

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: P474417

Luminaire Tested: **24CZ2-60-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474417
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60-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

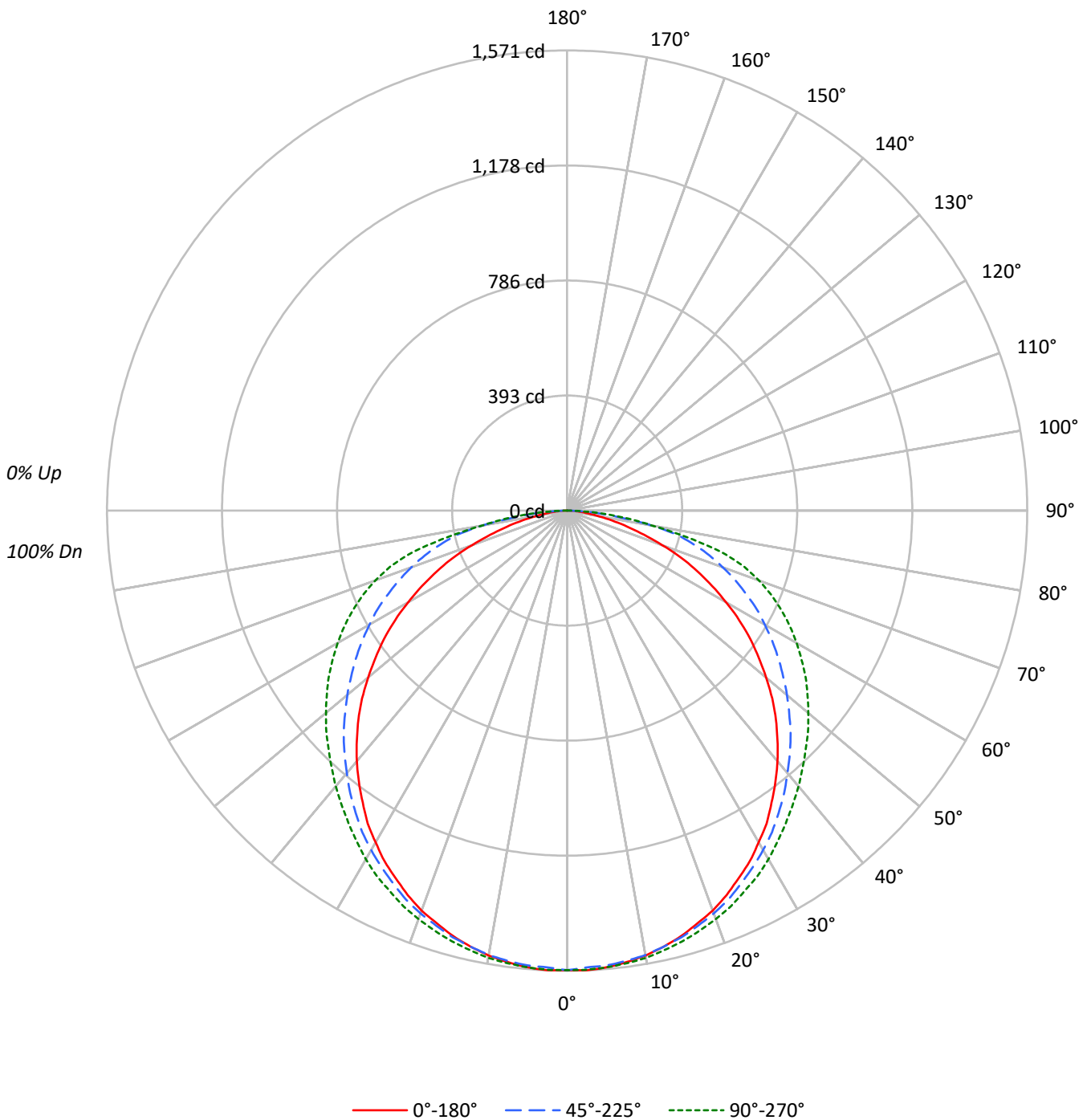
Lumens per Lamp: N/A
Luminaire Lumens: 4835.6 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.3
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	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°	2111	2111	2111
5°	2114	2105	2114
10°	2107	2105	2119
15°	2095	2101	2121
20°	2081	2096	2125
25°	2056	2086	2128
30°	2032	2079	2136
35°	1998	2068	2138
40°	1963	2055	2158
45°	1918	2053	2192
50°	1856	2051	2250
55°	1790	2065	2332
60°	1689	2097	2435
65°	1560	2146	2572
70°	1362	2222	2740
75°	1105	2336	2831
80°	816	2291	2291
85°	625	1687	1905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.6	3.1
10°-20°	426.8	8.8
20°-30°	649.7	13.4
30°-40°	788.9	16.3
40°-50°	833.5	17.2
50°-60°	786.5	16.3
60°-70°	654.0	13.5
70°-80°	430.2	8.9
80°-90°	117.3	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°	1225.2	25.3
0°-40°	2014.1	41.7
0°-60°	3634.1	75.2
0°-90°	4835.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4835.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1569	1569	1569	1569	1569	
5°	1565	1565	1559	1565	1565	149
15°	1504	1506	1508	1522	1522	424
25°	1385	1393	1405	1429	1433	639
35°	1217	1231	1259	1292	1302	762
45°	1008	1028	1079	1132	1152	776
55°	763	796	880	964	994	680
