

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: P474394

Luminaire Tested: **24CZ2-100VHE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474394
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-100VHE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7823.9 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

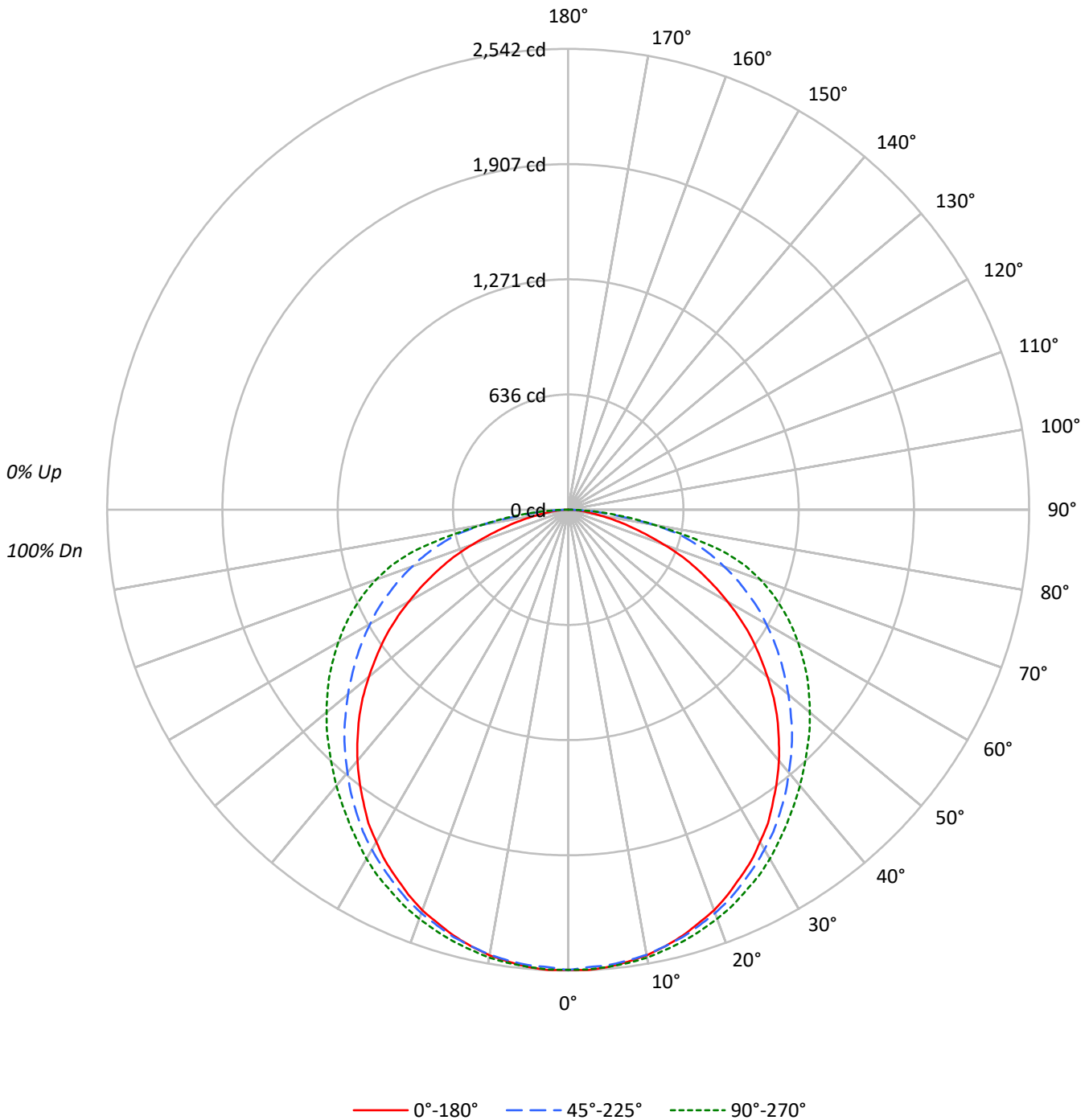
Input Watts (W): 71.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3415	3415	3415
5°	3420	3406	3420
10°	3410	3406	3428
15°	3390	3399	3431
20°	3368	3391	3438
25°	3326	3375	3443
30°	3287	3364	3455
35°	3234	3346	3459
40°	3175	3325	3492
45°	3104	3322	3546
50°	3003	3319	3641
55°	2897	3342	3773
60°	2732	3393	3940
65°	2524	3473	4161
70°	2203	3594	4433
75°	1788	3780	4580
80°	1320	3707	3707
85°	1013	2729	3083



