

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: P473935

Luminaire Tested: **24CZ2-45VHE-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473935  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45VHE-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

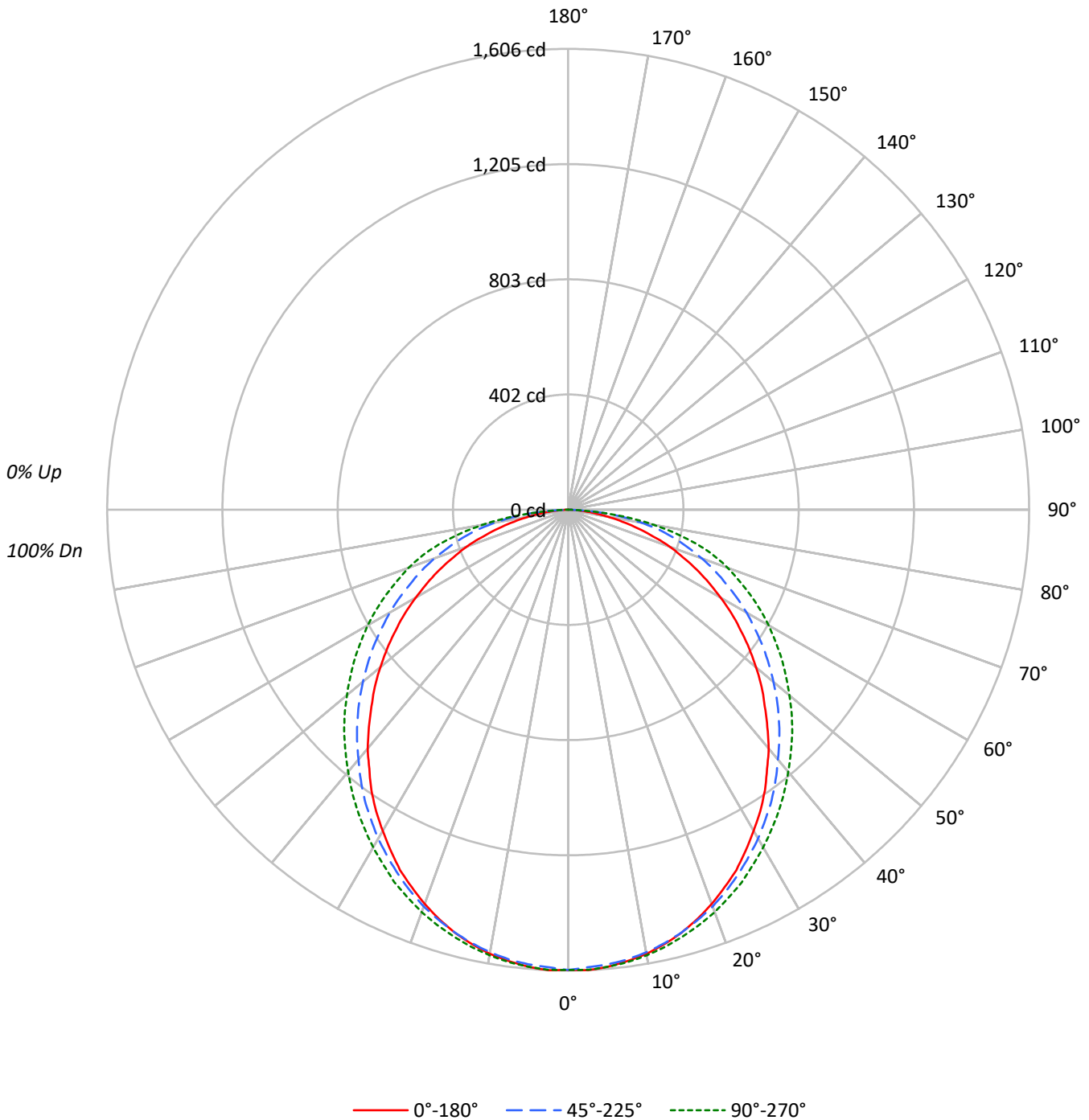
Lumens per Lamp: N/A  
Luminaire Lumens: 4641.5 lumens  
Efficiency: N/A  
Efficacy: 151.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 30.7  
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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

