

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: P473772

Luminaire Tested: **24CZ2-45HE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473772
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4547.0 lumens
Efficiency: N/A
Efficacy: 128.8 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

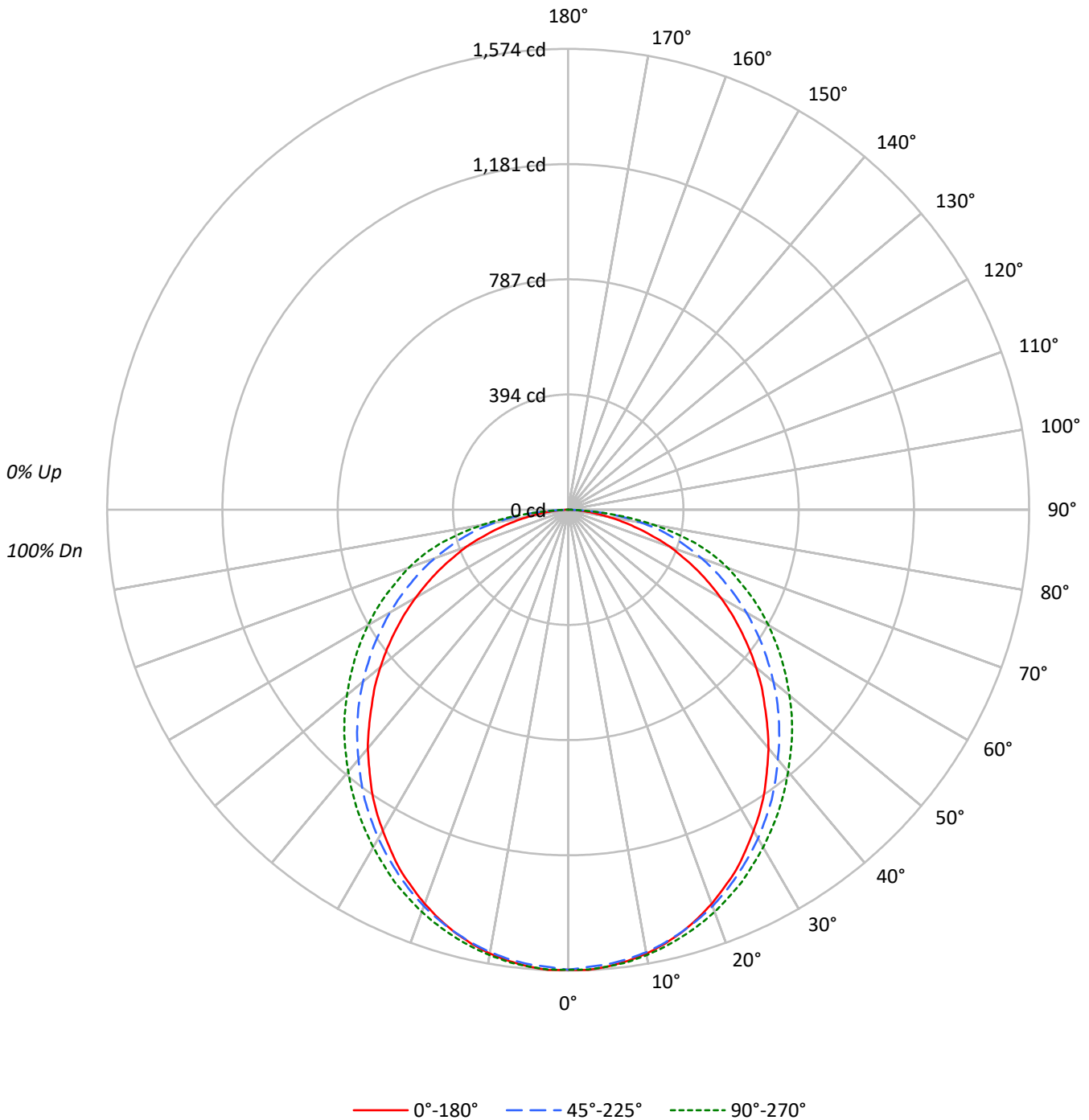
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P473772

CATALOG NUMBER: 24CZ2-45HE-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P473772

