

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: P474547

Luminaire Tested: **24CZ2-115VHE-HRP-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474547  
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-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9501.6 lumens  
Efficiency: N/A  
Efficacy: 117.9 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

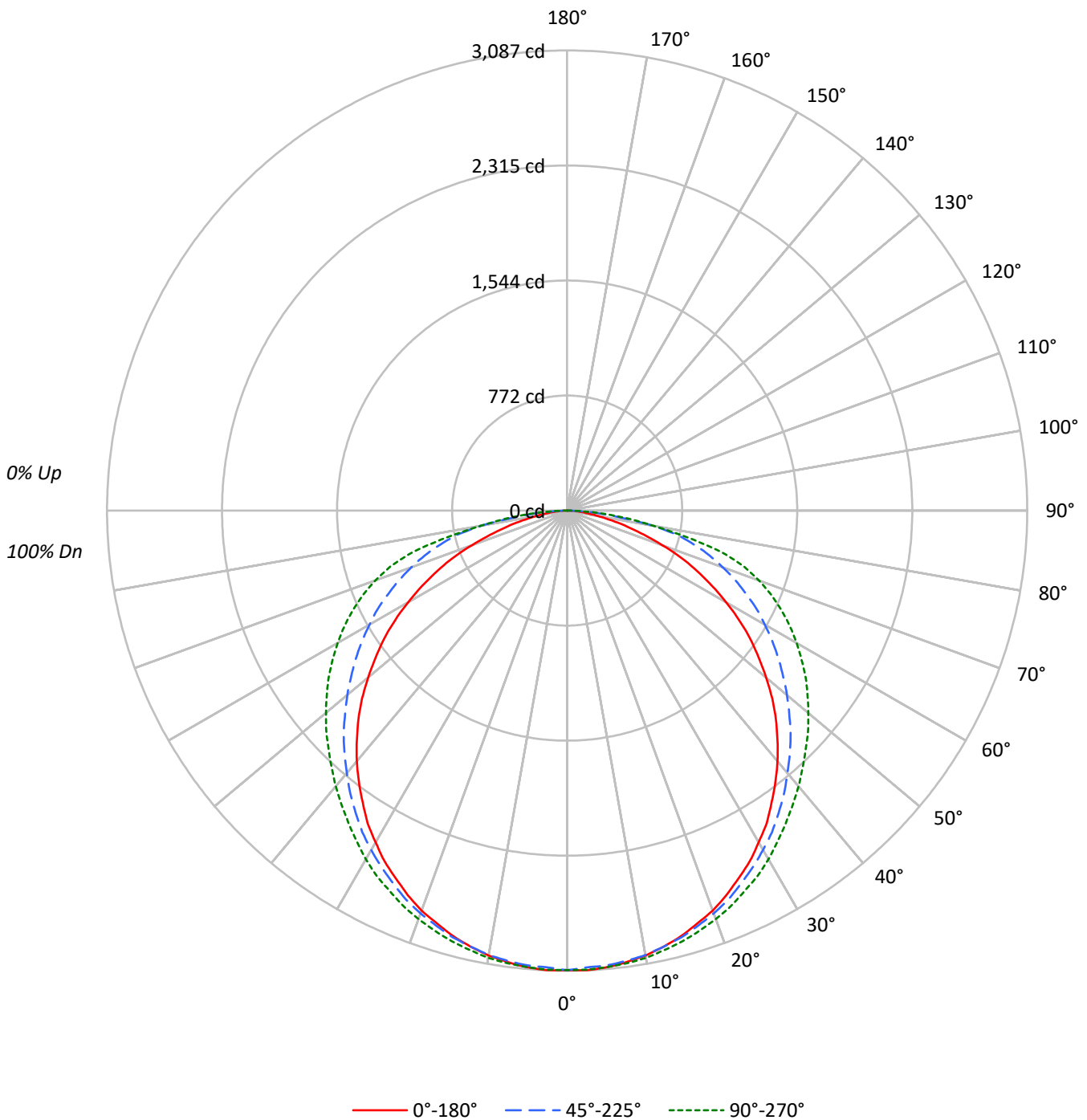
Input Watts (W): 80.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4148	4148	4148
5°	4153	4137	4153
10°	4141	4136	4163
15°	4117	4128	4167
20°	4090	4118	4175
25°	4039	4098	4181
30°	3992	4085	4197
35°	3927	4064	4201
40°	3856	4039	4241
45°	3769	4034	4307
50°	3647	4030	4421
55°	3518	4059	4582
60°	3318	4121	4785
65°	3065	4218	5053
70°	2676	4366	5384
75°	2171	4591	5563
80°	1604	4502	4502
85°	1229	3314	3744