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

	0°	45°	90°
0°	2158	2158	2158
5°	2159	2148	2159
10°	2147	2140	2154
15°	2126	2125	2145
20°	2094	2107	2137
25°	2057	2081	2126
30°	2007	2056	2111
35°	1962	2030	2102
40°	1908	1997	2094
45°	1843	1976	2100
50°	1788	1954	2106
55°	1722	1940	2130
60°	1651	1931	2169
65°	1573	1924	2225
70°	1481	1944	2327
75°	1302	1984	2421
80°	1086	1998	2335
85°	775	1714	1737



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.6	3.3
10°-20°	431.9	9.3
20°-30°	647.9	14.0
30°-40°	773.5	16.7
40°-50°	801.2	17.3
50°-60°	737.6	15.9
60°-70°	595.0	12.8
70°-80°	388.8	8.4
80°-90°	114.0	2.5
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°	1231.4	26.5
0°-40°	2004.9	43.2
0°-60°	3543.7	76.3
0°-90°	4641.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4641.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1599	1597	1590	1599	1599	152
15°	1526	1526	1525	1540	1540	430
25°	1386	1389	1402	1427	1432	637
35°	1194	1205	1236	1270	1280	746
45°	969	993	1038	1085	1104	749
55°	734	766	827	888	908	657
65°	494	528	604	673	699	489
75°	250	298	382	448	466	267
85°	50	87	111	118	112	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1603.9	1603.9	1603.9	1603.9	1603.9
2.5°	1606.2	1603.9	1595.7	1605.4	1604.7
5°	1598.7	1597.2	1590.4	1599.4	1598.7
7.5°	1586.7	1585.9	1580.7	1590.4	1590.4
10°	1571.7	1570.2	1566.4	1577.7	1576.9
12.5°	1550.7	1549.9	1547.7	1561.2	1560.4
15°	1525.9	1525.9	1525.2	1540.2	1540.2
17.5°	1495.9	1496.7	1499.7	1516.9	1517.7
20°	1462.2	1465.2	1471.2	1490.7	1492.2
22.5°	1424.0	1430.0	1438.2	1459.9	1462.2
25°	1385.7	1388.7	1401.5	1427.0	1432.2
27.5°	1339.2	1346.7	1363.2	1389.5	1394.7
30°	1292.0	1302.5	1323.5	1350.5	1358.7
32.5°	1245.5	1254.5	1279.2	1310.0	1319.7
35°	1194.5	1205.0	1235.7	1269.5	1280.0
37.5°	1138.3	1154.8	1187.0	1226.0	1237.2
40°	1086.5	1101.5	1136.8	1180.3	1192.3
42.5°	1027.3	1046.0	1088.8	1133.0	1148.0
45°	968.8	992.8	1038.5	1085.0	1103.8
47.5°	914.1	933.6	987.5	1040.0	1056.5
50°	854.1	876.6	933.6	989.0	1006.3
52.5°	794.8	821.8	879.6	938.1	956.8
55°	734.1	765.6	827.1	887.8	908.1
57.5°	675.6	707.1	770.8	835.3	856.3
60°	613.4	647.1	717.6	779.8	806.1
62.5°	553.4	587.1	661.4	728.9	753.6
65°	494.1	527.9	604.4	673.4	698.9
67.5°	432.7	469.4	551.1	617.9	642.6
70°	376.4	411.7	494.1	565.4	591.6
72.5°	311.9	353.9	437.9	508.4	533.1
75°	250.4	297.7	381.7	447.7	465.7
77.5°	193.5	240.7	324.7	374.2	385.4
80°	140.2	188.2	257.9	292.4	301.4
82.5°	90.7	140.2	186.7	210.0	213.0
85°	50.2	87.0	111.0	117.7	112.5
87.5°	18.0	33.0	32.2	26.2	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)