

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: P474441

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474441  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-85VHE-HRP-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6879.5 lumens  
Efficiency: N/A  
Efficacy: 115.2 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

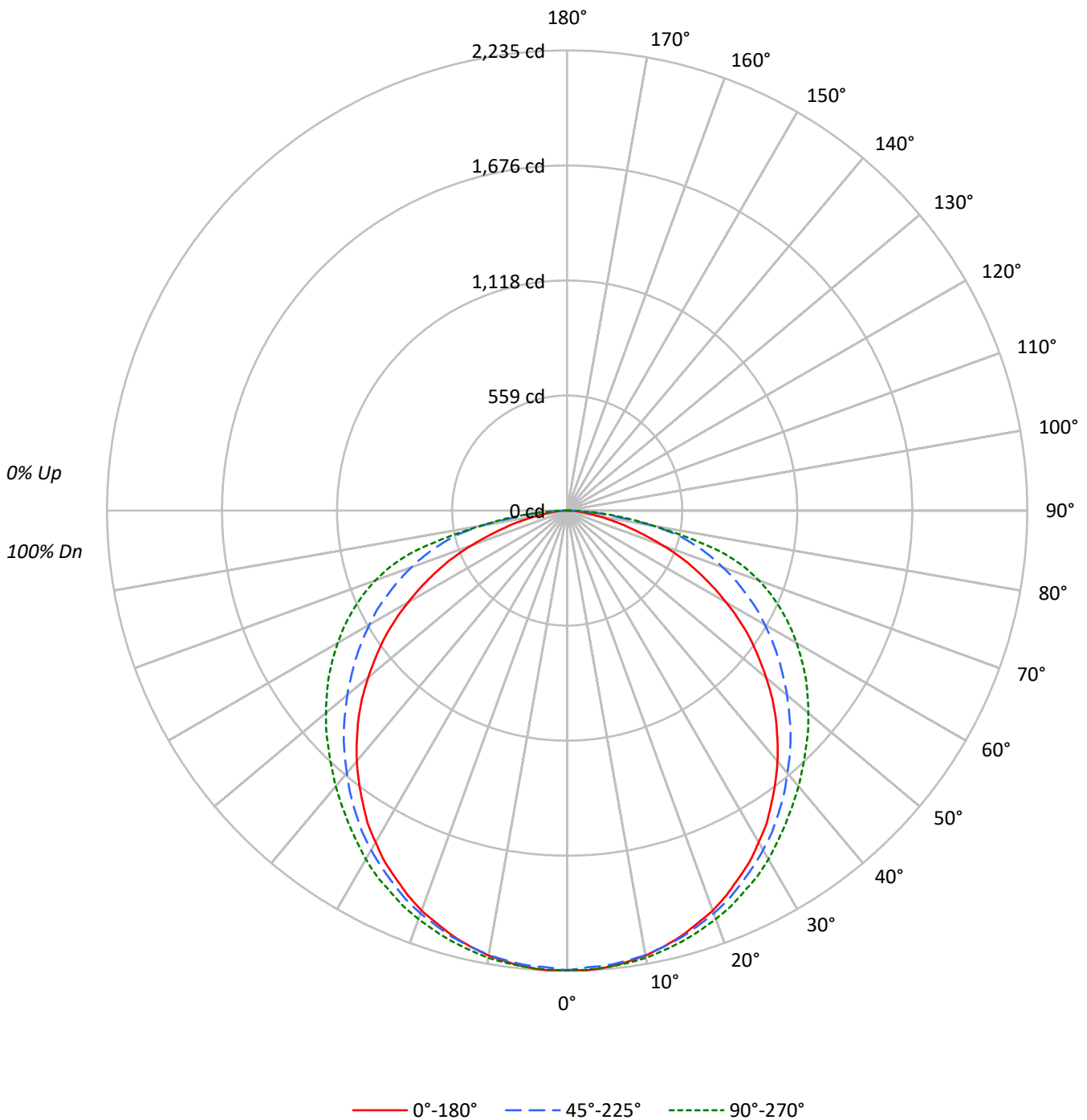
Input Watts (W): 59.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3003	3003	3003
5°	3007	2995	3007
10°	2998	2995	3014
15°	2981	2989	3017
20°	2961	2981	3023
25°	2924	2967	3027
30°	2891	2958	3038
35°	2843	2942	3042
40°	2792	2924	3071
45°	2729	2921	3118
50°	2641	2918	3201
55°	2547	2939	3317
60°	2402	2984	3464
65°	2219	3054	3659
70°	1937	3161	3898
75°	1572	3324	4028
80°	1161	3259	3259
85°	889	2401	2711



