

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: P474068

Luminaire Tested: **24CZ2-65-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474068
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

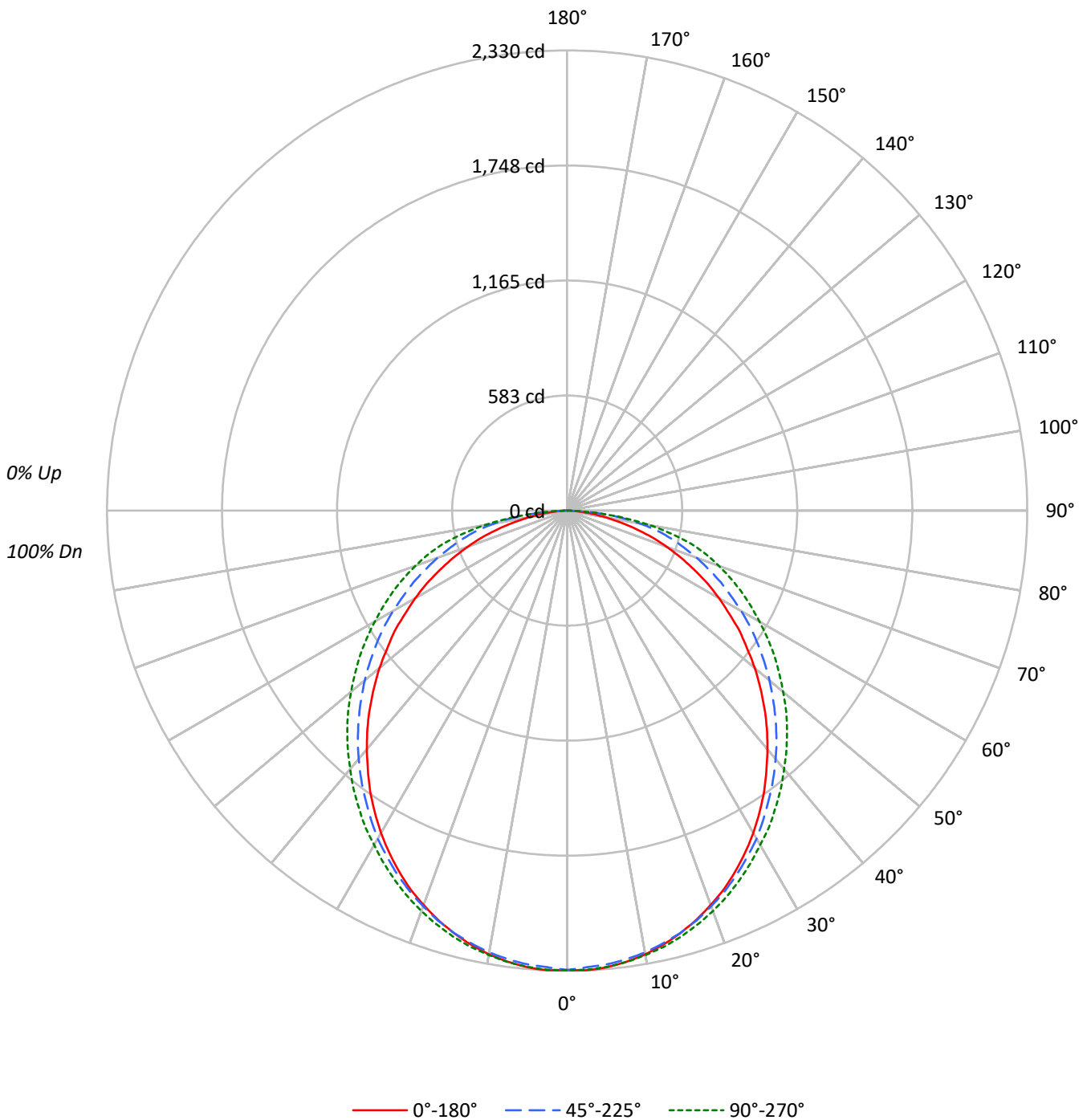
Lumens per Lamp: N/A
Luminaire Lumens: 6665.6 lumens
Efficiency: N/A
Efficacy: 130.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	3130	3130	3130
5°	3135	3116	3132
10°	3117	3104	3122
15°	3085	3084	3110
20°	3043	3052	3090
25°	2992	3018	3066
30°	2929	2980	3036
35°	2856	2928	3019
40°	2771	2885	3002
45°	2688	2840	2996
50°	2597	2801	2988
55°	2504	2766	3005
60°	2389	2740	3026
65°	2262	2729	3099
70°	2111	2744	3209
75°	1878	2823	3381
80°	1536	2885	3300
85°	1082	2518	2569



