

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: P474397

Luminaire Tested: **24CZ2-115VHE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474397
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-115VHE-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: 8998.1 lumens
Efficiency: N/A
Efficacy: 111.6 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

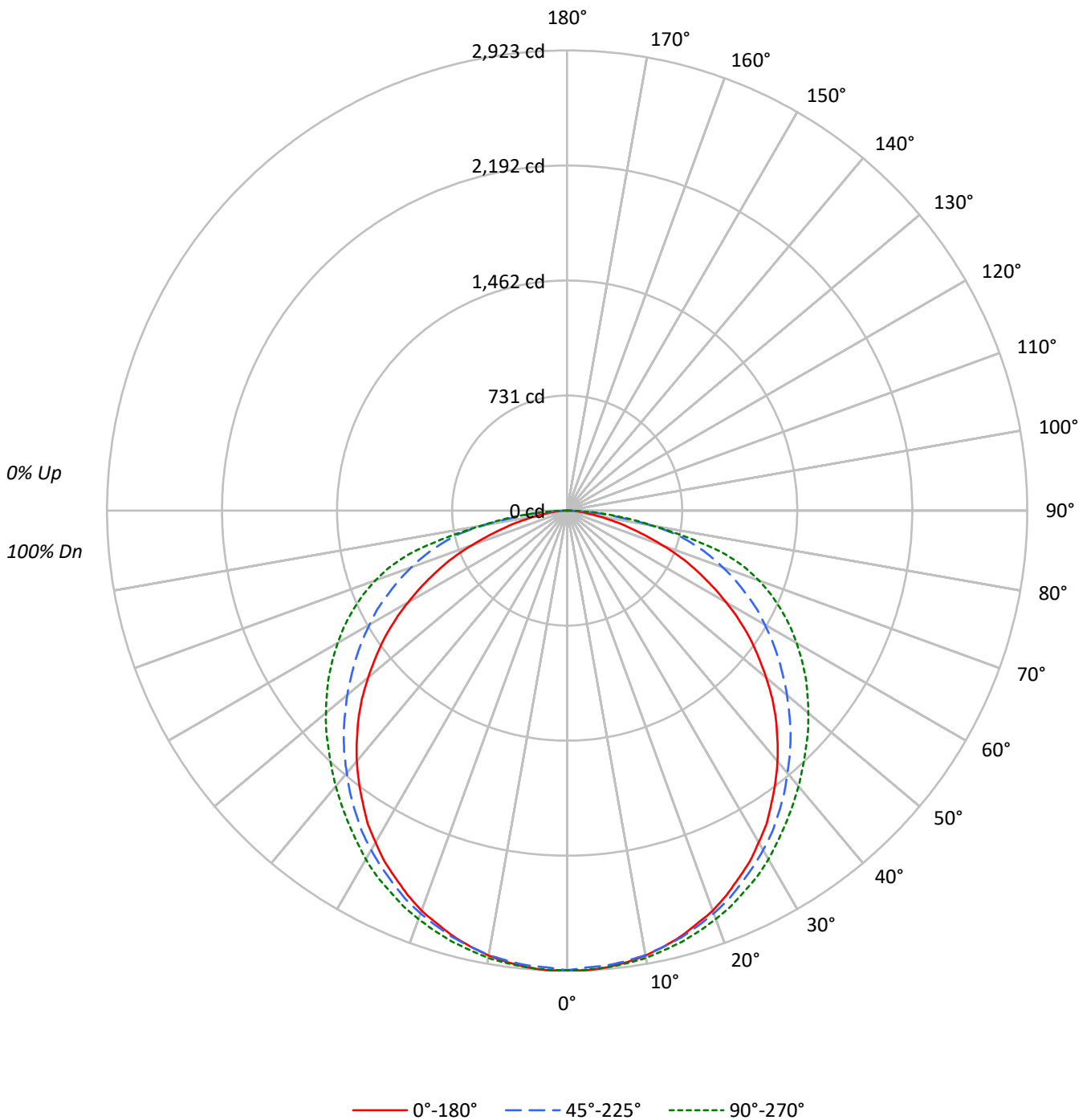
Input Watts (W): 80.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3928	3928	3928
5°	3933	3917	3933
10°	3922	3917	3942
15°	3899	3909	3946
20°	3873	3899	3954
25°	3825	3881	3959
30°	3781	3868	3974
35°	3719	3848	3979
40°	3652	3825	4016
45°	3569	3820	4079
50°	3454	3817	4187
55°	3331	3844	4339
60°	3142	3902	4531
65°	2903	3994	4786
70°	2534	4134	5098
75°	2056	4348	5268
80°	1519	4263	4263
85°	1164	3140	3546



