

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: P474843

Luminaire Tested: **22CZ2-90VHE-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474843
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-90VHE-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

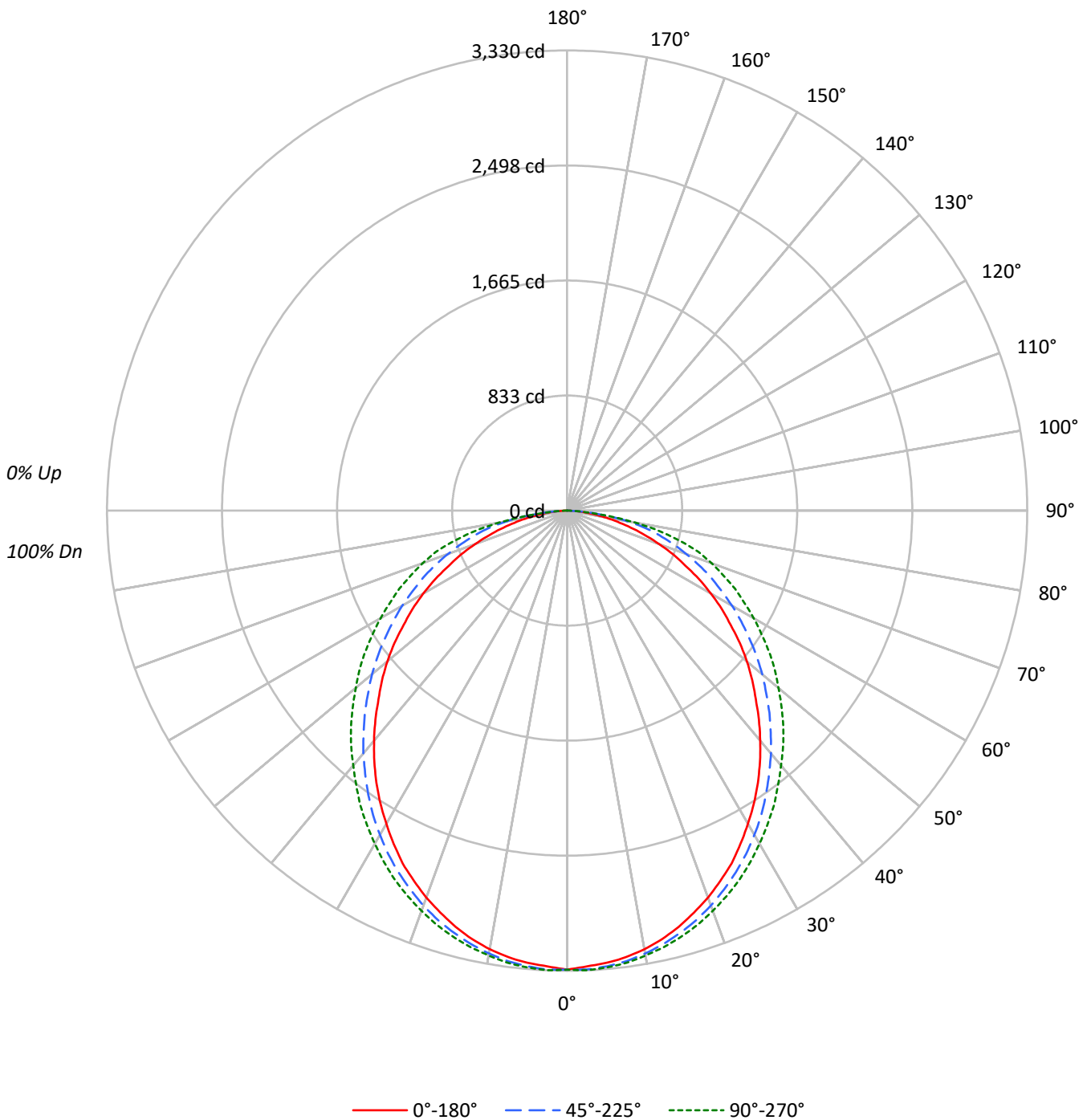
Lumens per Lamp: N/A
Luminaire Lumens: 9160.5 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.7
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°	8940	8940	8940
5°	8874	8942	8963
10°	8808	8892	8935
15°	8689	8813	8893
20°	8532	8709	8826
25°	8364	8576	8754
30°	8133	8422	8650
35°	7905	8242	8566
40°	7637	8059	8460
45°	7345	7876	8421
50°	7108	7716	8356
55°	6776	7548	8374
60°	6470	7418	8398
65°	6015	7322	8530
70°	5559	7220	8743
75°	4972	7185	8796
80°	4170	6811	7680
85°	3226	4662	4363



