

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: P474368

Luminaire Tested: **24CZ2-65-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474368
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

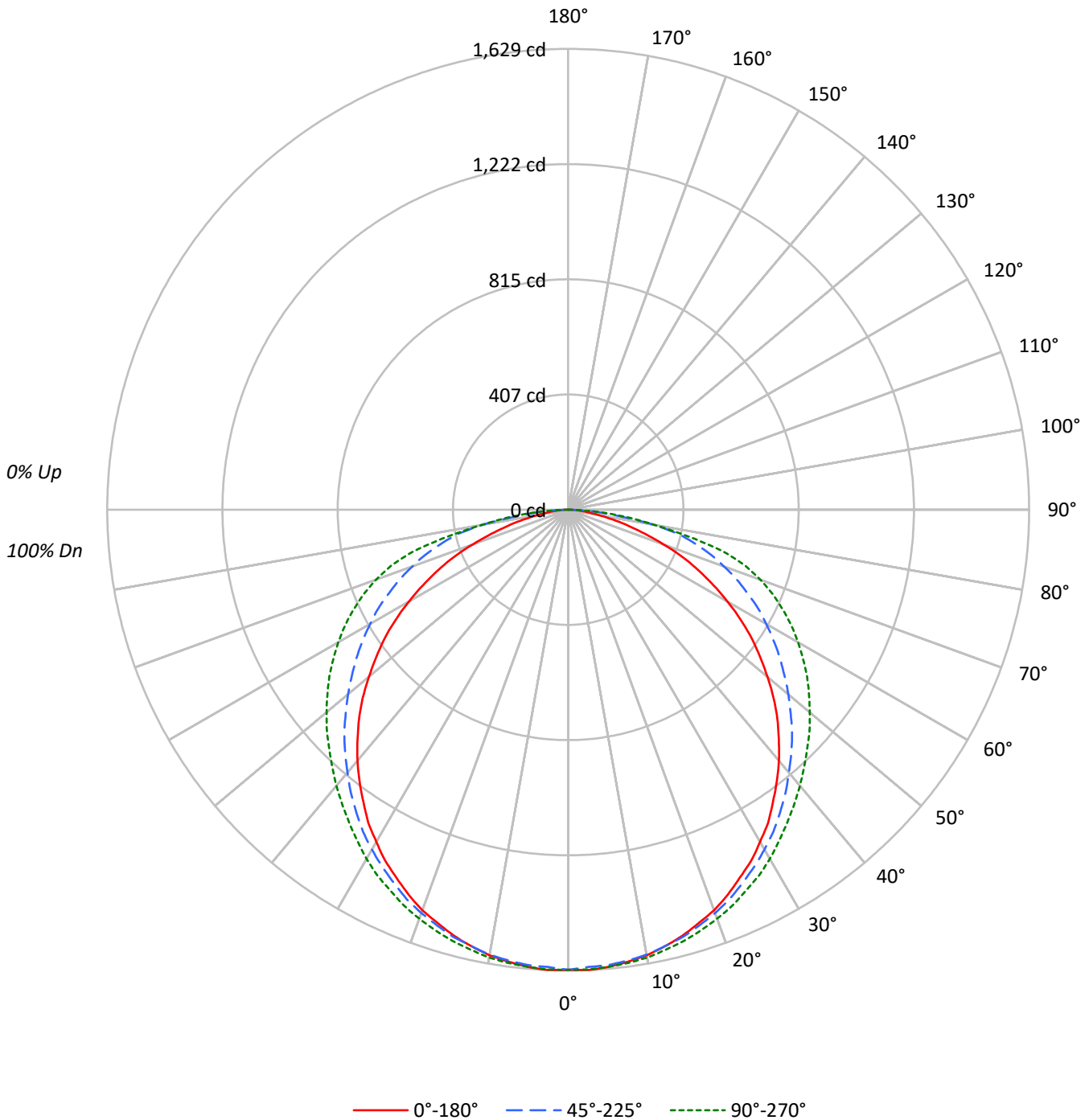
Lumens per Lamp: N/A
Luminaire Lumens: 5013.4 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 51
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°	2189	2189	2189
5°	2191	2183	2191
10°	2185	2182	2196
15°	2172	2178	2199
20°	2158	2173	2203
25°	2131	2162	2206
30°	2106	2155	2214
35°	2072	2144	2217
40°	2035	2131	2238
45°	1989	2129	2273
50°	1924	2126	2333
55°	1856	2141	2417
60°	1751	2174	2524
65°	1617	2225	2666
70°	1412	2303	2841
75°	1146	2422	2935
80°	846	2375	2375
85°	648	1749	1976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.1	3.1
10°-20°	442.5	8.8
20°-30°	673.6	13.4
30°-40°	818.0	16.3
40°-50°	864.2	17.2
50°-60°	815.4	16.3
60°-70°	678.0	13.5
70°-80°	446.1	8.9
80°-90°	121.6	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°	1270.2	25.3
0°-40°	2088.2	41.7
0°-60°	3767.8	75.2
0°-90°	5013.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5013.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1627	1627	1627	1627	1627	
5°	1622	1622	1616	1622	1622	154
15°	1559	1562	1564	1578	1578	440
25°	1436	1444	1457	1482	1486	662
35°	1262	1276	1305	1339	1350	790
45°	1045	1066	1119	1173	1194	805
55°	791	825	913	999	1030	705
65°	508	567	699	802	838	502
75°	220	321	466	552	565	237
