

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: P474418

Luminaire Tested: **24CZ2-65-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474418  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65-HRP-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

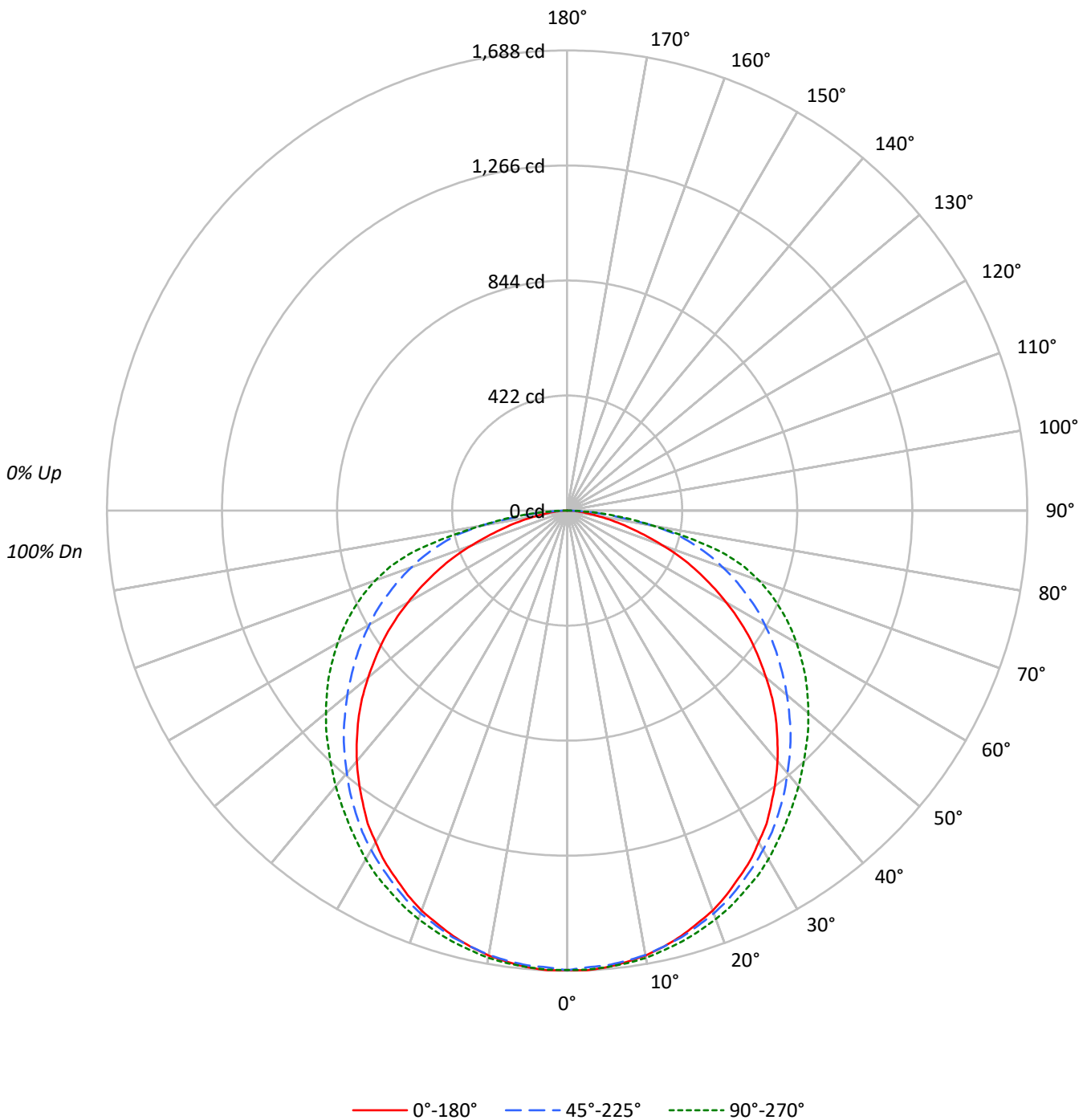
Lumens per Lamp: N/A  
Luminaire Lumens: 5195.3 lumens  
Efficiency: N/A  
Efficacy: 101.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 51  
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°	2268	2268	2268
5°	2271	2262	2271
10°	2264	2261	2276
15°	2251	2257	2278
20°	2236	2251	2283
25°	2208	2241	2286
30°	2183	2234	2295
35°	2147	2222	2297
40°	2109	2208	2319
45°	2061	2206	2355
50°	1994	2204	2418
55°	1923	2219	2505
60°	1814	2253	2616
65°	1676	2306	2763
70°	1463	2387	2944
75°	1187	2510	3042
80°	877	2462	2462
85°	672	1812	2047