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.8	3.4
10°-20°	891.0	9.7
20°-30°	1328.5	14.5
30°-40°	1568.3	17.1
40°-50°	1598.4	17.4
50°-60°	1441.4	15.7
60°-70°	1132.9	12.4
70°-80°	709.3	7.7
80°-90°	176.9	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°	2533.3	27.7
0°-40°	4101.6	44.8
0°-60°	7141.3	78.0
0°-90°	9160.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9160.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3322	3322	3322	3322	3322	
5°	3285	3293	3310	3318	3318	312
15°	3119	3132	3163	3186	3192	879
25°	2817	2838	2888	2933	2948	1295
35°	2406	2437	2509	2579	2608	1504
45°	1930	1973	2070	2170	2213	1493
55°	1444	1489	1609	1733	1785	1296
65°	945	1003	1150	1278	1340	942
75°	478	550	691	815	846	508
85°	104	134	151	151	141	126
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3322.1	3322.1	3322.1	3322.1	3322.1
2.5°	3300.8	3308.5	3324.0	3329.8	3329.8
5°	3285.3	3293.0	3310.4	3318.2	3318.2
7.5°	3260.1	3267.8	3289.1	3298.8	3300.8
10°	3223.3	3233.0	3254.3	3269.8	3269.8
12.5°	3176.9	3186.5	3213.6	3233.0	3234.9
15°	3118.8	3132.3	3163.3	3186.5	3192.3
17.5°	3051.0	3072.3	3107.2	3136.2	3142.0
20°	2979.4	3000.7	3041.3	3074.3	3082.0
22.5°	2900.0	2919.4	2967.8	3008.4	3018.1
25°	2816.8	2838.1	2888.4	2932.9	2948.4
27.5°	2718.0	2743.2	2803.2	2853.6	2869.0
30°	2617.4	2648.3	2710.3	2766.4	2783.9
32.5°	2514.8	2543.8	2613.5	2673.5	2696.7
35°	2406.4	2437.3	2509.0	2578.7	2607.7
37.5°	2292.1	2323.1	2400.6	2479.9	2507.0
40°	2174.0	2210.8	2294.1	2379.3	2408.3
42.5°	2054.0	2092.7	2179.9	2274.7	2313.4
45°	1930.1	1972.7	2069.5	2170.2	2212.8
47.5°	1817.8	1852.7	1953.4	2063.7	2104.4
50°	1697.8	1730.7	1843.0	1953.4	1995.9
52.5°	1575.8	1606.8	1726.8	1843.0	1895.3
55°	1444.2	1488.7	1608.8	1732.7	1784.9
57.5°	1328.0	1368.7	1492.6	1618.4	1668.8
60°	1202.2	1244.8	1378.4	1506.2	1560.4
62.5°	1076.4	1122.8	1258.4	1395.8	1446.1
65°	944.7	1002.8	1149.9	1277.7	1339.7
67.5°	832.4	888.6	1033.8	1167.4	1221.6
70°	706.6	772.4	917.6	1053.1	1111.2
72.5°	588.5	654.3	803.4	938.9	997.0
75°	478.2	549.8	691.1	815.0	846.0
77.5°	371.7	439.5	580.8	652.4	685.3
80°	269.1	334.9	439.5	487.9	495.6
82.5°	182.0	238.1	298.1	311.7	303.9
85°	104.5	133.6	151.0	151.0	141.3
87.5°	42.6	42.6	36.8	23.2	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)