

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: P474832

Luminaire Tested: **22CZ2-29VHE-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474832
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-29VHE-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

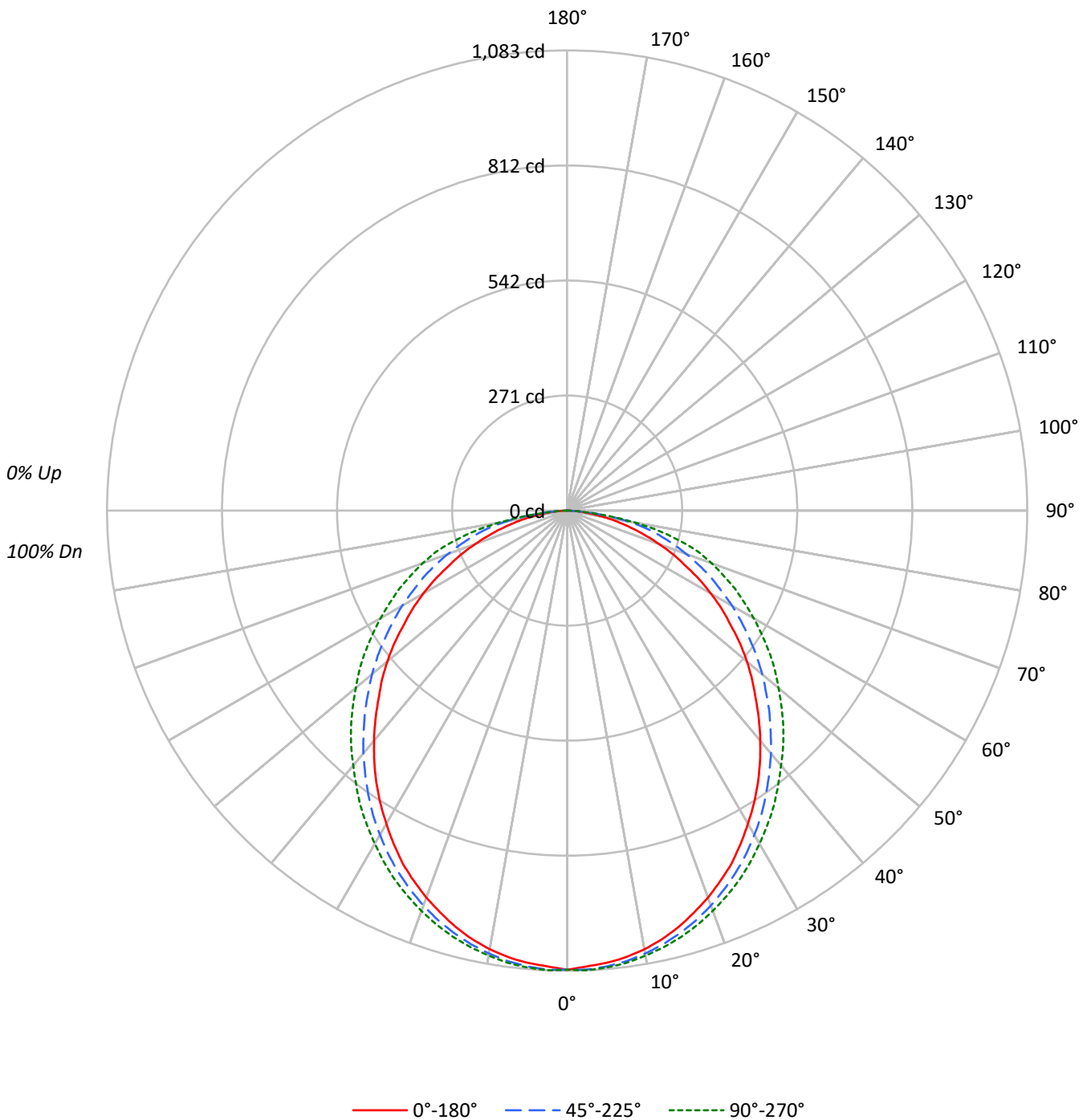
Lumens per Lamp: N/A
Luminaire Lumens: 2979.4 lumens
Efficiency: N/A
Efficacy: 149.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 19.9
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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2908	2908	2908
5°	2886	2908	2915
10°	2865	2892	2906
15°	2826	2866	2893
20°	2775	2833	2871
25°	2720	2790	2847
30°	2645	2739	2814
35°	2571	2681	2786
40°	2484	2621	2752
45°	2389	2562	2739
50°	2312	2509	2718
55°	2204	2455	2723
60°	2104	2413	2731
65°	1957	2381	2774
70°	1808	2349	2843
75°	1617	2337	2861
80°	1356	2214	2498
85°	1050	1516	1420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	3.4
10°-20°	289.8	9.7
20°-30°	432.1	14.5
30°-40°	510.1	17.1
40°-50°	519.9	17.4
50°-60°	468.8	15.7
60°-70°	368.5	12.4
70°-80°	230.7	7.7
80°-90°	57.5	1.9
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°	824.0	27.7
0°-40°	1334.0	44.8
0°-60°	2322.7	78.0
0°-90°	2979.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2979.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1080	1080	1080	1080	1080	
5°	1068	1071	1077	1079	1079	101
15°	1014	1019	1029	1036	1038	286
25°	916	923	940	954	959	421
35°	783	793	816	839	848	489
45°	628	642	673	706	720	486