85°	42	92	113	126	128	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1626.6	1626.6	1626.6	1626.6	1626.6
2.5°	1628.8	1626.6	1618.2	1626.6	1626.6
5°	1622.5	1622.5	1616.0	1622.5	1622.5
7.5°	1612.0	1612.0	1607.6	1616.0	1616.0
10°	1599.2	1599.2	1597.3	1607.6	1607.6
12.5°	1580.5	1582.4	1580.5	1593.0	1593.0
15°	1559.4	1561.5	1563.7	1578.4	1578.4
17.5°	1532.3	1536.3	1540.7	1557.2	1559.4
20°	1507.0	1509.0	1517.4	1536.3	1538.5
22.5°	1473.4	1479.7	1490.2	1509.0	1515.4
25°	1435.5	1443.9	1456.6	1481.8	1485.9
27.5°	1400.0	1406.2	1423.0	1450.4	1458.8
30°	1355.8	1366.4	1387.3	1414.6	1425.2
32.5°	1313.8	1324.4	1349.6	1378.9	1387.3
35°	1261.5	1276.1	1305.4	1339.0	1349.6
37.5°	1211.1	1225.7	1261.5	1299.2	1311.9
40°	1158.5	1175.3	1213.2	1257.2	1274.0
42.5°	1101.9	1124.9	1166.9	1215.2	1234.1
45°	1045.2	1066.3	1118.7	1173.2	1194.3
47.5°	984.4	1009.7	1066.3	1131.4	1156.6
50°	919.4	950.8	1015.9	1087.2	1114.6
52.5°	854.3	889.9	963.3	1043.0	1072.6
55°	791.2	824.8	912.9	999.1	1030.5
57.5°	722.1	764.1	860.6	952.8	984.4
60°	650.6	696.9	808.0	904.5	938.1
62.5°	579.3	631.8	757.6	854.3	889.9
65°	508.0	566.8	699.0	801.8	837.5
67.5°	438.6	503.6	644.3	747.3	782.8
70°	358.9	440.7	585.5	686.3	722.1
72.5°	285.4	380.0	528.8	623.4	654.9
75°	220.4	321.2	465.9	551.9	564.6
77.5°	161.6	262.4	400.9	430.2	432.3
80°	109.2	209.8	306.5	302.2	306.5
82.5°	71.3	157.5	193.0	216.3	218.2
85°	42.0	92.4	113.3	126.0	128.0
87.5°	20.9	31.5	39.9	42.0	46.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)