

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: P474375

Luminaire Tested: **24CZ2-60HE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474375
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4832.9 lumens
Efficiency: N/A
Efficacy: 109.6 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

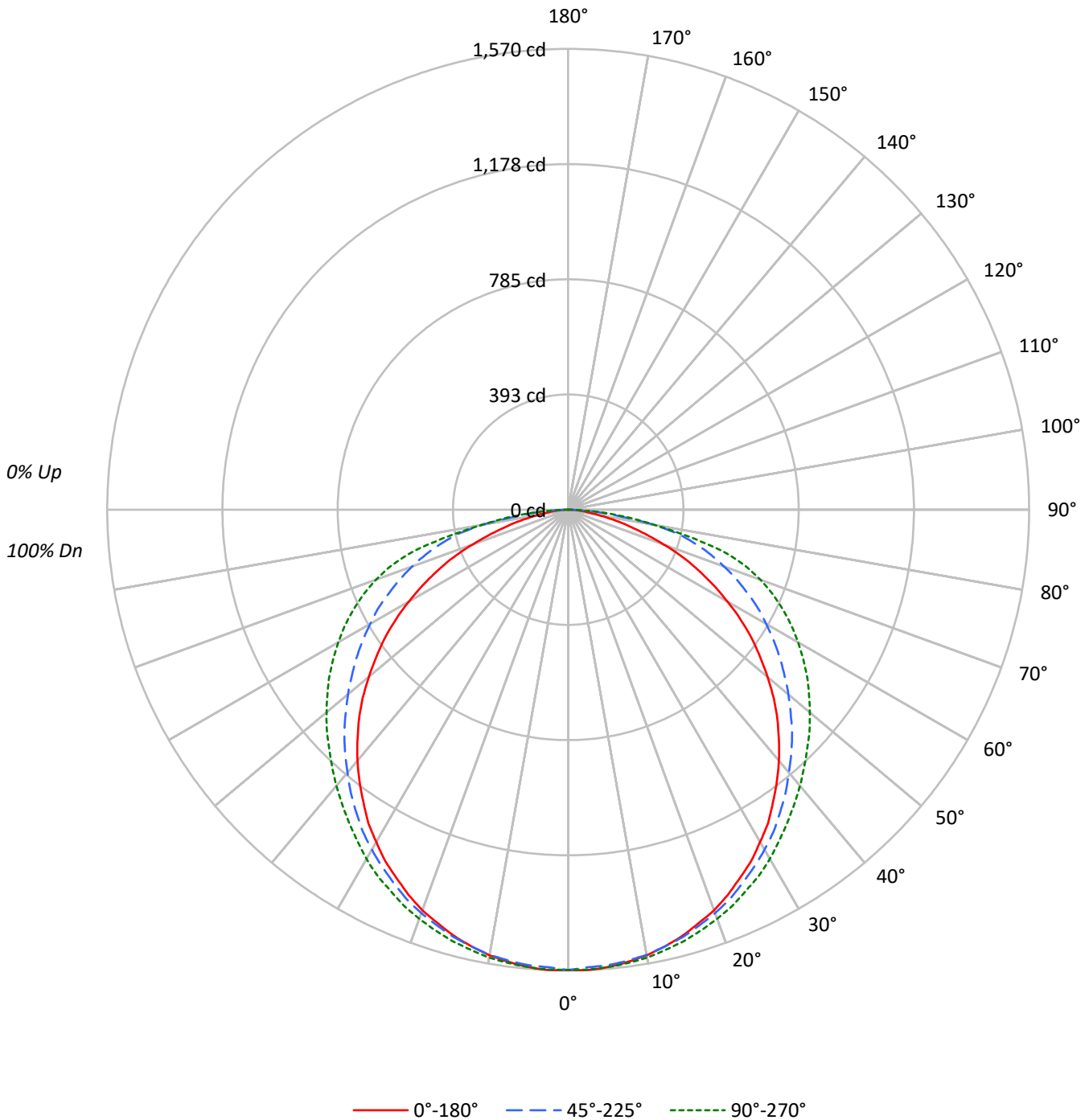
Input Watts (W): 44.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2110	2110	2110
5°	2113	2104	2113
10°	2106	2104	2117
15°	2094	2100	2119
20°	2080	2094	2124
25°	2054	2085	2127
30°	2031	2078	2135
35°	1997	2067	2137
40°	1962	2054	2157
45°	1917	2052	2191
50°	1855	2050	2249
55°	1789	2064	2330
60°	1688	2096	2433
65°	1559	2145	2571
70°	1361	2220	2738
75°	1104	2335	2830
80°	816	2290	2290
85°	625	1686	1903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	3.1
10°-20°	426.6	8.8
20°-30°	649.4	13.4
30°-40°	788.5	16.3
40°-50°	833.1	17.2
50°-60°	786.1	16.3
60°-70°	653.6	13.5
70°-80°	430.0	8.9
80°-90°	117.2	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°	1224.5	25.3
0°-40°	2013.0	41.7
0°-60°	3632.1	75.2
0°-90°	4832.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4832.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1568	1568	1568	1568	1568	
5°	1564	1564	1558	1564	1564	149
15°	1503	1505	1507	1522	1522	424
25°	1384	1392	1404	1428	1432	638
35°	1216	1230	1258	1291	1301	761
45°	1008	1028	1078	1131	1151	776
55°	763	795	880	963	993	679
65°	490	546	674	773	807	484
75°	212	310	449	532	544	229
