

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: P475136

Luminaire Tested: **22CZ2-105VHE-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475136
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-105VHE-HRP-UNV-L830-CD1-U
Description: 2'X2' 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: 8231.9 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

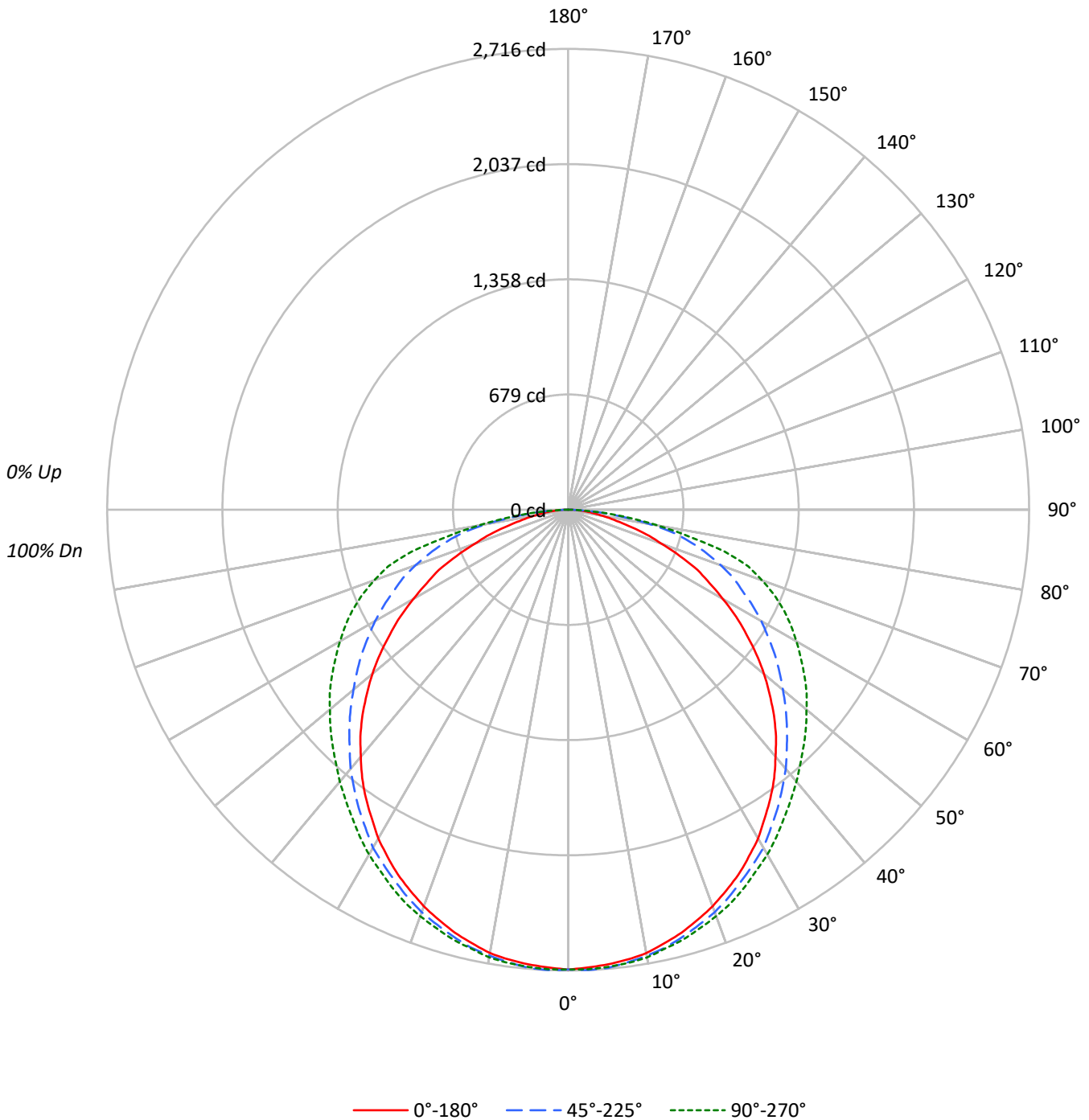
Input Watts (W): 79.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7294	7294	7294
5°	7266	7322	7308
10°	7251	7294	7323
15°	7190	7262	7306
20°	7124	7227	7301
25°	7047	7169	7293
30°	6954	7148	7293
35°	6823	7063	7284
40°	6676	7005	7351
45°	6522	6937	7470
50°	6304	6913	7674
55°	6017	6968	7967
60°	5673	7070	8357
65°	5357	7209	8929
70°	4576	7518	9560
75°	3834	7831	9934
80°	3143	7564	8288
85°	2720	5607	6089