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.0	3.3
10°-20°	626.5	9.4
20°-30°	939.1	14.1
30°-40°	1118.4	16.8
40°-50°	1153.2	17.3
50°-60°	1052.3	15.8
60°-70°	841.5	12.6
70°-80°	549.6	8.2
80°-90°	165.0	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°	1785.5	26.8
0°-40°	2903.9	43.6
0°-60°	5109.4	76.7
0°-90°	6665.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6665.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2327	2327	2327	2327	2327	
5°	2321	2317	2307	2321	2319	220
15°	2215	2216	2214	2232	2232	624
25°	2016	2019	2033	2063	2065	928
35°	1739	1751	1782	1827	1838	1086
45°	1412	1438	1492	1555	1574	1089
55°	1068	1098	1179	1257	1281	951
65°	711	759	857	942	973	705
75°	361	422	543	631	650	384
85°	70	126	163	166	166	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2326.6	2326.6	2326.6	2326.6	2326.6
2.5°	2329.9	2326.6	2314.5	2328.8	2326.6
5°	2321.1	2316.7	2306.9	2321.1	2318.9
7.5°	2303.6	2301.4	2291.6	2308.0	2305.8
10°	2281.7	2279.5	2271.8	2288.3	2285.0
12.5°	2251.0	2249.9	2244.5	2264.2	2262.0
15°	2214.9	2216.0	2213.8	2232.4	2232.4
17.5°	2173.3	2172.2	2176.6	2199.6	2197.4
20°	2125.1	2126.2	2131.7	2158.0	2158.0
22.5°	2074.8	2073.7	2085.7	2112.0	2114.2
25°	2015.6	2018.9	2033.2	2062.7	2064.9
27.5°	1952.1	1957.6	1975.1	2009.1	2012.4
30°	1885.4	1891.9	1918.2	1950.0	1954.3
32.5°	1812.0	1826.2	1850.3	1890.8	1901.8
35°	1738.6	1750.7	1782.4	1827.3	1838.3
37.5°	1657.6	1677.3	1713.5	1762.7	1777.0
40°	1577.7	1597.4	1642.3	1693.8	1709.1
42.5°	1496.7	1517.5	1568.9	1627.0	1643.4
45°	1412.4	1437.6	1492.3	1554.7	1574.4
47.5°	1325.9	1355.4	1414.6	1482.4	1504.3
50°	1240.5	1270.0	1337.9	1408.0	1427.7
52.5°	1148.5	1185.7	1258.0	1333.5	1353.3
55°	1067.5	1098.2	1179.2	1256.9	1281.0
57.5°	972.2	1013.8	1100.3	1179.2	1202.2
60°	887.9	926.3	1018.2	1098.2	1124.4
62.5°	802.5	842.0	933.9	1024.8	1048.9
65°	710.6	758.7	857.3	941.6	973.3
67.5°	623.0	673.3	774.1	863.8	896.7
70°	536.5	587.9	697.4	789.4	815.7
72.5°	451.1	504.7	618.6	708.4	739.0
75°	361.3	421.5	543.1	630.6	650.4
77.5°	277.0	343.8	466.4	525.5	539.8
80°	198.2	271.5	372.3	415.0	425.9
82.5°	130.3	201.5	278.1	301.1	297.8
85°	70.1	125.9	163.1	166.4	166.4
87.5°	27.4	50.4	51.5	39.4	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)