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	292.0	3.1
10°-20°	838.6	8.8
20°-30°	1276.7	13.4
30°-40°	1550.2	16.3
40°-50°	1637.8	17.2
50°-60°	1545.4	16.3
60°-70°	1285.0	13.5
70°-80°	845.4	8.9
80°-90°	230.4	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°	2407.4	25.3
0°-40°	3957.6	41.7
0°-60°	7140.8	75.2
0°-90°	9501.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9501.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3083	3083	3083	3083	3083	
5°	3075	3075	3063	3075	3075	292
15°	2955	2960	2964	2991	2991	834
25°	2721	2737	2761	2808	2816	1255
35°	2391	2418	2474	2538	2558	1497
45°	1981	2021	2120	2223	2263	1526
55°	1500	1563	1730	1894	1953	1336
65°	963	1074	1325	1520	1587	952
75°	418	609	883	1046	1070	450
85°	80	175	215	239	242	97
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3082.8	3082.8	3082.8	3082.8	3082.8
2.5°	3086.9	3082.8	3066.9	3082.8	3082.8
5°	3075.0	3075.0	3062.8	3075.0	3075.0
7.5°	3055.0	3055.0	3046.9	3062.8	3062.8
10°	3030.9	3030.9	3027.3	3046.9	3046.9
12.5°	2995.4	2999.1	2995.4	3019.1	3019.1
15°	2955.4	2959.5	2963.6	2991.3	2991.3
17.5°	2904.0	2911.7	2919.9	2951.3	2955.4
20°	2856.2	2859.9	2875.8	2911.7	2915.8
22.5°	2792.5	2804.3	2824.4	2859.9	2872.1
25°	2720.7	2736.6	2760.7	2808.4	2816.2
27.5°	2653.3	2665.1	2697.0	2748.8	2764.7
30°	2569.6	2589.6	2629.2	2681.1	2701.1
32.5°	2490.0	2510.0	2557.8	2613.3	2629.2
35°	2390.8	2418.5	2474.1	2537.8	2557.8
37.5°	2295.2	2323.0	2390.8	2462.2	2486.3
40°	2195.6	2227.5	2299.3	2382.6	2414.5
42.5°	2088.3	2131.9	2211.6	2303.0	2338.9
45°	1980.9	2020.9	2120.1	2223.4	2263.4
47.5°	1865.8	1913.5	2020.9	2144.2	2192.0
50°	1742.5	1802.1	1925.4	2060.5	2112.3
52.5°	1619.2	1686.5	1825.7	1976.8	2032.7
55°	1499.5	1563.2	1730.2	1893.5	1953.1
57.5°	1368.5	1448.1	1631.0	1805.7	1865.8
60°	1232.9	1320.7	1531.4	1714.3	1778.0
62.5°	1097.8	1197.4	1435.9	1619.2	1686.5
65°	962.7	1074.1	1324.8	1519.5	1587.3
67.5°	831.2	954.5	1221.1	1416.3	1483.6
70°	680.2	835.3	1109.7	1300.7	1368.5
72.5°	540.9	720.2	1002.3	1181.5	1241.1
75°	417.7	608.7	883.1	1046.0	1070.1
77.5°	306.2	497.3	759.8	815.3	819.4
80°	207.0	397.6	581.0	572.8	581.0
82.5°	135.1	298.4	365.8	409.9	413.6
85°	79.6	175.1	214.7	238.8	242.5
87.5°	39.6	59.6	75.5	79.6	87.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)