

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: P474022

Luminaire Tested: **24CZ2-45HE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474022  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45HE-S-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4806.2 lumens  
Efficiency: N/A  
Efficacy: 136.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

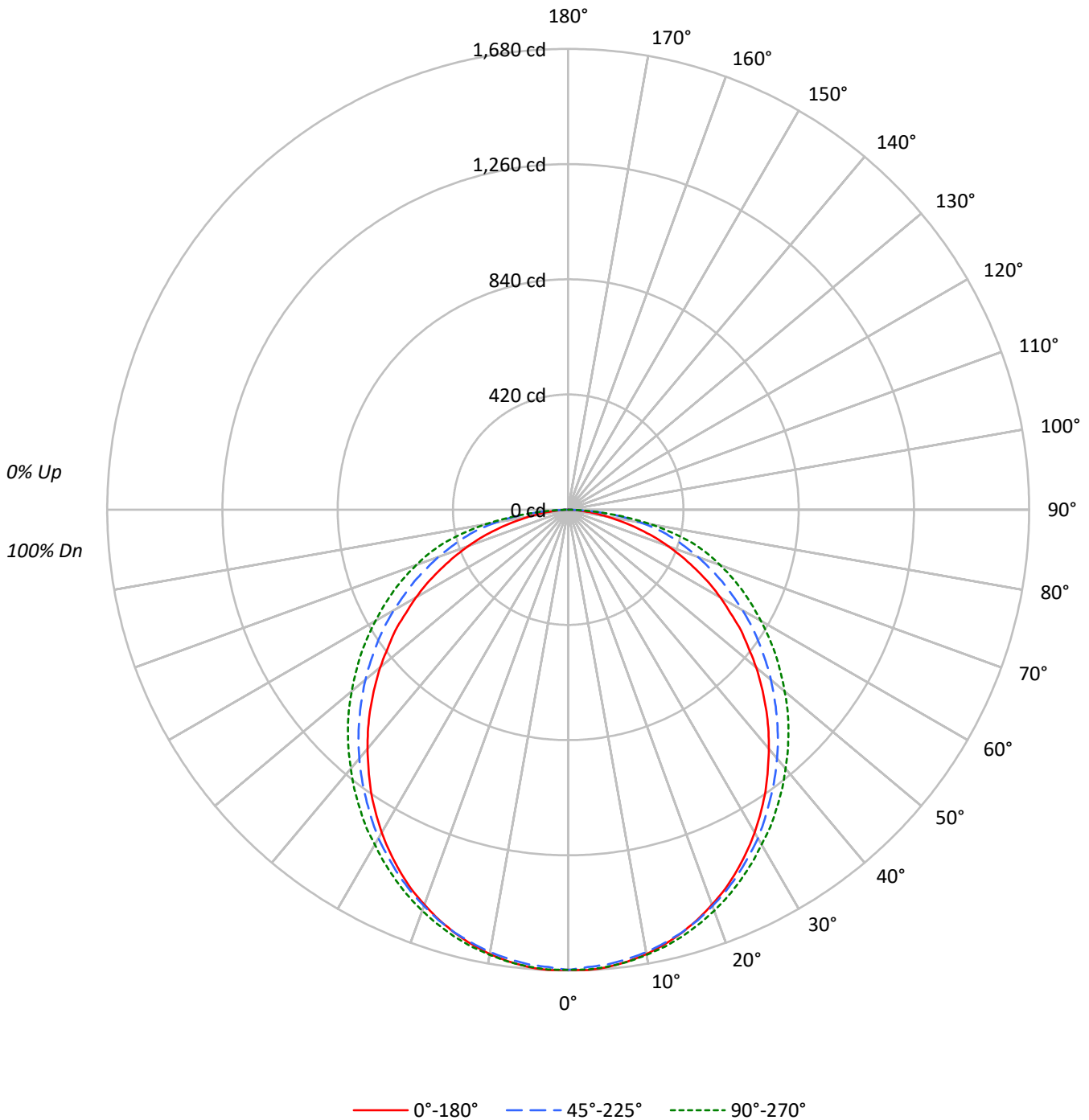
Input Watts (W): 35.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2257	2257	2257
5°	2261	2247	2258
10°	2248	2238	2251
15°	2225	2224	2242
20°	2194	2201	2228
25°	2158	2176	2210
30°	2112	2149	2189
35°	2059	2111	2177
40°	1998	2080	2164
45°	1938	2047	2160
50°	1872	2019	2155
55°	1806	1994	2167
60°	1723	1976	2182
65°	1631	1968	2234
70°	1522	1978	2314
75°	1354	2036	2438
80°	1107	2080	2380
85°	780	1815	1853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.6	3.3
10°-20°	451.7	9.4
20°-30°	677.1	14.1
30°-40°	806.5	16.8
40°-50°	831.5	17.3
50°-60°	758.8	15.8
60°-70°	606.7	12.6
70°-80°	396.3	8.2
80°-90°	119.0	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°	1287.4	26.8
0°-40°	2093.9	43.6
0°-60°	3684.2	76.7
0°-90°	4806.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4806.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1674	1670	1663	1674	1672	159
15°	1597	1598	1596	1610	1610	450
25°	1453	1456	1466	1487	1489	669
35°	1254	1262	1285	1318	1326	783
45°	1018	1037	1076	1121	1135	785
55°	770	792	850	906	924	686
65°	512	547	618	679	702	508