85°	40	89	109	122	123	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1568.0	1568.0	1568.0	1568.0	1568.0
2.5°	1570.1	1568.0	1559.9	1568.0	1568.0
5°	1564.1	1564.1	1557.8	1564.1	1564.1
7.5°	1553.9	1553.9	1549.7	1557.8	1557.8
10°	1541.6	1541.6	1539.8	1549.7	1549.7
12.5°	1523.6	1525.4	1523.6	1535.6	1535.6
15°	1503.2	1505.3	1507.4	1521.5	1521.5
17.5°	1477.1	1481.0	1485.2	1501.1	1503.2
20°	1452.8	1454.6	1462.7	1481.0	1483.1
22.5°	1420.4	1426.4	1436.6	1454.6	1460.9
25°	1383.8	1391.9	1404.2	1428.5	1432.4
27.5°	1349.6	1355.6	1371.8	1398.1	1406.2
30°	1307.0	1317.2	1337.3	1363.7	1373.9
32.5°	1266.5	1276.7	1301.0	1329.2	1337.3
35°	1216.0	1230.2	1258.4	1290.8	1301.0
37.5°	1167.4	1181.6	1216.0	1252.4	1264.6
40°	1116.8	1133.0	1169.5	1211.9	1228.1
42.5°	1062.2	1084.4	1124.9	1171.4	1189.7
45°	1007.5	1027.9	1078.4	1130.9	1151.2
47.5°	949.0	973.3	1027.9	1090.6	1114.9
50°	886.3	916.6	979.3	1048.0	1074.4
52.5°	823.6	857.8	928.6	1005.5	1033.9
55°	762.7	795.1	880.0	963.1	993.4
57.5°	696.1	736.6	829.6	918.5	949.0
60°	627.1	671.8	778.9	871.9	904.3
62.5°	558.4	609.1	730.3	823.6	857.8
65°	489.7	546.3	673.8	772.9	807.4
67.5°	422.8	485.5	621.1	720.4	754.6
70°	346.0	424.9	564.4	661.6	696.1
72.5°	275.1	366.3	509.8	601.0	631.3
75°	212.4	309.6	449.2	532.0	544.3
77.5°	155.7	252.9	386.4	414.7	416.8
80°	105.3	202.3	295.5	291.3	295.5
82.5°	68.7	151.8	186.1	208.5	210.4
85°	40.5	89.1	109.2	121.5	123.3
87.5°	20.1	30.3	38.4	40.5	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)