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.9	3.1
10°-20°	734.9	8.9
20°-30°	1113.7	13.5
30°-40°	1344.8	16.3
40°-50°	1413.1	17.2
50°-60°	1329.6	16.2
60°-70°	1108.6	13.5
70°-80°	734.6	8.9
80°-90°	195.7	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°	2105.5	25.6
0°-40°	3450.3	41.9
0°-60°	6193.0	75.2
0°-90°	8231.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8231.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2710	2710	2710	2710	2710	
5°	2690	2695	2710	2710	2705	256
15°	2581	2591	2607	2617	2622	728
25°	2373	2389	2415	2446	2456	1093
35°	2077	2098	2150	2197	2217	1299
45°	1714	1739	1823	1916	1963	1320
55°	1282	1340	1485	1636	1698	1147
65°	841	914	1132	1319	1402	819
75°	369	514	753	909	956	400
85°	88	135	182	197	197	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2710.5	2710.5	2710.5	2710.5	2710.5
2.5°	2700.4	2705.4	2716.0	2716.0	2710.5
5°	2689.8	2694.9	2710.5	2710.5	2705.4
7.5°	2674.2	2679.8	2689.8	2700.4	2694.9
10°	2653.6	2658.7	2669.2	2679.8	2679.8
12.5°	2617.4	2622.4	2643.1	2648.6	2648.6
15°	2580.7	2591.2	2606.8	2617.4	2622.4
17.5°	2534.4	2544.4	2565.1	2586.2	2586.2
20°	2487.6	2497.6	2523.8	2544.4	2549.5
22.5°	2430.2	2445.8	2472.0	2497.6	2508.2
25°	2373.4	2389.0	2414.6	2445.8	2456.4
27.5°	2305.4	2321.0	2357.8	2394.0	2399.0
30°	2238.0	2253.6	2300.4	2331.6	2347.2
32.5°	2155.0	2175.6	2222.4	2269.2	2284.8
35°	2077.0	2098.1	2150.0	2196.8	2217.4
37.5°	1994.0	2014.6	2072.0	2129.3	2155.0
40°	1900.4	1926.6	1994.0	2056.4	2092.6
42.5°	1812.4	1838.5	1905.9	1989.0	2025.2
45°	1713.7	1739.4	1822.9	1916.0	1962.8
47.5°	1609.6	1640.8	1739.4	1854.1	1900.4
50°	1505.9	1542.2	1651.3	1781.2	1833.0
52.5°	1396.7	1443.5	1568.3	1708.7	1770.6
55°	1282.5	1339.9	1485.3	1635.7	1698.1
57.5°	1173.3	1225.7	1396.7	1557.8	1625.2
60°	1054.1	1121.5	1313.7	1479.8	1552.7
62.5°	939.9	1012.8	1225.7	1402.3	1479.8
65°	841.3	913.7	1132.1	1318.8	1402.3
67.5°	711.5	810.1	1054.1	1230.7	1313.7
70°	581.6	716.5	955.5	1137.1	1215.1
72.5°	483.0	612.8	856.9	1038.5	1111.5
75°	368.8	514.2	753.2	908.7	955.5
77.5°	275.2	425.7	644.0	722.0	727.1
80°	202.8	327.0	488.1	514.2	534.8
82.5°	140.4	228.4	317.0	347.7	358.2
85°	88.1	134.8	181.6	197.2	197.2
87.5°	46.8	51.8	62.4	62.4	62.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)