

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: P473975

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473975
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

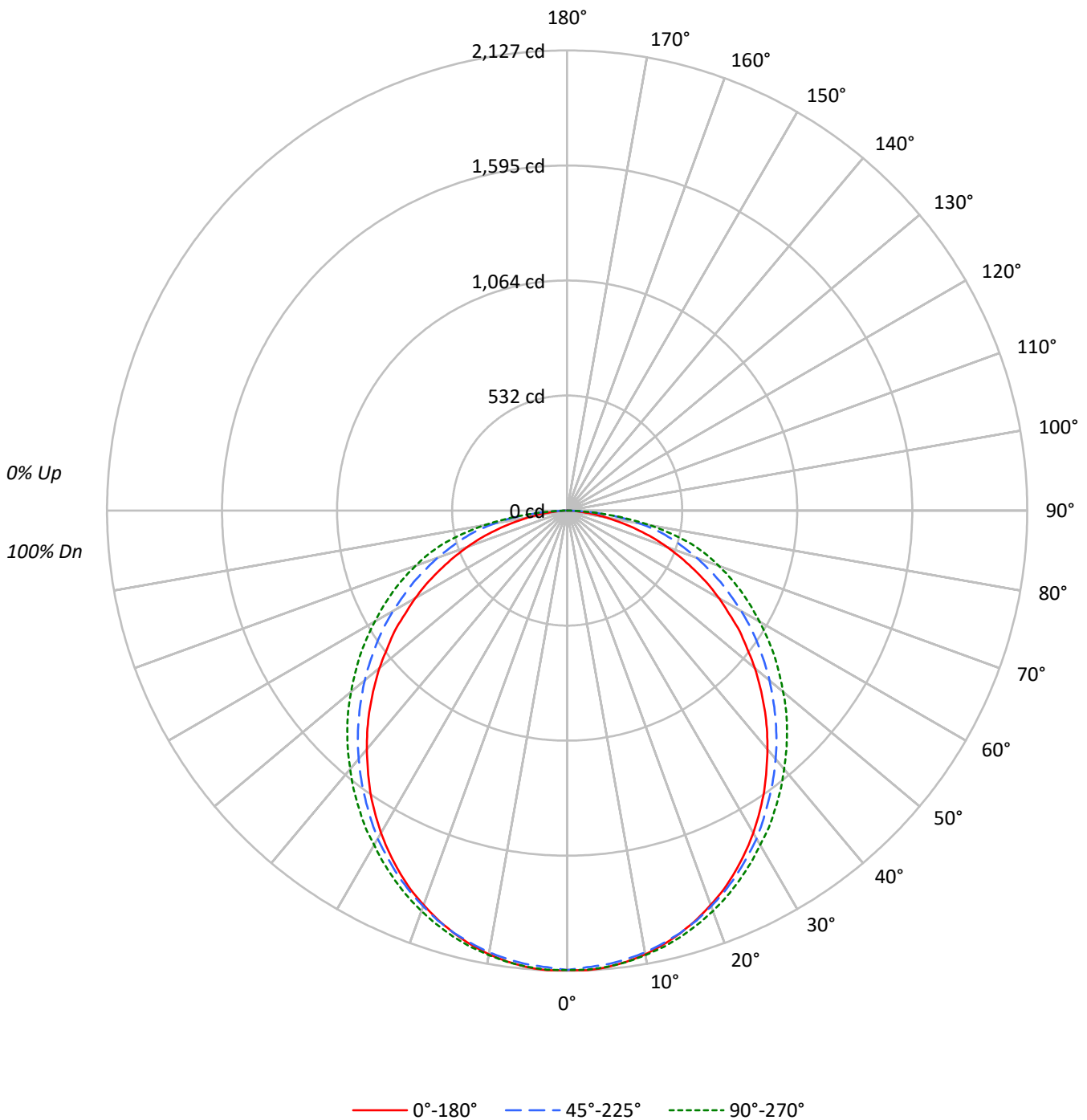
Lumens per Lamp: N/A
Luminaire Lumens: 6085.0 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2858	2858	2858
5°	2862	2844	2859
10°	2846	2834	2850
15°	2817	2815	2839
20°	2778	2786	2821
25°	2732	2756	2799
30°	2674	2721	2772
35°	2607	2673	2757
40°	2530	2633	2740
45°	2453	2592	2735
50°	2370	2557	2728
55°	2286	2525	2743
60°	2181	2501	2762
65°	2065	2492	2829
70°	1927	2505	2929
75°	1714	2577	3086
80°	1402	2633	3013
85°	988	2299	2345