75°	260	304	392	455	469	277
85°	50	91	118	120	120	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1677.6	1677.6	1677.6	1677.6	1677.6
2.5°	1680.0	1677.6	1668.9	1679.2	1677.6
5°	1673.7	1670.5	1663.4	1673.7	1672.1
7.5°	1661.0	1659.4	1652.3	1664.2	1662.6
10°	1645.2	1643.7	1638.1	1650.0	1647.6
12.5°	1623.1	1622.3	1618.4	1632.6	1631.0
15°	1597.1	1597.9	1596.3	1609.7	1609.7
17.5°	1567.1	1566.3	1569.4	1586.0	1584.4
20°	1532.3	1533.1	1537.1	1556.0	1556.0
22.5°	1496.0	1495.2	1503.9	1522.9	1524.4
25°	1453.4	1455.8	1466.0	1487.3	1488.9
27.5°	1407.6	1411.6	1424.2	1448.7	1451.0
30°	1359.5	1364.2	1383.1	1406.0	1409.2
32.5°	1306.6	1316.8	1334.2	1363.4	1371.3
35°	1253.7	1262.3	1285.2	1317.6	1325.5
37.5°	1195.2	1209.5	1235.5	1271.0	1281.3
40°	1137.6	1151.8	1184.2	1221.3	1232.3
42.5°	1079.2	1094.2	1131.3	1173.1	1185.0
45°	1018.4	1036.6	1076.0	1121.0	1135.2
47.5°	956.0	977.4	1020.0	1068.9	1084.7
50°	894.5	915.8	964.7	1015.2	1029.5
52.5°	828.1	855.0	907.1	961.6	975.8
55°	769.7	791.8	850.2	906.3	923.7
57.5°	701.0	731.0	793.4	850.2	866.8
60°	640.3	667.9	734.2	791.8	810.8
62.5°	578.7	607.1	673.4	738.9	756.3
65°	512.4	547.1	618.1	678.9	701.8
67.5°	449.2	485.5	558.1	622.9	646.6
70°	386.8	423.9	502.9	569.2	588.1
72.5°	325.3	363.9	446.0	510.8	532.9
75°	260.5	303.9	391.6	454.7	468.9
77.5°	199.7	247.9	336.3	378.9	389.2
80°	142.9	195.8	268.4	299.2	307.1
82.5°	93.9	145.3	200.5	217.1	214.7
85°	50.5	90.8	117.6	120.0	120.0
87.5°	19.7	36.3	37.1	28.4	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)