CATALOG NUMBER: 24CZ2-45HE-UNV-L830-CD1-U

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°	2114	2114	2114
5°	2115	2104	2115
10°	2104	2097	2111
15°	2082	2081	2102
20°	2051	2064	2093
25°	2015	2038	2083
30°	1966	2014	2068
35°	1922	1988	2060
40°	1870	1956	2051
45°	1806	1936	2058
50°	1751	1914	2063
55°	1687	1901	2087
60°	1617	1892	2125
65°	1541	1885	2180
70°	1451	1904	2280
75°	1276	1944	2372
80°	1065	1958	2288
85°	760	1678	1701



TEST NUMBER: P473772

CATALOG NUMBER: 24CZ2-45HE-UNV-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	3.3
10°-20°	423.1	9.3
20°-30°	634.7	14.0
30°-40°	757.8	16.7
40°-50°	784.9	17.3
50°-60°	722.6	15.9
60°-70°	582.9	12.8
70°-80°	380.9	8.4
80°-90°	111.7	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°	1206.3	26.5
0°-40°	1964.1	43.2
0°-60°	3471.6	76.3
0°-90°	4547.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4547.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1571	1571	1571	1571	1571	
5°	1566	1565	1558	1567	1566	149
15°	1495	1495	1494	1509	1509	421
25°	1358	1360	1373	1398	1403	624
35°	1170	1180	1211	1244	1254	731
45°	949	973	1017	1063	1081	734
55°	719	750	810	870	890	644
65°	484	517	592	660	685	479
75°	245	292	374	438	456	262
85°	49	85	109	115	110	61
90°	0	0	0	0	0	



TEST NUMBER: P473772

CATALOG NUMBER: 24CZ2-45HE-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1571.3	1571.3	1571.3	1571.3	1571.3
2.5°	1573.5	1571.3	1563.2	1572.7	1572.0
5°	1566.1	1564.7	1558.1	1566.9	1566.1
7.5°	1554.4	1553.6	1548.5	1558.1	1558.1
10°	1539.7	1538.2	1534.5	1545.6	1544.8
12.5°	1519.1	1518.4	1516.2	1529.4	1528.7
15°	1494.9	1494.9	1494.1	1508.8	1508.8
17.5°	1465.5	1466.2	1469.2	1486.1	1486.8
20°	1432.4	1435.4	1441.3	1460.4	1461.8
22.5°	1395.0	1400.9	1408.9	1430.2	1432.4
25°	1357.5	1360.5	1372.9	1397.9	1403.1
27.5°	1312.0	1319.3	1335.5	1361.2	1366.3
30°	1265.7	1276.0	1296.5	1323.0	1331.1
32.5°	1220.1	1229.0	1253.2	1283.3	1292.9
35°	1170.2	1180.5	1210.6	1243.7	1253.9
37.5°	1115.1	1131.3	1162.8	1201.0	1212.1
40°	1064.4	1079.1	1113.6	1156.2	1168.0
42.5°	1006.4	1024.7	1066.6	1110.0	1124.6
45°	949.1	972.6	1017.4	1062.9	1081.3
47.5°	895.5	914.6	967.4	1018.9	1035.0
50°	836.7	858.7	914.6	968.9	985.8
52.5°	778.7	805.1	861.7	919.0	937.3
55°	719.2	750.0	810.2	869.7	889.6
57.5°	661.9	692.7	755.2	818.3	838.9
60°	600.9	633.9	703.0	764.0	789.7
62.5°	542.1	575.2	647.9	714.0	738.3
65°	484.1	517.1	592.1	659.7	684.6
67.5°	423.9	459.9	539.9	605.3	629.5
70°	368.8	403.3	484.1	553.9	579.6
72.5°	305.6	346.7	429.0	498.0	522.3
75°	245.4	291.6	373.9	438.5	456.2
77.5°	189.5	235.8	318.1	366.6	377.6
80°	137.4	184.4	252.7	286.5	295.3
82.5°	88.9	137.4	182.9	205.7	208.6
85°	49.2	85.2	108.7	115.3	110.2
87.5°	17.6	32.3	31.6	25.7	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)