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	3.1
10°-20°	458.5	8.8
20°-30°	698.1	13.4
30°-40°	847.6	16.3
40°-50°	895.5	17.2
50°-60°	845.0	16.3
60°-70°	702.6	13.5
70°-80°	462.2	8.9
80°-90°	126.0	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°	1316.3	25.3
0°-40°	2163.9	41.7
0°-60°	3904.4	75.2
0°-90°	5195.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5195.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1686	1686	1686	1686	1686	
5°	1681	1681	1675	1681	1681	160
15°	1616	1618	1620	1636	1636	456
25°	1488	1496	1510	1536	1540	686
35°	1307	1322	1353	1388	1398	818
45°	1083	1105	1159	1216	1238	834
55°	820	855	946	1035	1068	730
65°	526	587	724	831	868	520
75°	228	333	483	572	585	246
85°	44	96	117	131	133	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1685.6	1685.6	1685.6	1685.6	1685.6
2.5°	1687.8	1685.6	1676.9	1685.6	1685.6
5°	1681.4	1681.4	1674.7	1681.4	1681.4
7.5°	1670.4	1670.4	1666.0	1674.7	1674.7
10°	1657.2	1657.2	1655.2	1666.0	1666.0
12.5°	1637.8	1639.8	1637.8	1650.8	1650.8
15°	1616.0	1618.2	1620.4	1635.6	1635.6
17.5°	1587.8	1592.1	1596.5	1613.7	1616.0
20°	1561.7	1563.7	1572.4	1592.1	1594.3
22.5°	1526.9	1533.4	1544.3	1563.7	1570.4
25°	1487.6	1496.3	1509.5	1535.6	1539.8
27.5°	1450.8	1457.2	1474.6	1503.0	1511.7
30°	1405.0	1415.9	1437.6	1465.9	1476.9
32.5°	1361.5	1372.4	1398.5	1428.9	1437.6
35°	1307.2	1322.4	1352.8	1387.6	1398.5
37.5°	1255.0	1270.2	1307.2	1346.3	1359.5
40°	1200.5	1217.9	1257.2	1302.8	1320.2
42.5°	1141.8	1165.7	1209.2	1259.2	1278.9
45°	1083.1	1105.0	1159.2	1215.7	1237.6
47.5°	1020.2	1046.3	1105.0	1172.4	1198.5
50°	952.7	985.3	1052.7	1126.6	1155.0
52.5°	885.3	922.2	998.3	1080.9	1111.5
55°	819.9	854.7	946.0	1035.3	1067.9
57.5°	748.3	791.8	891.8	987.3	1020.2
60°	674.2	722.1	837.3	937.3	972.2
62.5°	600.3	654.7	785.1	885.3	922.2
65°	526.4	587.3	724.4	830.9	867.9
67.5°	454.5	521.9	667.7	774.4	811.2
70°	371.9	456.7	606.7	711.2	748.3
72.5°	295.8	393.8	548.0	646.0	678.6
75°	228.4	332.8	482.8	571.9	585.1
77.5°	167.4	271.9	415.4	445.8	448.0
80°	113.2	217.4	317.7	313.2	317.7
82.5°	73.9	163.2	200.0	224.1	226.1
85°	43.5	95.8	117.4	130.6	132.6
87.5°	21.7	32.6	41.3	43.5	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)