

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: P474067

Luminaire Tested: **24CZ2-60-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474067
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-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

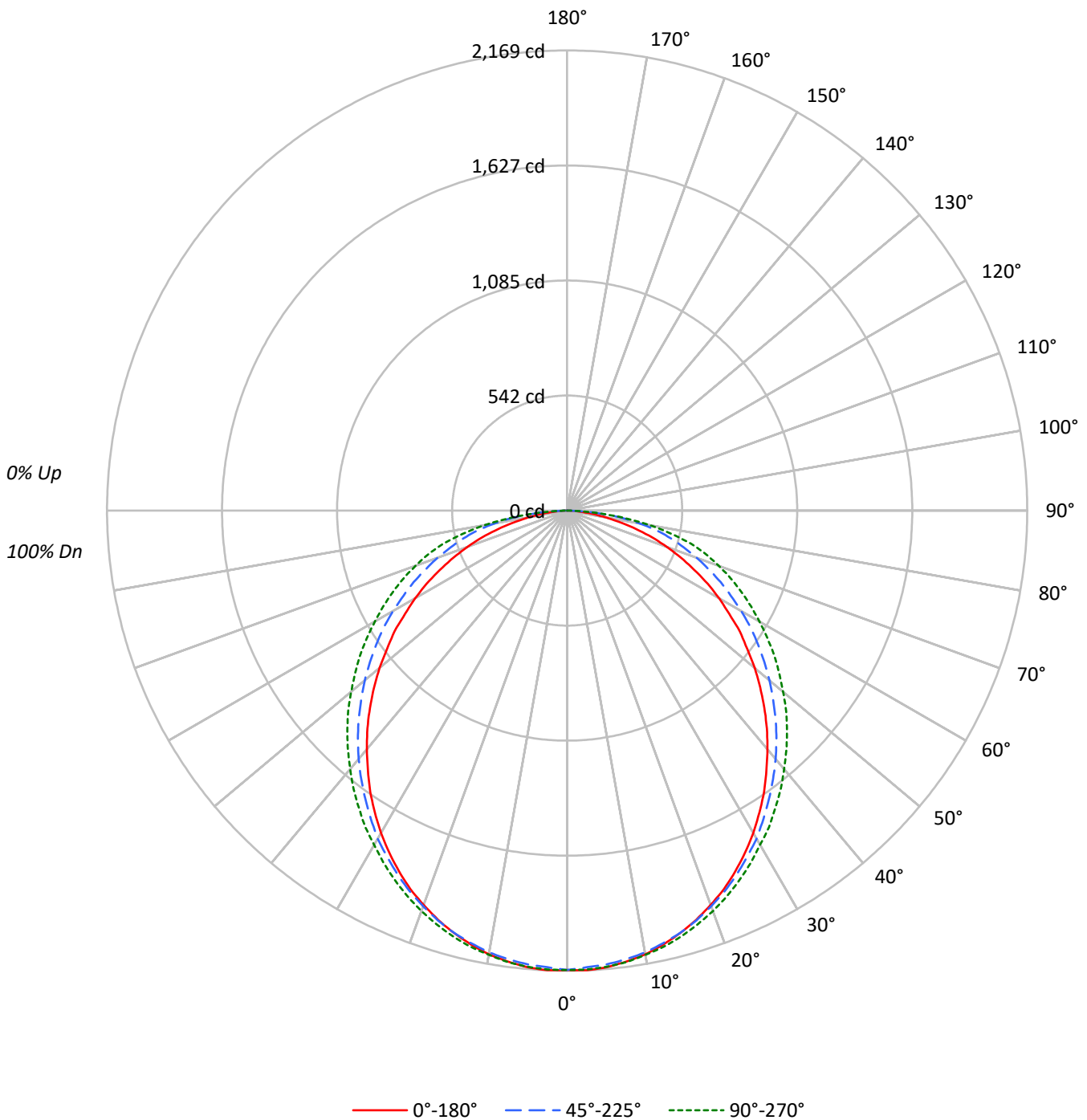
Lumens per Lamp: N/A
Luminaire Lumens: 6204.1 lumens
Efficiency: N/A
Efficacy: 134.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2914	2914	2914
5°	2918	2900	2915
10°	2901	2889	2906
15°	2872	2870	2894
20°	2832	2841	2876
25°	2785	2809	2853
30°	2726	2774	2826
35°	2658	2725	2810
40°	2579	2685	2794
45°	2501	2643	2788
50°	2417	2607	2782
55°	2331	2575	2797
60°	2224	2550	2816
65°	2106	2540	2884
70°	1964	2554	2987
75°	1748	2628	3147
80°	1430	2685	3071
85°	1007	2343	2391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.7	3.3
10°-20°	583.1	9.4
20°-30°	874.0	14.1
30°-40°	1041.0	16.8
40°-50°	1073.4	17.3
50°-60°	979.5	15.8
60°-70°	783.2	12.6
70°-80°	511.6	8.2
80°-90°	153.6	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°	1661.9	26.8
0°-40°	2702.9	43.6
0°-60°	4755.7	76.7
0°-90°	6204.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6204.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2166	2166	2166	2166	2166	
5°	2160	2156	2147	2160	2158	205
15°	2062	2063	2060	2078	2078	581
25°	1876	1879	1892	1920	1922	864
35°	1618	1630	1659	1701	1711	1011
45°	1315	1338	1389	1447	1465	1014
55°	994	1022	1098	1170	1192	885
65°	661	706	798	876	906	656
75°	336	392	506	587	605	357