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.8	3.3
10°-20°	571.9	9.4
20°-30°	857.3	14.1
30°-40°	1021.0	16.8
40°-50°	1052.8	17.3
50°-60°	960.7	15.8
60°-70°	768.2	12.6
70°-80°	501.8	8.2
80°-90°	150.7	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°	1630.0	26.8
0°-40°	2651.0	43.6
0°-60°	4664.4	76.7
0°-90°	6085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2124	2124	2124	2124	2124	
5°	2119	2115	2106	2119	2117	201
15°	2022	2023	2021	2038	2038	570
25°	1840	1843	1856	1883	1885	847
35°	1587	1598	1627	1668	1678	992
45°	1289	1312	1362	1419	1437	994
55°	974	1002	1076	1147	1169	868
65°	649	693	783	860	889	643
75°	330	385	496	576	594	351
85°	64	115	149	152	152	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2123.9	2123.9	2123.9	2123.9	2123.9
2.5°	2126.9	2123.9	2112.9	2125.9	2123.9
5°	2118.9	2114.9	2105.9	2118.9	2116.9
7.5°	2102.9	2100.9	2091.9	2106.9	2104.9
10°	2083.0	2081.0	2074.0	2089.0	2086.0
12.5°	2055.0	2054.0	2049.0	2067.0	2065.0
15°	2022.0	2023.0	2021.0	2038.0	2038.0
17.5°	1984.0	1983.0	1987.0	2008.0	2006.0
20°	1940.0	1941.0	1946.0	1970.0	1970.0
22.5°	1894.0	1893.0	1904.0	1928.0	1930.0
25°	1840.1	1843.1	1856.1	1883.1	1885.1
27.5°	1782.1	1787.1	1803.1	1834.1	1837.1
30°	1721.1	1727.1	1751.1	1780.1	1784.1
32.5°	1654.2	1667.2	1689.2	1726.1	1736.1
35°	1587.2	1598.2	1627.2	1668.2	1678.2
37.5°	1513.2	1531.2	1564.2	1609.2	1622.2
40°	1440.3	1458.3	1499.2	1546.2	1560.2
42.5°	1366.3	1385.3	1432.3	1485.3	1500.2
45°	1289.4	1312.3	1362.3	1419.3	1437.3
47.5°	1210.4	1237.4	1291.4	1353.3	1373.3
50°	1132.4	1159.4	1221.4	1285.4	1303.3
52.5°	1048.5	1082.5	1148.4	1217.4	1235.4
55°	974.5	1002.5	1076.5	1147.4	1169.4
57.5°	887.6	925.5	1004.5	1076.5	1097.4
60°	810.6	845.6	929.5	1002.5	1026.5
62.5°	732.6	768.6	852.6	935.5	957.5
65°	648.7	692.7	782.6	859.6	888.6
67.5°	568.7	614.7	706.6	788.6	818.6
70°	489.8	536.7	636.7	720.6	744.6
72.5°	411.8	460.8	564.7	646.7	674.7
75°	329.8	384.8	495.8	575.7	593.7
77.5°	252.9	313.8	425.8	479.8	492.8
80°	180.9	247.9	339.8	378.8	388.8
82.5°	118.9	183.9	253.9	274.9	271.9
85°	64.0	114.9	148.9	151.9	151.9
87.5°	25.0	46.0	47.0	36.0	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)