

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: P475286

Luminaire Tested: **22CZ2-39-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475286
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39-SQR-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

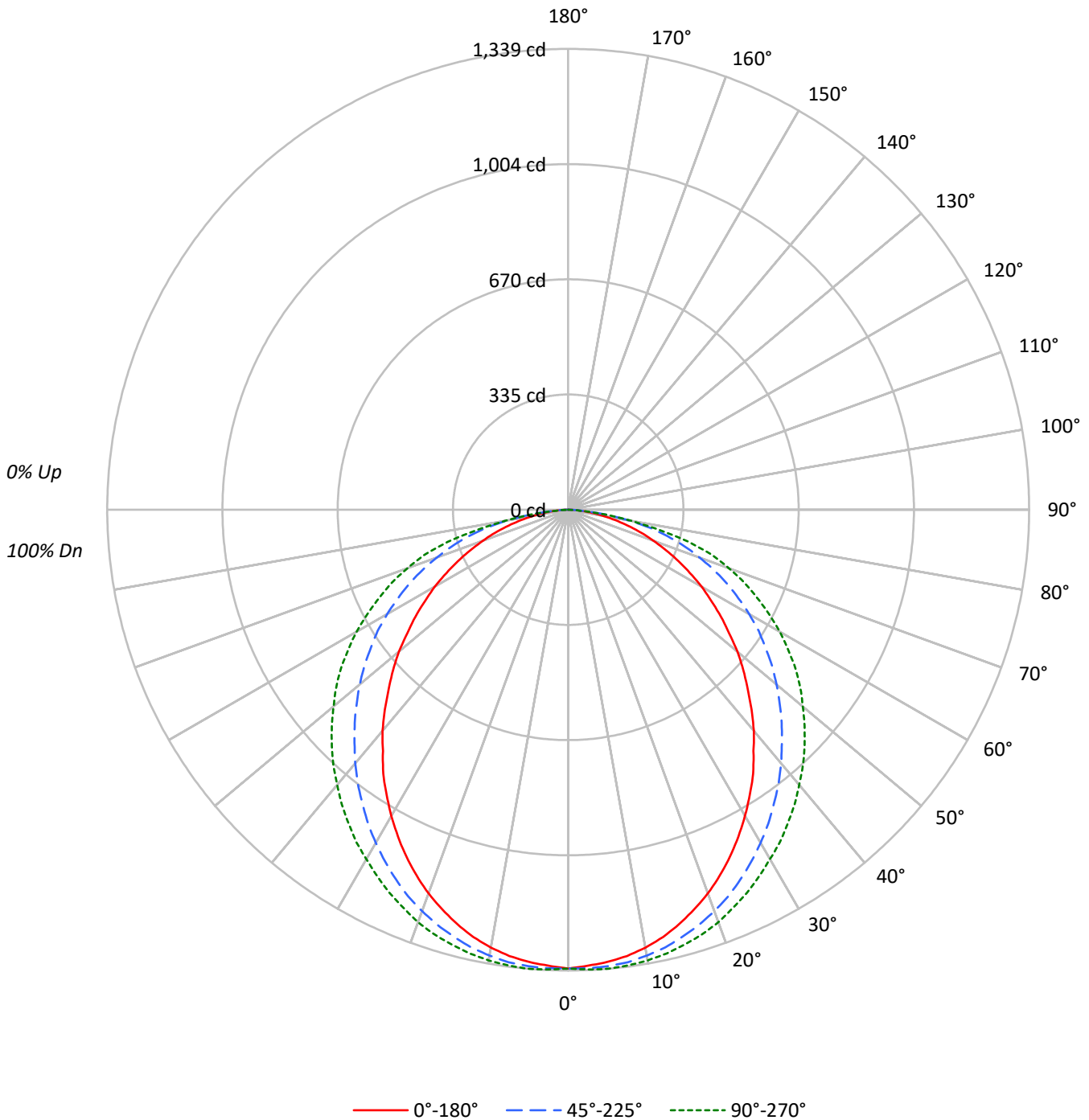
Lumens per Lamp: N/A
Luminaire Lumens: 3817.1 lumens
Efficiency: N/A
Efficacy: 130.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 29.3
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



