

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: P474087

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474087
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6243.6 lumens
Efficiency: N/A
Efficacy: 153.4 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

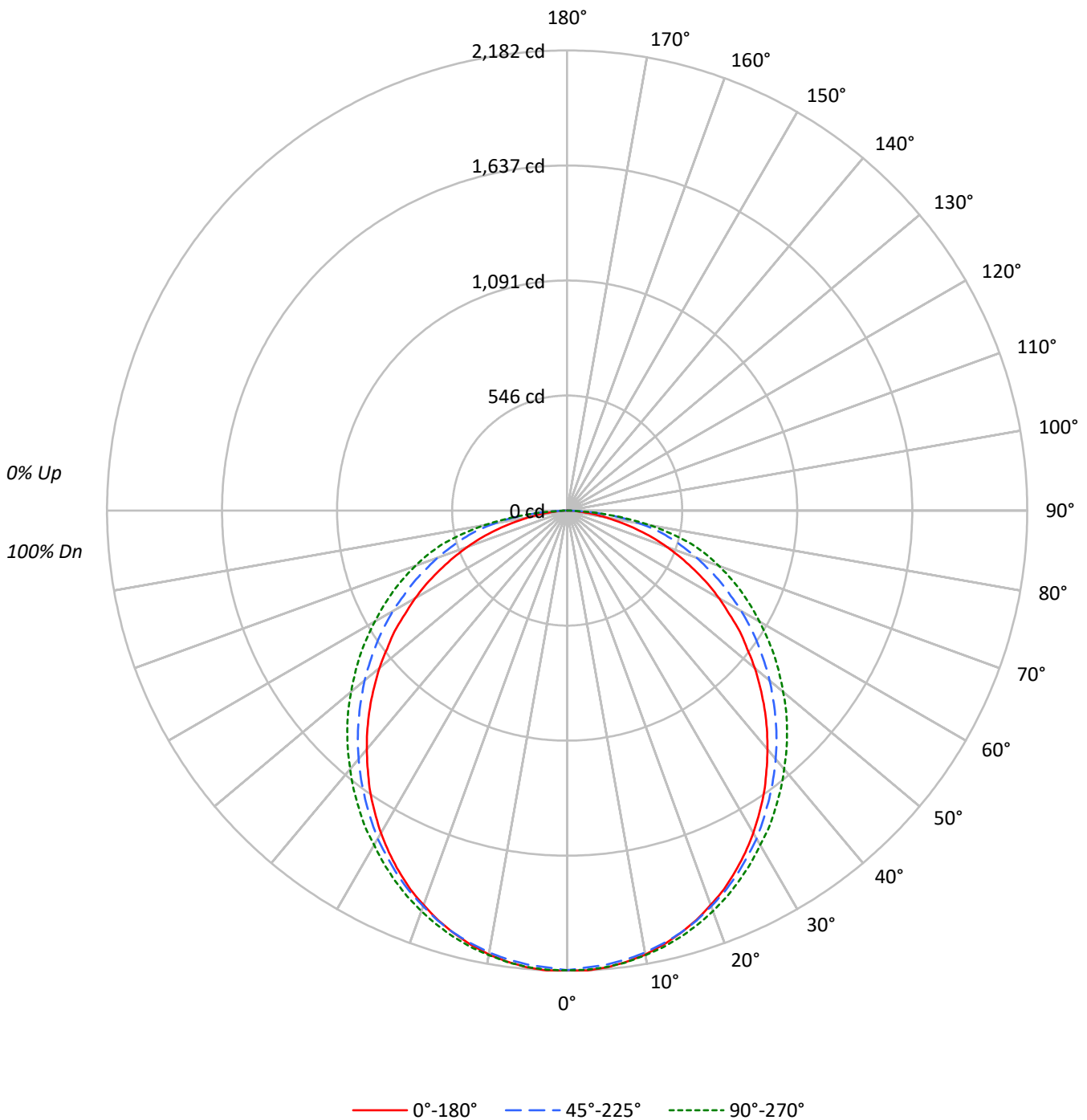
Input Watts (W): 40.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2932	2932	2932
5°	2937	2918	2934
10°	2920	2907	2924
15°	2890	2889	2913
20°	2850	2859	2894
25°	2803	2827	2871
30°	2744	2792	2844
35°	2675	2742	2828
40°	2596	2702	2812
45°	2517	2660	2806
50°	2432	2623	2799
55°	2346	2591	2815
60°	2238	2567	2834
65°	2119	2557	2903
70°	1977	2570	3006
75°	1759	2645	3167
80°	1438	2702	3091
85°	1013	2359	2407



