

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: P473775

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473775
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-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: 5965.5 lumens
Efficiency: N/A
Efficacy: 135.3 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

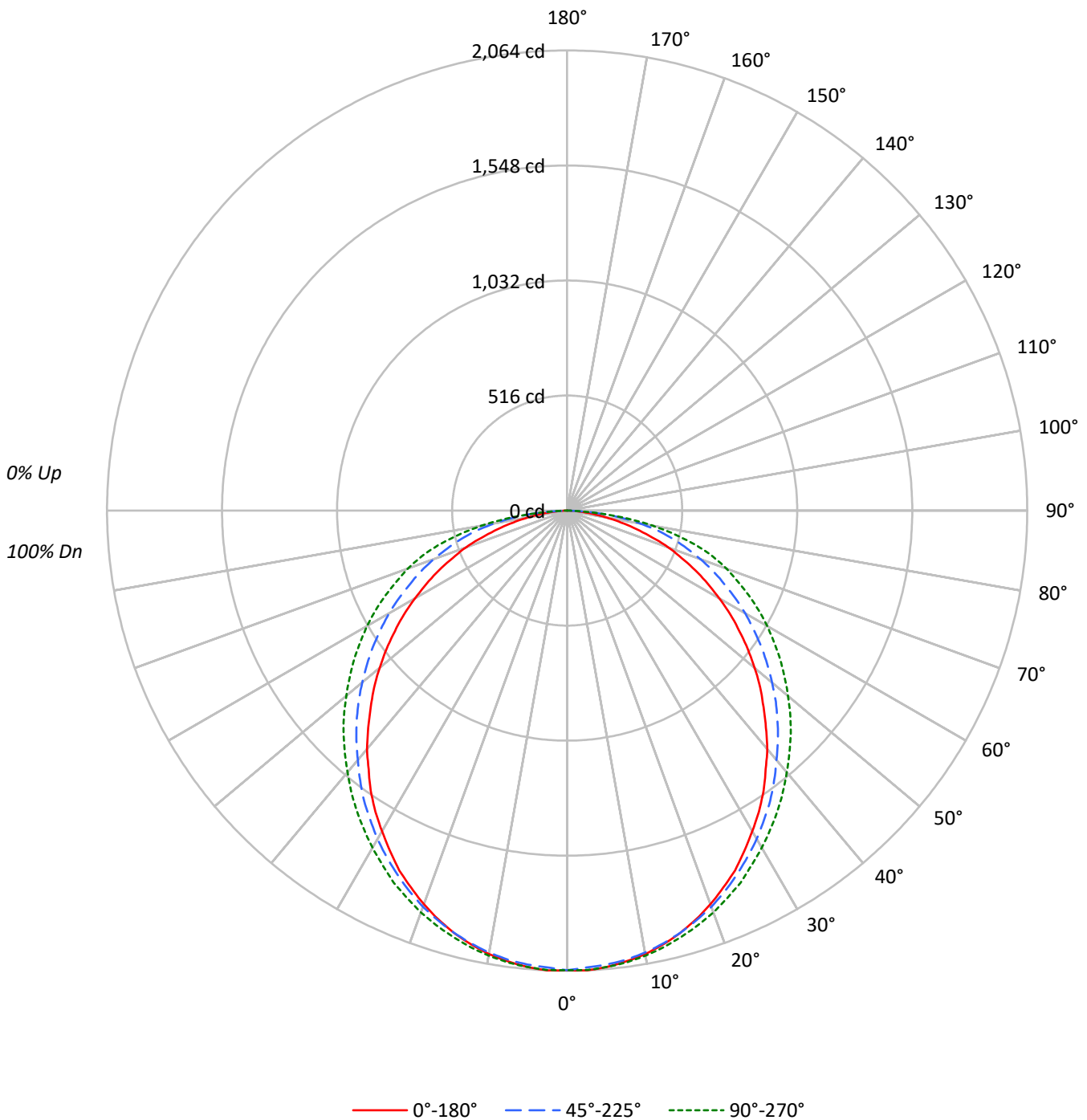
Input Watts (W): 44.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2774	2774	2774
5°	2775	2761	2775
10°	2760	2751	2769
15°	2732	2731	2757
20°	2691	2707	2746
25°	2644	2674	2733
30°	2580	2643	2713
35°	2522	2609	2702
40°	2453	2566	2692
45°	2369	2540	2699
50°	2298	2512	2707
55°	2213	2494	2738
60°	2121	2482	2788
65°	2022	2473	2860
70°	1903	2498	2991
75°	1673	2550	3111
80°	1396	2569	3002
85°	997	2201	2232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.9	3.3
10°-20°	555.1	9.3
20°-30°	832.7	14.0
30°-40°	994.2	16.7
40°-50°	1029.8	17.3
50°-60°	948.0	15.9
60°-70°	764.7	12.8
70°-80°	499.7	8.4
80°-90°	146.5	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°	1582.7	26.5
0°-40°	2576.8	43.2
0°-60°	4554.7	76.3
0°-90°	5965.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5965.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2062	2062	2062	2062	2062	
5°	2055	2053	2044	2056	2055	195
15°	1961	1961	1960	1980	1980	553
25°	1781	1785	1801	1834	1841	819
35°	1535	1549	1588	1632	1645	959
45°	1245	1276	1335	1395	1419	962
55°	944	984	1063	1141	1167	844
65°	635	678	777	866	898	628
75°	322	383	491	575	598	344