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.6	3.1
10°-20°	794.2	8.8
20°-30°	1209.1	13.4
30°-40°	1468.1	16.3
40°-50°	1551.0	17.2
50°-60°	1463.5	16.3
60°-70°	1216.9	13.5
70°-80°	800.6	8.9
80°-90°	218.2	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°	2279.8	25.3
0°-40°	3747.8	41.7
0°-60°	6762.4	75.2
0°-90°	8998.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8998.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2919	2919	2919	2919	2919	
5°	2912	2912	2900	2912	2912	277
15°	2799	2803	2806	2833	2833	789
25°	2576	2592	2614	2660	2667	1189
35°	2264	2290	2343	2403	2422	1417
45°	1876	1914	2008	2106	2144	1445
55°	1420	1480	1638	1793	1850	1265
65°	912	1017	1255	1439	1503	901
75°	396	576	836	990	1013	426
85°	75	166	203	226	230	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2919.4	2919.4	2919.4	2919.4	2919.4
2.5°	2923.3	2919.4	2904.3	2919.4	2919.4
5°	2912.1	2912.1	2900.5	2912.1	2912.1
7.5°	2893.1	2893.1	2885.4	2900.5	2900.5
10°	2870.3	2870.3	2866.8	2885.4	2885.4
12.5°	2836.7	2840.2	2836.7	2859.1	2859.1
15°	2798.8	2802.7	2806.5	2832.8	2832.8
17.5°	2750.1	2757.4	2765.2	2794.9	2798.8
20°	2704.8	2708.3	2723.4	2757.4	2761.3
22.5°	2644.5	2655.7	2674.7	2708.3	2719.9
25°	2576.5	2591.6	2614.4	2659.6	2666.9
27.5°	2512.7	2523.9	2554.1	2603.2	2618.2
30°	2433.4	2452.4	2489.9	2539.0	2557.9
32.5°	2358.0	2377.0	2422.2	2474.8	2489.9
35°	2264.1	2290.4	2343.0	2403.3	2422.2
37.5°	2173.6	2199.9	2264.1	2331.7	2354.6
40°	2079.3	2109.4	2177.5	2256.4	2286.5
42.5°	1977.6	2019.0	2094.4	2181.0	2215.0
45°	1875.9	1913.8	2007.7	2105.6	2143.5
47.5°	1766.9	1812.1	1913.8	2030.6	2075.8
50°	1650.1	1706.6	1823.3	1951.3	2000.4
52.5°	1533.4	1597.2	1729.0	1872.0	1925.0
55°	1420.1	1480.4	1638.5	1793.2	1849.6
57.5°	1296.0	1371.4	1544.6	1710.0	1766.9
60°	1167.6	1250.7	1450.2	1623.4	1683.8
62.5°	1039.6	1134.0	1359.8	1533.4	1597.2
65°	911.7	1017.2	1254.6	1439.0	1503.2
67.5°	787.2	903.9	1156.4	1341.2	1405.0
70°	644.1	791.0	1050.8	1231.8	1296.0
72.5°	512.3	682.0	949.2	1118.9	1175.3
75°	395.5	576.5	836.3	990.5	1013.3
77.5°	290.0	470.9	719.5	772.1	776.0
80°	196.0	376.6	550.2	542.4	550.2
82.5°	128.0	282.6	346.4	388.2	391.7
85°	75.4	165.9	203.4	226.2	229.7
87.5°	37.5	56.4	71.5	75.4	82.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)