

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: P474206

Luminaire Tested: **24CZ2-160VHE-RDP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474206
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-160VHE-RDP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10408.3 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

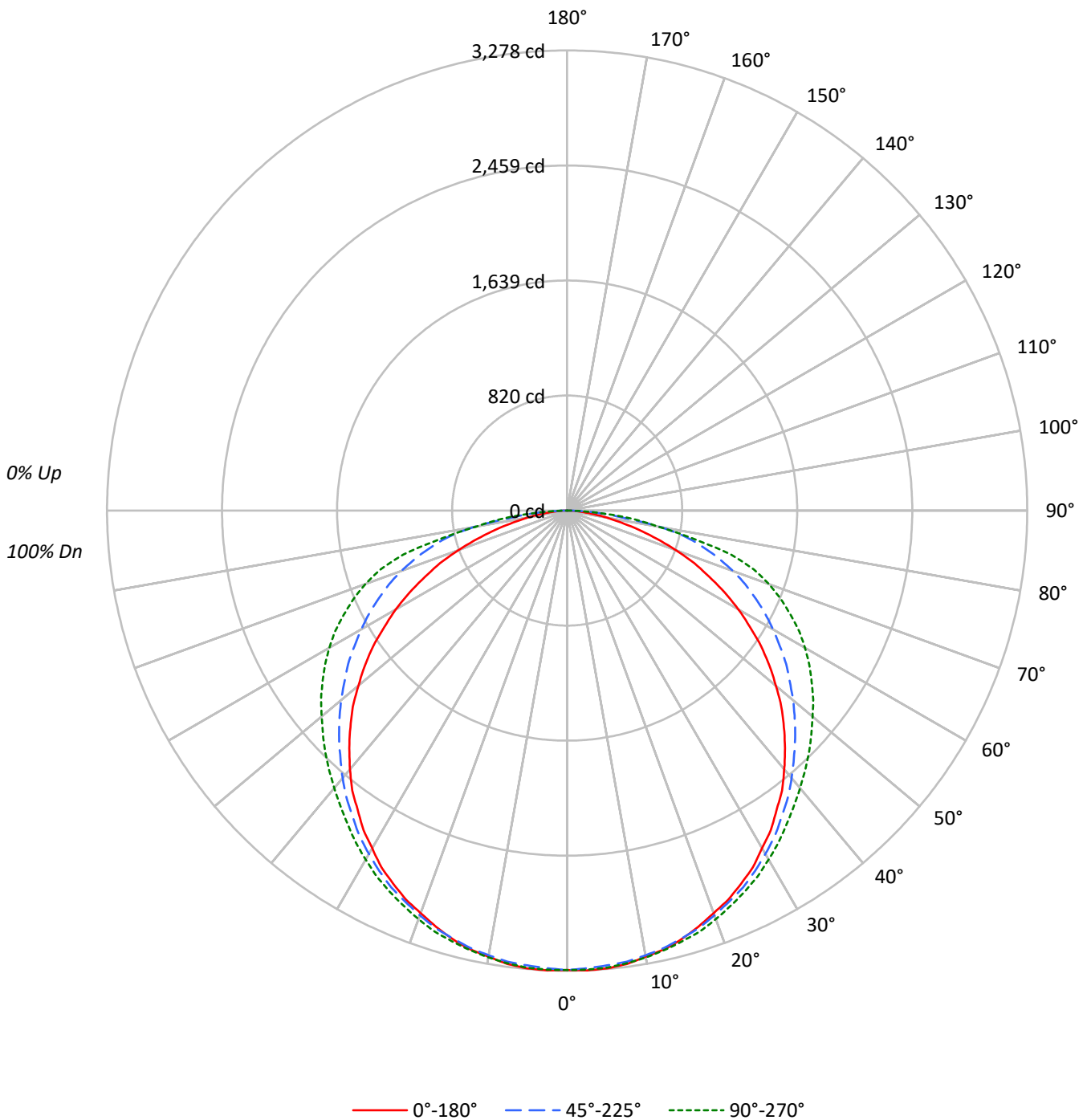
Input Watts (W): 118.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474206

CATALOG NUMBER: 24CZ2-160VHE-RDP-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474206

