

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: P473838

Luminaire Tested: **24CZ2-70VHE-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473838
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

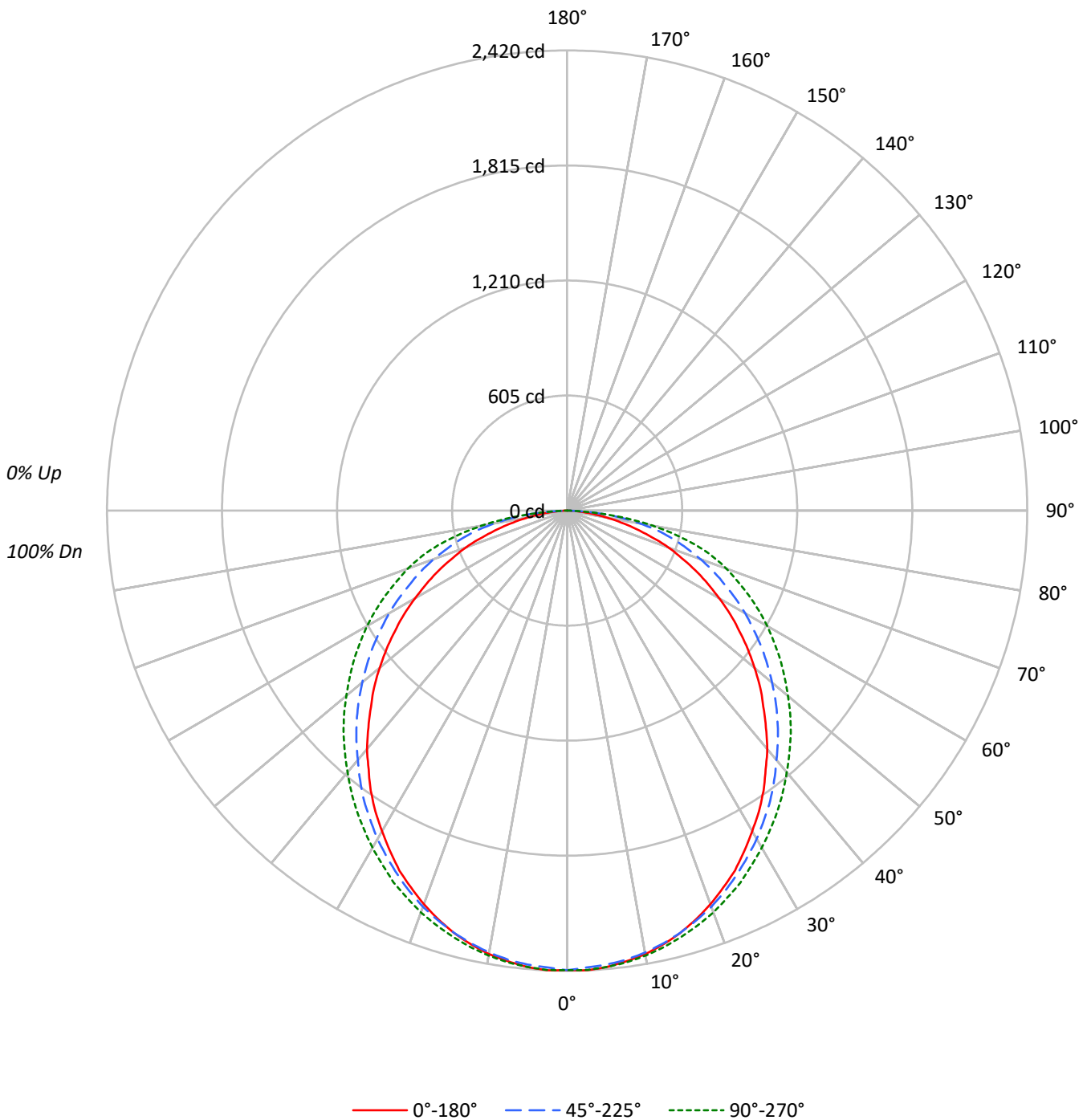
Lumens per Lamp: N/A
Luminaire Lumens: 6993.9 lumens
Efficiency: N/A
Efficacy: 146.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 47.8
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: P473838
CATALOG NUMBER: 24CZ2-70VHE-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P473838