85°	65	117	152	155	155	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2165.5	2165.5	2165.5	2165.5	2165.5
2.5°	2168.6	2165.5	2154.3	2167.5	2165.5
5°	2160.4	2156.3	2147.2	2160.4	2158.4
7.5°	2144.1	2142.1	2132.9	2148.2	2146.1
10°	2123.7	2121.7	2114.6	2129.8	2126.8
12.5°	2095.2	2094.2	2089.1	2107.4	2105.4
15°	2061.6	2062.6	2060.5	2077.9	2077.9
17.5°	2022.8	2021.8	2025.9	2047.3	2045.3
20°	1978.0	1979.0	1984.1	2008.6	2008.6
22.5°	1931.1	1930.1	1941.3	1965.8	1967.8
25°	1876.1	1879.2	1892.4	1919.9	1922.0
27.5°	1817.0	1822.1	1838.4	1870.0	1873.0
30°	1754.8	1760.9	1785.4	1815.0	1819.0
32.5°	1686.6	1699.8	1722.2	1759.9	1770.1
35°	1618.3	1629.5	1659.0	1700.8	1711.0
37.5°	1542.9	1561.2	1594.8	1640.7	1653.9
40°	1468.5	1486.8	1528.6	1576.5	1590.8
42.5°	1393.1	1412.4	1460.3	1514.3	1529.6
45°	1314.6	1338.0	1389.0	1447.1	1465.4
47.5°	1234.1	1261.6	1316.6	1379.8	1400.2
50°	1154.6	1182.1	1245.3	1310.5	1328.9
52.5°	1069.0	1103.6	1170.9	1241.2	1259.6
55°	993.6	1022.1	1097.5	1169.9	1192.3
57.5°	904.9	943.7	1024.2	1097.5	1118.9
60°	826.5	862.1	947.7	1022.1	1046.6
62.5°	747.0	783.7	869.3	953.8	976.3
65°	661.4	706.2	797.9	876.4	905.9
67.5°	579.8	626.7	720.5	804.0	834.6
70°	499.3	547.2	649.1	734.7	759.2
72.5°	419.9	469.8	575.8	659.3	687.9
75°	336.3	392.3	505.5	587.0	605.3
77.5°	257.8	320.0	434.1	489.2	502.4
80°	184.5	252.7	346.5	386.2	396.4
82.5°	121.3	187.5	258.8	280.2	277.2
85°	65.2	117.2	151.8	154.9	154.9
87.5°	25.5	46.9	47.9	36.7	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)