

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: P474404

Luminaire Tested: **24CZ2-150VHE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474404
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-150VHE-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: 11748.3 lumens
Efficiency: N/A
Efficacy: 107.1 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

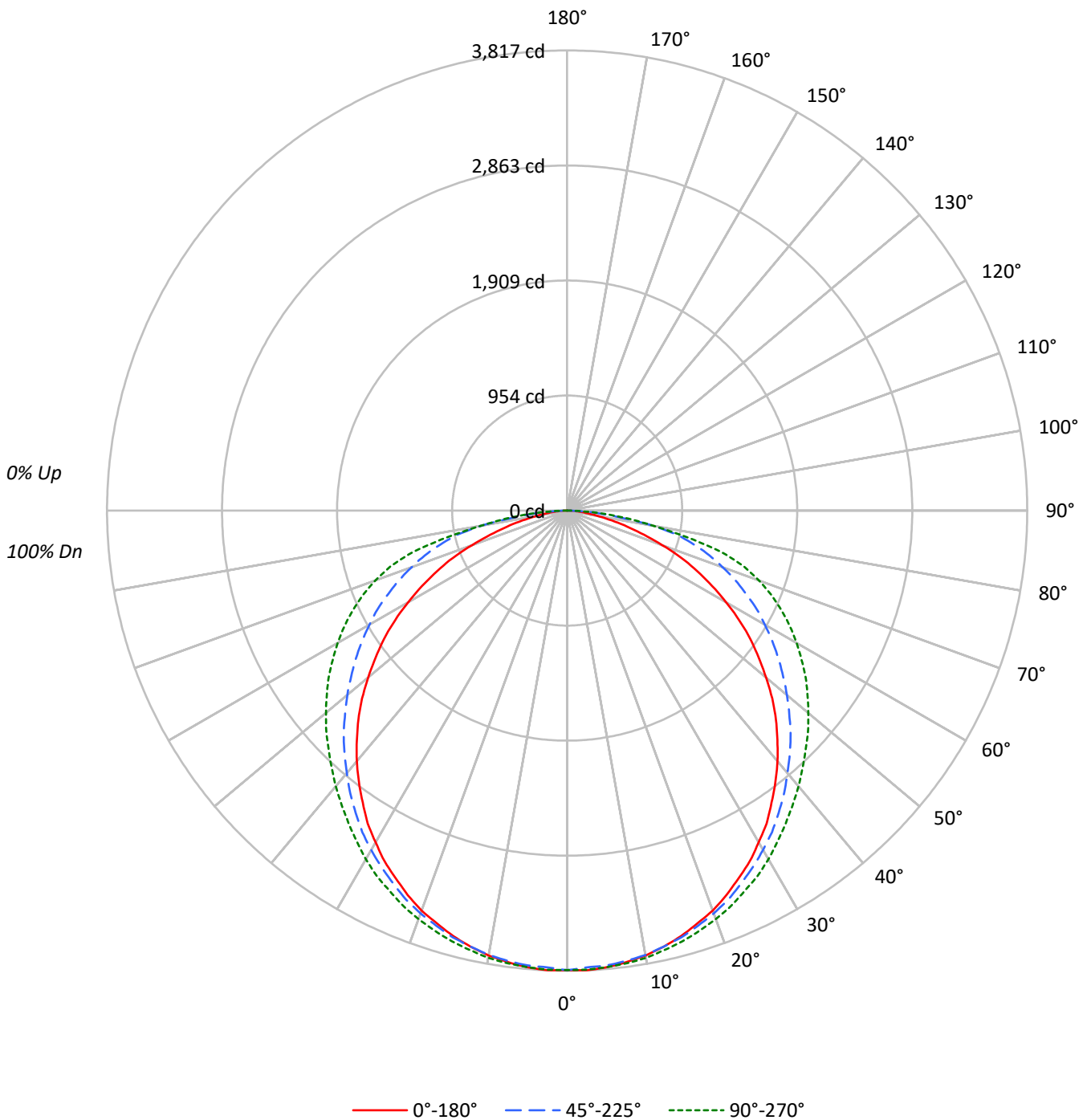
Input Watts (W): 109.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5129	5129	5129
5°	5135	5115	5135
10°	5120	5114	5147
15°	5090	5104	5152
20°	5057	5091	5162
25°	4994	5067	5169
30°	4936	5051	5189
35°	4856	5025	5195
40°	4768	4993	5244
45°	4661	4988	5325
50°	4510	4983	5467
55°	4349	5018	5665
60°	4102	5095	5916
65°	3790	5215	6249
70°	3308	5397	6657
75°	2685	5676	6878
80°	1983	5566	5566
85°	1519	4099	4628