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.4	3.1
10°-20°	607.2	8.8
20°-30°	924.4	13.4
30°-40°	1122.4	16.3
40°-50°	1185.8	17.2
50°-60°	1118.9	16.3
60°-70°	930.4	13.5
70°-80°	612.1	8.9
80°-90°	166.9	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°	1743.0	25.3
0°-40°	2865.4	41.7
0°-60°	5170.2	75.2
0°-90°	6879.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6879.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2232	2232	2232	2232	2232	
5°	2226	2226	2218	2226	2226	211
15°	2140	2143	2146	2166	2166	604
25°	1970	1981	1999	2033	2039	909
35°	1731	1751	1791	1837	1852	1084
45°	1434	1463	1535	1610	1639	1105
55°	1086	1132	1253	1371	1414	967
65°	697	778	959	1100	1149	689
75°	302	441	639	757	775	326
85°	58	127	156	173	176	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2232.0	2232.0	2232.0	2232.0	2232.0
2.5°	2235.0	2232.0	2220.5	2232.0	2232.0
5°	2226.4	2226.4	2217.6	2226.4	2226.4
7.5°	2211.9	2211.9	2206.0	2217.6	2217.6
10°	2194.5	2194.5	2191.8	2206.0	2206.0
12.5°	2168.8	2171.4	2168.8	2185.9	2185.9
15°	2139.8	2142.8	2145.7	2165.8	2165.8
17.5°	2102.6	2108.2	2114.1	2136.9	2139.8
20°	2068.0	2070.7	2082.2	2108.2	2111.1
22.5°	2021.9	2030.4	2044.9	2070.7	2079.5
25°	1969.9	1981.4	1998.8	2033.4	2039.0
27.5°	1921.1	1929.7	1952.7	1990.2	2001.8
30°	1860.5	1875.0	1903.6	1941.2	1955.7
32.5°	1802.8	1817.3	1851.9	1892.1	1903.6
35°	1731.0	1751.1	1791.3	1837.4	1851.9
37.5°	1661.8	1681.9	1731.0	1782.7	1800.2
40°	1589.7	1612.8	1664.8	1725.1	1748.2
42.5°	1512.0	1543.6	1601.2	1667.5	1693.5
45°	1434.2	1463.2	1535.0	1609.8	1638.8
47.5°	1350.9	1385.5	1463.2	1552.5	1587.1
50°	1261.6	1304.8	1394.0	1491.9	1529.4
52.5°	1172.3	1221.1	1321.9	1431.3	1471.8
55°	1085.7	1131.8	1252.7	1371.0	1414.1
57.5°	990.8	1048.5	1180.9	1307.4	1350.9
60°	892.7	956.3	1108.8	1241.2	1287.3
62.5°	794.9	867.0	1039.6	1172.3	1221.1
65°	697.0	777.7	959.2	1100.2	1149.3
67.5°	601.8	691.1	884.1	1025.4	1074.2
70°	492.5	604.8	803.4	941.8	990.8
72.5°	391.7	521.4	725.7	855.5	898.6
75°	302.4	440.7	639.4	757.3	774.8
77.5°	221.7	360.0	550.1	590.3	593.3
80°	149.9	287.9	420.6	414.7	420.6
82.5°	97.8	216.1	264.9	296.8	299.4
85°	57.6	126.8	155.5	172.9	175.6
87.5°	28.7	43.2	54.7	57.6	63.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)