85°	65	112	143	151	145	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2061.5	2061.5	2061.5	2061.5	2061.5
2.5°	2064.4	2061.5	2050.9	2063.4	2062.4
5°	2054.7	2052.8	2044.1	2055.7	2054.7
7.5°	2039.3	2038.3	2031.6	2044.1	2044.1
10°	2020.0	2018.1	2013.3	2027.7	2026.8
12.5°	1993.0	1992.1	1989.2	2006.5	2005.6
15°	1961.2	1961.2	1960.3	1979.5	1979.5
17.5°	1922.7	1923.7	1927.5	1949.7	1950.6
20°	1879.3	1883.2	1890.9	1915.9	1917.9
22.5°	1830.2	1837.9	1848.5	1876.4	1879.3
25°	1781.0	1784.9	1801.3	1834.0	1840.8
27.5°	1721.3	1730.9	1752.1	1785.8	1792.6
30°	1660.5	1674.0	1701.0	1735.7	1746.3
32.5°	1600.8	1612.4	1644.2	1683.7	1696.2
35°	1535.3	1548.8	1588.3	1631.6	1645.1
37.5°	1463.0	1484.2	1525.6	1575.7	1590.2
40°	1396.5	1415.8	1461.0	1516.9	1532.4
42.5°	1320.3	1344.4	1399.4	1456.2	1475.5
45°	1245.2	1276.0	1334.8	1394.6	1418.6
47.5°	1174.8	1199.9	1269.3	1336.7	1357.9
50°	1097.7	1126.6	1199.9	1271.2	1293.4
52.5°	1021.6	1056.3	1130.5	1205.7	1229.7
55°	943.5	984.0	1063.0	1141.1	1167.1
57.5°	868.3	908.8	990.7	1073.6	1100.6
60°	788.3	831.7	922.3	1002.3	1036.0
62.5°	711.2	754.6	850.0	936.8	968.6
65°	635.1	678.5	776.8	865.5	898.2
67.5°	556.1	603.3	708.4	794.1	825.9
70°	483.8	529.1	635.1	726.7	760.4
72.5°	400.9	454.9	562.8	653.4	685.2
75°	321.9	382.6	490.6	575.4	598.5
77.5°	248.6	309.4	417.3	480.9	495.4
80°	180.2	241.9	331.5	375.9	387.4
82.5°	116.6	180.2	240.0	269.9	273.7
85°	64.6	111.8	142.6	151.3	144.6
87.5°	23.1	42.4	41.4	33.7	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)