.2	1333.3	1388.3	1409.3
42.5°	1169.8	1215.2	1280.8	1342.0	1362.1
45°	1106.8	1156.7	1227.5	1293.1	1314.9
47.5°	1043.0	1098.1	1175.9	1242.3	1267.7
50°	979.2	1037.8	1119.1	1190.8	1217.0
52.5°	914.5	975.7	1064.0	1140.1	1163.7
55°	853.3	913.6	1005.4	1080.6	1110.3
57.5°	782.5	850.7	947.7	1023.8	1052.6
60°	718.7	785.1	883.0	963.4	994.9
62.5°	649.6	717.8	820.9	901.4	932.0
65°	583.1	653.1	755.4	835.8	866.4
67.5°	511.5	584.9	689.8	767.6	797.3
70°	447.6	516.7	619.9	699.4	729.1
72.5°	369.8	448.5	547.3	626.0	658.3
75°	303.4	381.2	475.6	550.8	570.0
77.5°	233.4	311.2	404.8	453.7	466.9
80°	171.4	244.8	320.0	346.2	347.1
82.5°	115.4	180.1	222.9	236.1	234.3
85°	63.8	110.2	121.5	118.0	114.5
87.5°	26.2	36.7	29.7	21.0	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)