

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: P473967

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473967
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

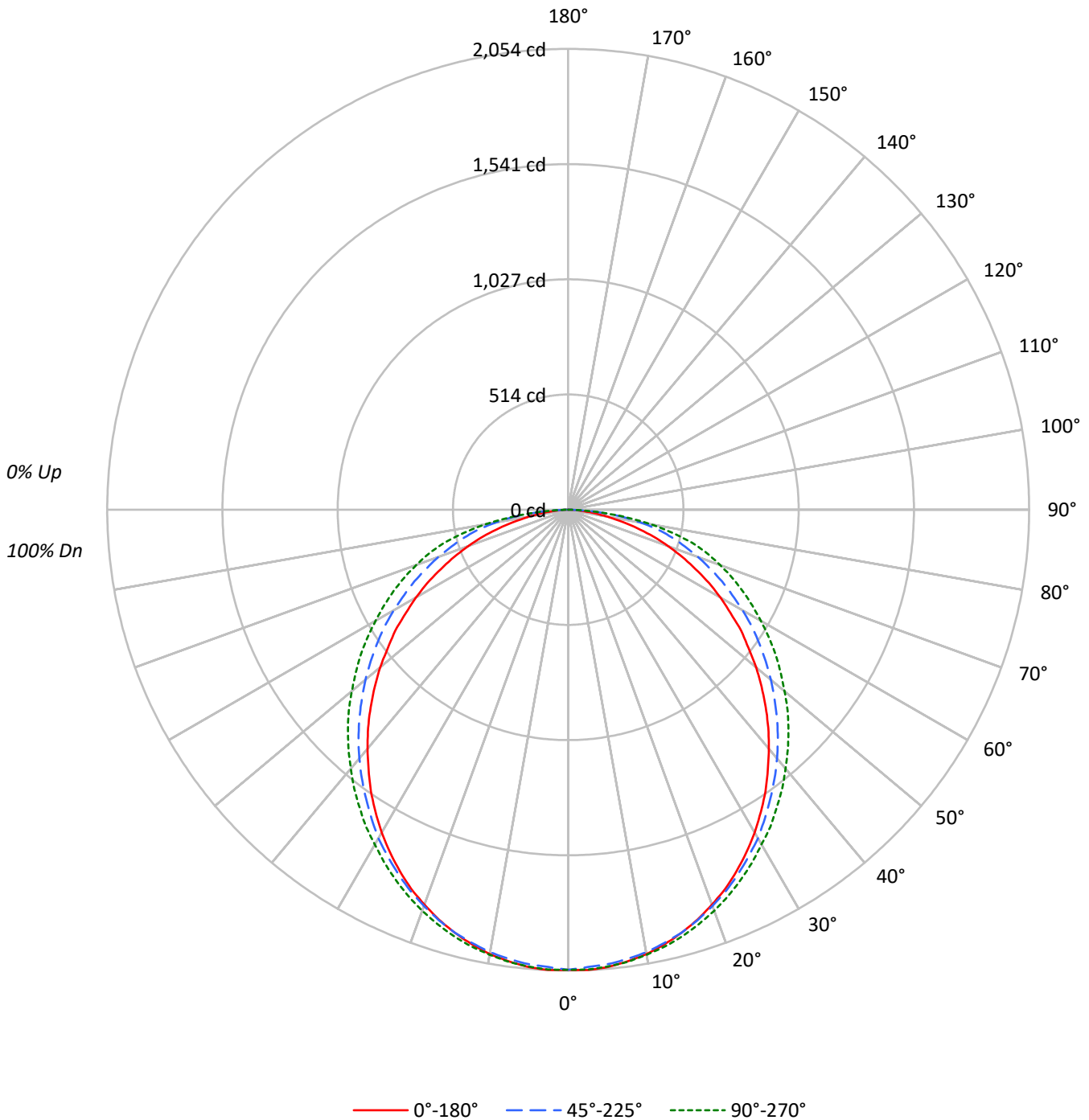
Lumens per Lamp: N/A
Luminaire Lumens: 5875.3 lumens
Efficiency: N/A
Efficacy: 126.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	2759	2759	2759
5°	2763	2746	2761
10°	2748	2736	2752
15°	2719	2718	2741
20°	2682	2690	2724
25°	2638	2661	2702
30°	2582	2627	2676
35°	2517	2581	2661
40°	2443	2543	2646
45°	2369	2503	2641
50°	2289	2469	2634
55°	2207	2438	2649
60°	2106	2415	2667
65°	1994	2406	2731
70°	1860	2418	2829
75°	1656	2489	2980
80°	1354	2542	2909
85°	954	2220	2265