65°	490	547	674	773	808	484
75°	213	310	449	532	545	229
85°	40	89	109	122	123	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1568.9	1568.9	1568.9	1568.9	1568.9
2.5°	1571.0	1568.9	1560.8	1568.9	1568.9
5°	1565.0	1565.0	1558.7	1565.0	1565.0
7.5°	1554.8	1554.8	1550.6	1558.7	1558.7
10°	1542.5	1542.5	1540.6	1550.6	1550.6
12.5°	1524.4	1526.3	1524.4	1536.5	1536.5
15°	1504.1	1506.2	1508.2	1522.4	1522.4
17.5°	1477.9	1481.8	1486.0	1502.0	1504.1
20°	1453.6	1455.5	1463.6	1481.8	1483.9
22.5°	1421.2	1427.2	1437.4	1455.5	1461.7
25°	1384.6	1392.7	1405.0	1429.3	1433.2
27.5°	1350.3	1356.3	1372.6	1398.9	1407.0
30°	1307.7	1317.9	1338.1	1364.4	1374.6
32.5°	1267.2	1277.4	1301.7	1330.0	1338.1
35°	1216.7	1230.9	1259.1	1291.5	1301.7
37.5°	1168.1	1182.2	1216.7	1253.1	1265.3
40°	1117.4	1133.6	1170.2	1212.6	1228.8
42.5°	1062.8	1085.0	1125.5	1172.1	1190.3
45°	1008.1	1028.5	1079.0	1131.5	1151.9
47.5°	949.5	973.8	1028.5	1091.2	1115.5
50°	886.8	917.1	979.9	1048.6	1075.0
52.5°	824.0	858.3	929.2	1006.0	1034.5
55°	763.2	795.6	880.5	963.7	994.0
57.5°	696.5	737.0	830.1	919.0	949.5
60°	627.5	672.1	779.4	872.4	904.9
62.5°	558.7	609.4	730.7	824.0	858.3
65°	489.9	546.7	674.2	773.3	807.8
67.5°	423.0	485.8	621.5	720.8	755.0
70°	346.2	425.1	564.7	662.0	696.5
72.5°	275.3	366.5	510.1	601.3	631.6
75°	212.6	309.8	449.4	532.3	544.6
77.5°	155.8	253.1	386.7	414.9	417.0
80°	105.3	202.4	295.7	291.5	295.7
82.5°	68.8	151.9	186.2	208.6	210.5
85°	40.5	89.1	109.3	121.5	123.4
87.5°	20.2	30.3	38.4	40.5	44.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)