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.5	3.1
10°-20°	690.5	8.8
20°-30°	1051.3	13.4
30°-40°	1276.5	16.3
40°-50°	1348.6	17.2
50°-60°	1272.6	16.3
60°-70°	1058.1	13.5
70°-80°	696.1	8.9
80°-90°	189.8	2.4
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°	1982.3	25.3
0°-40°	3258.8	41.7
0°-60°	5879.9	75.2
0°-90°	7823.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7823.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2538	2538	2538	2538	2538	
5°	2532	2532	2522	2532	2532	240
15°	2434	2437	2440	2463	2463	686
25°	2240	2253	2273	2312	2319	1033
35°	1969	1992	2037	2090	2106	1232
45°	1631	1664	1746	1831	1864	1256
55°	1235	1287	1425	1559	1608	1100
65°	793	884	1091	1251	1307	784
75°	344	501	727	861	881	371
85°	66	144	177	197	200	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2538.4	2538.4	2538.4	2538.4	2538.4
2.5°	2541.8	2538.4	2525.3	2538.4	2538.4
5°	2532.1	2532.1	2522.0	2532.1	2532.1
7.5°	2515.6	2515.6	2508.9	2522.0	2522.0
10°	2495.8	2495.8	2492.7	2508.9	2508.9
12.5°	2466.5	2469.5	2466.5	2486.0	2486.0
15°	2433.6	2436.9	2440.3	2463.1	2463.1
17.5°	2391.2	2397.6	2404.3	2430.2	2433.6
20°	2351.9	2354.9	2368.0	2397.6	2400.9
22.5°	2299.4	2309.2	2325.6	2354.9	2365.0
25°	2240.3	2253.4	2273.2	2312.5	2318.9
27.5°	2184.8	2194.5	2220.8	2263.5	2276.6
30°	2115.9	2132.3	2165.0	2207.7	2224.1
32.5°	2050.3	2066.8	2106.1	2151.8	2165.0
35°	1968.6	1991.5	2037.2	2089.7	2106.1
37.5°	1890.0	1912.8	1968.6	2027.5	2047.3
40°	1807.9	1834.2	1893.3	1961.9	1988.1
42.5°	1719.5	1755.5	1821.1	1896.4	1925.9
45°	1631.1	1664.1	1745.7	1830.8	1863.7
47.5°	1536.3	1575.6	1664.1	1765.6	1804.9
50°	1434.8	1483.9	1585.4	1696.7	1739.4
52.5°	1333.3	1388.7	1503.4	1627.8	1673.8
55°	1234.8	1287.2	1424.7	1559.2	1608.3
57.5°	1126.9	1192.4	1343.0	1486.9	1536.3
60°	1015.2	1087.5	1261.0	1411.6	1464.0
62.5°	904.0	986.0	1182.3	1333.3	1388.7
65°	792.7	884.5	1090.9	1251.2	1307.0
67.5°	684.4	786.0	1005.5	1166.2	1221.7
70°	560.1	687.8	913.7	1071.0	1126.9
72.5°	445.4	593.0	825.3	972.9	1022.0
75°	343.9	501.2	727.1	861.3	881.1
77.5°	252.1	409.5	625.6	671.3	674.7
80°	170.4	327.4	478.4	471.7	478.4
82.5°	111.3	245.7	301.2	337.5	340.5
85°	65.6	144.2	176.8	196.7	199.7
87.5°	32.6	49.1	62.2	65.6	71.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)