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.9	3.3
10°-20°	552.2	9.4
20°-30°	827.7	14.1
30°-40°	985.8	16.8
40°-50°	1016.5	17.3
50°-60°	927.6	15.8
60°-70°	741.7	12.6
70°-80°	484.5	8.2
80°-90°	145.5	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°	1573.8	26.8
0°-40°	2559.6	43.6
0°-60°	4503.7	76.7
0°-90°	5875.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5875.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2051	2051	2051	2051	2051	
5°	2046	2042	2033	2046	2044	194
15°	1952	1953	1951	1968	1968	550
25°	1777	1780	1792	1818	1820	818
35°	1532	1543	1571	1611	1620	957
45°	1245	1267	1315	1370	1388	960
55°	941	968	1039	1108	1129	838
65°	626	669	756	830	858	621
75°	318	372	479	556	573	338
85°	62	111	144	147	147	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2050.8	2050.8	2050.8	2050.8	2050.8
2.5°	2053.6	2050.8	2040.1	2052.7	2050.8
5°	2045.9	2042.1	2033.4	2045.9	2044.0
7.5°	2030.5	2028.6	2019.9	2034.3	2032.4
10°	2011.2	2009.3	2002.5	2017.0	2014.1
12.5°	1984.2	1983.2	1978.4	1995.7	1993.8
15°	1952.3	1953.3	1951.4	1967.8	1967.8
17.5°	1915.6	1914.7	1918.5	1938.8	1936.9
20°	1873.2	1874.1	1879.0	1902.1	1902.1
22.5°	1828.8	1827.8	1838.4	1861.6	1863.5
25°	1776.7	1779.6	1792.1	1818.2	1820.1
27.5°	1720.7	1725.5	1741.0	1770.9	1773.8
30°	1661.8	1667.6	1690.8	1718.8	1722.6
32.5°	1597.2	1609.7	1631.0	1666.7	1676.3
35°	1532.5	1543.1	1571.1	1610.7	1620.3
37.5°	1461.1	1478.5	1510.3	1553.7	1566.3
40°	1390.7	1408.0	1447.6	1492.9	1506.5
42.5°	1319.2	1337.6	1382.9	1434.1	1448.6
45°	1244.9	1267.1	1315.4	1370.4	1387.8
47.5°	1168.7	1194.7	1246.9	1306.7	1326.0
50°	1093.4	1119.5	1179.3	1241.1	1258.4
52.5°	1012.3	1045.2	1108.9	1175.4	1192.8
55°	940.9	968.0	1039.4	1107.9	1129.1
57.5°	857.0	893.6	969.9	1039.4	1059.6
60°	782.7	816.4	897.5	968.0	991.1
62.5°	707.4	742.1	823.2	903.3	924.5
65°	626.3	668.8	755.6	830.0	857.9
67.5°	549.1	593.5	682.3	761.4	790.4
70°	472.9	518.2	614.7	695.8	719.0
72.5°	397.6	444.9	545.3	624.4	651.4
75°	318.5	371.5	478.7	555.9	573.2
77.5°	244.2	303.0	411.1	463.2	475.8
80°	174.7	239.3	328.1	365.8	375.4
82.5°	114.8	177.6	245.1	265.4	262.5
85°	61.8	111.0	143.8	146.7	146.7
87.5°	24.1	44.4	45.4	34.7	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)