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3588	3588	3588
5°	3563	3597	3617
10°	3530	3594	3633
15°	3473	3578	3644
20°	3398	3554	3652
25°	3303	3518	3647
30°	3192	3473	3642
35°	3077	3422	3654
40°	2947	3380	3666
45°	2806	3337	3696
50°	2685	3307	3724
55°	2541	3281	3783
60°	2408	3267	3823
65°	2249	3241	3852
70°	2066	3193	3906
75°	1865	3108	3767
80°	1599	2752	2836
85°	1288	1621	1288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	3.3
10°-20°	361.4	9.5
20°-30°	542.8	14.2
30°-40°	647.4	17.0
40°-50°	669.4	17.5
50°-60°	615.4	16.1
60°-70°	489.9	12.8
70°-80°	299.3	7.8
80°-90°	65.0	1.7
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°	1030.7	27.0
0°-40°	1678.1	44.0
0°-60°	2962.9	77.6
0°-90°	3817.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3817.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1333	1333	1333	1333	1333	
5°	1319	1322	1332	1337	1339	125
15°	1246	1261	1284	1303	1308	351
25°	1112	1140	1185	1218	1228	512
35°	937	976	1042	1096	1112	584
45°	737	790	877	948	971	570
55°	542	601	699	779	806	485
65°	353	413	509	580	605	350
75°	179	232	299	351	362	191
85°	42	51	52	45	42	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1333.4	1333.4	1333.4	1333.4	1333.4
2.5°	1326.1	1327.9	1333.4	1337.2	1337.2
5°	1318.9	1322.5	1331.5	1337.2	1339.0
7.5°	1308.1	1313.5	1326.1	1333.4	1335.4
10°	1291.9	1299.1	1315.3	1326.1	1329.7
12.5°	1271.8	1282.6	1302.7	1317.1	1320.7
15°	1246.5	1261.0	1284.4	1302.7	1308.1
17.5°	1217.5	1235.5	1264.6	1286.4	1293.7
20°	1186.6	1204.8	1241.1	1266.4	1275.4
22.5°	1150.5	1174.0	1215.7	1244.7	1252.0
25°	1112.4	1139.5	1184.8	1217.5	1228.3
27.5°	1070.7	1103.4	1152.3	1192.2	1201.2
30°	1027.2	1061.7	1117.8	1161.3	1172.2
32.5°	981.9	1021.8	1081.6	1130.5	1145.1
35°	936.6	976.5	1041.7	1096.2	1112.4
37.5°	884.1	931.2	1003.8	1059.9	1079.8
40°	838.8	884.1	962.1	1023.6	1043.7
42.5°	788.1	837.0	918.6	985.5	1009.2
45°	737.3	789.9	876.9	947.6	971.1
47.5°	690.2	742.8	833.4	907.7	931.2
50°	641.3	695.6	789.9	866.0	889.5
52.5°	588.8	648.5	746.4	822.5	849.8
55°	541.7	601.4	699.3	779.0	806.3
57.5°	492.8	554.3	656.0	731.9	757.4
60°	447.5	507.2	607.0	681.2	710.3
62.5°	398.5	460.1	557.9	630.5	657.8
65°	353.2	413.2	509.0	579.8	605.0
67.5°	307.9	367.9	458.3	525.4	554.3
70°	262.6	322.6	405.8	471.1	496.4
72.5°	222.9	275.5	355.0	415.0	438.4
75°	179.4	231.9	298.9	351.4	362.3
77.5°	139.5	186.6	242.8	266.2	270.0
80°	103.2	139.5	177.6	183.0	183.0
82.5°	68.8	96.0	110.5	112.3	110.5
85°	41.7	50.7	52.5	45.3	41.7
87.5°	14.4	14.4	9.0	5.4	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)