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.1	3.1
10°-20°	1036.9	8.8
20°-30°	1578.6	13.4
30°-40°	1916.8	16.3
40°-50°	2025.1	17.2
50°-60°	1910.9	16.3
60°-70°	1588.8	13.5
70°-80°	1045.3	8.9
80°-90°	284.9	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°	2976.6	25.3
0°-40°	4893.4	41.7
0°-60°	8829.3	75.2
0°-90°	11748.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11748.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3812	3812	3812	3812	3812	
5°	3802	3802	3787	3802	3802	361
15°	3654	3659	3664	3699	3699	1031
25°	3364	3384	3413	3472	3482	1552
35°	2956	2990	3059	3138	3163	1850
45°	2449	2499	2621	2749	2799	1886
55°	1854	1933	2139	2341	2415	1652
65°	1190	1328	1638	1879	1963	1177
75°	516	753	1092	1293	1323	556
85°	98	217	266	295	300	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3811.7	3811.7	3811.7	3811.7	3811.7
2.5°	3816.8	3811.7	3792.0	3811.7	3811.7
5°	3802.1	3802.1	3787.0	3802.1	3802.1
7.5°	3777.4	3777.4	3767.3	3787.0	3787.0
10°	3747.6	3747.6	3743.1	3767.3	3767.3
12.5°	3703.7	3708.2	3703.7	3733.0	3733.0
15°	3654.2	3659.3	3664.3	3698.7	3698.7
17.5°	3590.6	3600.2	3610.3	3649.2	3654.2
20°	3531.6	3536.1	3555.8	3600.2	3605.3
22.5°	3452.8	3467.5	3492.2	3536.1	3551.2
25°	3364.0	3383.7	3413.4	3472.5	3482.1
27.5°	3280.7	3295.3	3334.7	3398.8	3418.5
30°	3177.2	3201.9	3250.9	3315.0	3339.7
32.5°	3078.8	3103.5	3162.6	3231.2	3250.9
35°	2956.1	2990.4	3059.1	3137.8	3162.6
37.5°	2838.0	2872.3	2956.1	3044.4	3074.2
40°	2714.8	2754.2	2843.0	2946.0	2985.4
42.5°	2582.0	2636.1	2734.5	2847.6	2892.0
45°	2449.3	2498.7	2621.4	2749.1	2798.6
47.5°	2306.9	2366.0	2498.7	2651.2	2710.3
50°	2154.5	2228.2	2380.6	2547.7	2611.8
52.5°	2002.0	2085.3	2257.5	2444.2	2513.4
55°	1854.1	1932.9	2139.3	2341.3	2415.0
57.5°	1692.1	1790.5	2016.7	2232.7	2306.9
60°	1524.5	1633.0	1893.5	2119.6	2198.4
62.5°	1357.4	1480.6	1775.4	2002.0	2085.3
65°	1190.3	1328.1	1638.1	1878.9	1962.7
67.5°	1027.8	1180.2	1509.8	1751.1	1834.4
70°	841.0	1032.8	1372.0	1608.3	1692.1
72.5°	668.9	890.5	1239.3	1460.9	1534.6
75°	516.4	752.7	1091.9	1293.3	1323.1
77.5°	378.6	614.8	939.4	1008.1	1013.1
80°	255.9	491.7	718.3	708.2	718.3
82.5°	167.1	369.0	452.3	506.8	511.4
85°	98.4	216.6	265.5	295.3	299.8
87.5°	49.0	73.7	93.4	98.4	108.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)