55°	470	484	523	564	580	422
65°	307	326	374	416	436	306
75°	156	179	225	265	275	165
85°	34	43	49	49	46	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1080.5	1080.5	1080.5	1080.5	1080.5
2.5°	1073.6	1076.1	1081.1	1083.0	1083.0
5°	1068.5	1071.1	1076.7	1079.2	1079.2
7.5°	1060.3	1062.9	1069.8	1072.9	1073.6
10°	1048.4	1051.5	1058.5	1063.5	1063.5
12.5°	1033.3	1036.4	1045.2	1051.5	1052.2
15°	1014.4	1018.8	1028.9	1036.4	1038.3
17.5°	992.3	999.3	1010.6	1020.1	1021.9
20°	969.0	976.0	989.2	999.9	1002.4
22.5°	943.2	949.5	965.3	978.5	981.6
25°	916.2	923.1	939.5	953.9	959.0
27.5°	884.0	892.2	911.7	928.1	933.2
30°	851.3	861.4	881.5	899.8	905.5
32.5°	817.9	827.4	850.0	869.6	877.1
35°	782.7	792.7	816.0	838.7	848.2
37.5°	745.5	755.6	780.8	806.6	815.4
40°	707.1	719.1	746.1	773.9	783.3
42.5°	668.1	680.7	709.0	739.9	752.4
45°	627.8	641.6	673.1	705.9	719.7
47.5°	591.3	602.6	635.3	671.2	684.4
50°	552.2	562.9	599.4	635.3	649.2
52.5°	512.5	522.6	561.7	599.4	616.4
55°	469.7	484.2	523.2	563.5	580.5
57.5°	431.9	445.2	485.5	526.4	542.8
60°	391.0	404.9	448.3	489.9	507.5
62.5°	350.1	365.2	409.3	454.0	470.4
65°	307.3	326.2	374.0	415.6	435.7
67.5°	270.8	289.0	336.2	379.7	397.3
70°	229.8	251.2	298.5	342.5	361.4
72.5°	191.4	212.8	261.3	305.4	324.3
75°	155.5	178.8	224.8	265.1	275.2
77.5°	120.9	142.9	188.9	212.2	222.9
80°	87.5	108.9	142.9	158.7	161.2
82.5°	59.2	77.4	97.0	101.4	98.9
85°	34.0	43.4	49.1	49.1	46.0
87.5°	13.9	13.9	12.0	7.6	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)