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.0	3.3
10°-20°	586.8	9.4
20°-30°	879.6	14.1
30°-40°	1047.6	16.8
40°-50°	1080.2	17.3
50°-60°	985.7	15.8
60°-70°	788.2	12.6
70°-80°	514.8	8.2
80°-90°	154.6	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°	1672.4	26.8
0°-40°	2720.1	43.6
0°-60°	4786.0	76.7
0°-90°	6243.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6243.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2179	2179	2179	2179	2179	
5°	2174	2170	2161	2174	2172	206
15°	2075	2076	2074	2091	2091	585
25°	1888	1891	1904	1932	1934	869
35°	1629	1640	1670	1712	1722	1017
45°	1323	1346	1398	1456	1475	1020
55°	1000	1029	1104	1177	1200	891
65°	666	711	803	882	912	660
75°	338	395	509	591	609	360
85°	66	118	153	156	156	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2179.3	2179.3	2179.3	2179.3	2179.3
2.5°	2182.4	2179.3	2168.0	2181.3	2179.3
5°	2174.2	2170.1	2160.8	2174.2	2172.1
7.5°	2157.8	2155.7	2146.5	2161.9	2159.8
10°	2137.2	2135.2	2128.0	2143.4	2140.3
12.5°	2108.5	2107.5	2102.4	2120.8	2118.8
15°	2074.7	2075.7	2073.7	2091.1	2091.1
17.5°	2035.7	2034.7	2038.8	2060.3	2058.3
20°	1990.6	1991.6	1996.7	2021.4	2021.4
22.5°	1943.4	1942.4	1953.7	1978.3	1980.3
25°	1888.0	1891.1	1904.4	1932.1	1934.2
27.5°	1828.6	1833.7	1850.1	1881.9	1885.0
30°	1766.0	1772.2	1796.8	1826.5	1830.6
32.5°	1697.3	1710.6	1733.2	1771.1	1781.4
35°	1628.6	1639.9	1669.6	1711.6	1721.9
37.5°	1552.7	1571.1	1605.0	1651.1	1664.5
40°	1477.8	1496.3	1538.3	1586.5	1600.9
42.5°	1401.9	1421.4	1469.6	1524.0	1539.4
45°	1323.0	1346.5	1397.8	1456.3	1474.7
47.5°	1241.9	1269.6	1325.0	1388.6	1409.1
50°	1161.9	1189.6	1253.2	1318.9	1337.3
52.5°	1075.8	1110.7	1178.4	1249.1	1267.6
55°	999.9	1028.6	1104.5	1177.3	1199.9
57.5°	910.7	949.7	1030.7	1104.5	1126.1
60°	831.7	867.6	953.8	1028.6	1053.2
62.5°	751.7	788.6	874.8	959.9	982.5
65°	665.6	710.7	803.0	882.0	911.7
67.5°	583.5	630.7	725.1	809.2	839.9
70°	502.5	550.7	653.3	739.4	764.0
72.5°	422.5	472.8	579.4	663.5	692.2
75°	338.4	394.8	508.7	590.7	609.2
77.5°	259.5	322.0	436.9	492.3	505.6
80°	185.6	254.3	348.7	388.7	398.9
82.5°	122.0	188.7	260.5	282.0	278.9
85°	65.6	117.9	152.8	155.9	155.9
87.5°	25.6	47.2	48.2	36.9	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)