CATALOG NUMBER: 24CZ2-160VHE-RDP-UNV-L830-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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4404	4404	4404
5°	4421	4393	4414
10°	4409	4395	4416
15°	4401	4394	4423
20°	4369	4391	4435
25°	4353	4399	4445
30°	4315	4387	4460
35°	4274	4375	4477
40°	4226	4370	4533
45°	4156	4372	4636
50°	4063	4398	4777
55°	3960	4469	4990
60°	3793	4556	5265
65°	3550	4716	5588
70°	3229	4936	6011
75°	2736	5207	6281
80°	2161	5239	5079
85°	1595	3988	4466



TEST NUMBER: P474206

CATALOG NUMBER: 24CZ2-160VHE-RDP-UNV-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.5	3.0
10°-20°	893.6	8.6
20°-30°	1366.5	13.1
30°-40°	1670.4	16.0
40°-50°	1780.4	17.1
50°-60°	1702.3	16.4
60°-70°	1442.0	13.9
70°-80°	969.2	9.3
80°-90°	273.5	2.6
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°	2570.6	24.7
0°-40°	4241.0	40.7
0°-60°	7723.7	74.2
0°-90°	10408.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10408.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3273	3273	3273	3273	3273	
5°	3273	3268	3253	3268	3268	311
15°	3160	3160	3154	3180	3175	891
25°	2932	2943	2963	2989	2994	1352
35°	2602	2622	2664	2715	2726	1630
45°	2184	2220	2298	2396	2436	1684
55°	1688	1750	1905	2055	2127	1504
65°	1115	1229	1481	1678	1755	1107
75°	526	718	1002	1172	1208	564
85°	103	212	258	279	289	128
90°	0	0	0	0	0	



TEST NUMBER: P474206

CATALOG NUMBER: 24CZ2-160VHE-RDP-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3273.3	3273.3	3273.3	3273.3	3273.3
2.5°	3278.4	3278.4	3262.9	3273.3	3273.3
5°	3273.3	3268.1	3252.6	3268.1	3268.1
7.5°	3257.8	3252.6	3242.3	3257.8	3252.6
10°	3226.8	3226.8	3216.5	3232.0	3232.0
12.5°	3201.0	3195.8	3190.6	3211.3	3206.1
15°	3159.6	3159.6	3154.5	3180.3	3175.1
17.5°	3108.0	3113.2	3118.3	3139.0	3144.1
20°	3051.2	3061.5	3066.7	3097.7	3097.7
22.5°	2999.5	3004.7	3015.0	3046.0	3046.0
25°	2932.4	2942.7	2963.4	2989.2	2994.3
27.5°	2865.2	2870.4	2896.2	2932.4	2937.5
30°	2777.4	2792.9	2823.9	2865.2	2870.4
32.5°	2699.9	2715.4	2751.6	2792.9	2803.2
35°	2601.8	2622.4	2663.8	2715.4	2725.8
37.5°	2514.0	2529.5	2581.1	2637.9	2653.4
40°	2406.0	2436.5	2488.1	2555.3	2581.1
42.5°	2297.5	2328.5	2390.5	2477.8	2508.8
45°	2183.9	2220.1	2297.5	2395.7	2436.5
47.5°	2070.3	2111.6	2199.4	2313.0	2359.5
50°	1941.1	1992.8	2101.3	2230.4	2282.0
52.5°	1817.2	1879.2	1998.0	2142.6	2209.7
55°	1688.0	1750.0	1905.0	2054.8	2127.1
57.5°	1543.4	1626.0	1796.5	1967.0	2044.4
60°	1409.6	1486.6	1693.2	1879.2	1956.6
62.5°	1265.0	1368.3	1589.9	1786.2	1863.7
65°	1115.2	1228.8	1481.4	1677.7	1755.2
67.5°	980.9	1104.9	1373.5	1569.2	1646.7
70°	820.8	975.7	1254.7	1450.4	1527.9
72.5°	671.0	841.4	1130.7	1321.8	1394.1
75°	526.3	717.5	1001.6	1172.0	1208.2
77.5°	392.6	593.5	867.3	939.6	913.7
80°	278.9	475.2	676.1	640.0	655.5
82.5°	180.8	361.6	418.4	475.2	490.2
85°	103.3	211.8	258.3	278.9	289.3
87.5°	46.5	77.5	103.3	103.3	98.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)