CATALOG NUMBER: 24CZ2-70VHE-UNV-L835-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	99	95	105	101	97	93	97	93	90		93	90	87		89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74		81	76	72		78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61		71	65	60		68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52		63	57	51		61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45		56	50	44		55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39		51	44	39		49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35		47	40	35		45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31		43	36	31		41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25		36	30	25		36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3252	3252	3252
5°	3254	3237	3254
10°	3236	3225	3246
15°	3203	3201	3233
20°	3155	3174	3219
25°	3100	3135	3204
30°	3025	3098	3181
35°	2956	3059	3168
40°	2876	3009	3155
45°	2778	2978	3165
50°	2694	2945	3174
55°	2595	2924	3210
60°	2487	2910	3268
65°	2371	2899	3353
70°	2231	2929	3507
75°	1962	2990	3648
80°	1637	3012	3519
85°	1169	2581	2617



TEST NUMBER: P473838

CATALOG NUMBER: 24CZ2-70VHE-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.5	3.3
10°-20°	650.8	9.3
20°-30°	976.3	14.0
30°-40°	1165.6	16.7
40°-50°	1207.3	17.3
50°-60°	1111.5	15.9
60°-70°	896.6	12.8
70°-80°	585.8	8.4
80°-90°	171.7	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°	1855.5	26.5
0°-40°	3021.0	43.2
0°-60°	5339.8	76.3
0°-90°	6993.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6993.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2417	2417	2417	2417	2417	
5°	2409	2407	2396	2410	2409	229
15°	2299	2299	2298	2321	2321	648
25°	2088	2093	2112	2150	2158	960
35°	1800	1816	1862	1913	1929	1124
45°	1460	1496	1565	1635	1663	1128
55°	1106	1154	1246	1338	1368	990
65°	745	795	911	1015	1053	736
75°	377	449	575	674	702	403
85°	76	131	167	177	170	94
90°	0	0	0	0	0	



TEST NUMBER: P473838

CATALOG NUMBER: 24CZ2-70VHE-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2416.8	2416.8	2416.8	2416.8	2416.8
2.5°	2420.2	2416.8	2404.4	2419.1	2418.0
5°	2408.9	2406.7	2396.5	2410.0	2408.9
7.5°	2390.8	2389.7	2381.8	2396.5	2396.5
10°	2368.2	2366.0	2360.3	2377.3	2376.2
12.5°	2336.6	2335.5	2332.1	2352.4	2351.3
15°	2299.3	2299.3	2298.2	2320.8	2320.8
17.5°	2254.1	2255.3	2259.8	2285.8	2286.9
20°	2203.3	2207.8	2216.8	2246.2	2248.5
22.5°	2145.7	2154.7	2167.1	2199.9	2203.3
25°	2088.0	2092.6	2111.8	2150.2	2158.1
27.5°	2018.0	2029.3	2054.1	2093.7	2101.6
30°	1946.8	1962.6	1994.3	2034.9	2047.4
32.5°	1876.7	1890.3	1927.6	1973.9	1988.6
35°	1799.9	1815.7	1862.1	1912.9	1928.7
37.5°	1715.2	1740.0	1788.6	1847.4	1864.3
40°	1637.2	1659.8	1712.9	1778.4	1796.5
42.5°	1547.9	1576.2	1640.6	1707.3	1729.9
45°	1459.8	1496.0	1564.9	1634.9	1663.2
47.5°	1377.3	1406.7	1488.1	1567.2	1592.0
50°	1286.9	1320.8	1406.7	1490.3	1516.3
52.5°	1197.7	1238.4	1325.4	1413.5	1441.7
55°	1106.2	1153.6	1246.3	1337.8	1368.3
57.5°	1018.0	1065.5	1161.5	1258.7	1290.3
60°	924.2	975.1	1081.3	1175.1	1214.6
62.5°	833.9	884.7	996.6	1098.3	1135.5
65°	744.6	795.4	910.7	1014.6	1053.1
67.5°	651.9	707.3	830.5	931.0	968.3
70°	567.2	620.3	744.6	851.9	891.5
72.5°	470.0	533.3	659.9	766.1	803.3
75°	377.4	448.6	575.1	674.5	701.7
77.5°	291.5	362.7	489.2	563.8	580.8
80°	211.3	283.6	388.7	440.7	454.2
82.5°	136.7	211.3	281.3	316.4	320.9
85°	75.7	131.1	167.2	177.4	169.5
87.5°	27.1	49.7	48.6	39.5	31.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)