

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: P474307

Luminaire Tested: **24CZ2-165VHE-RDP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474307
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-165VHE-RDP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP
INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11287.7 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

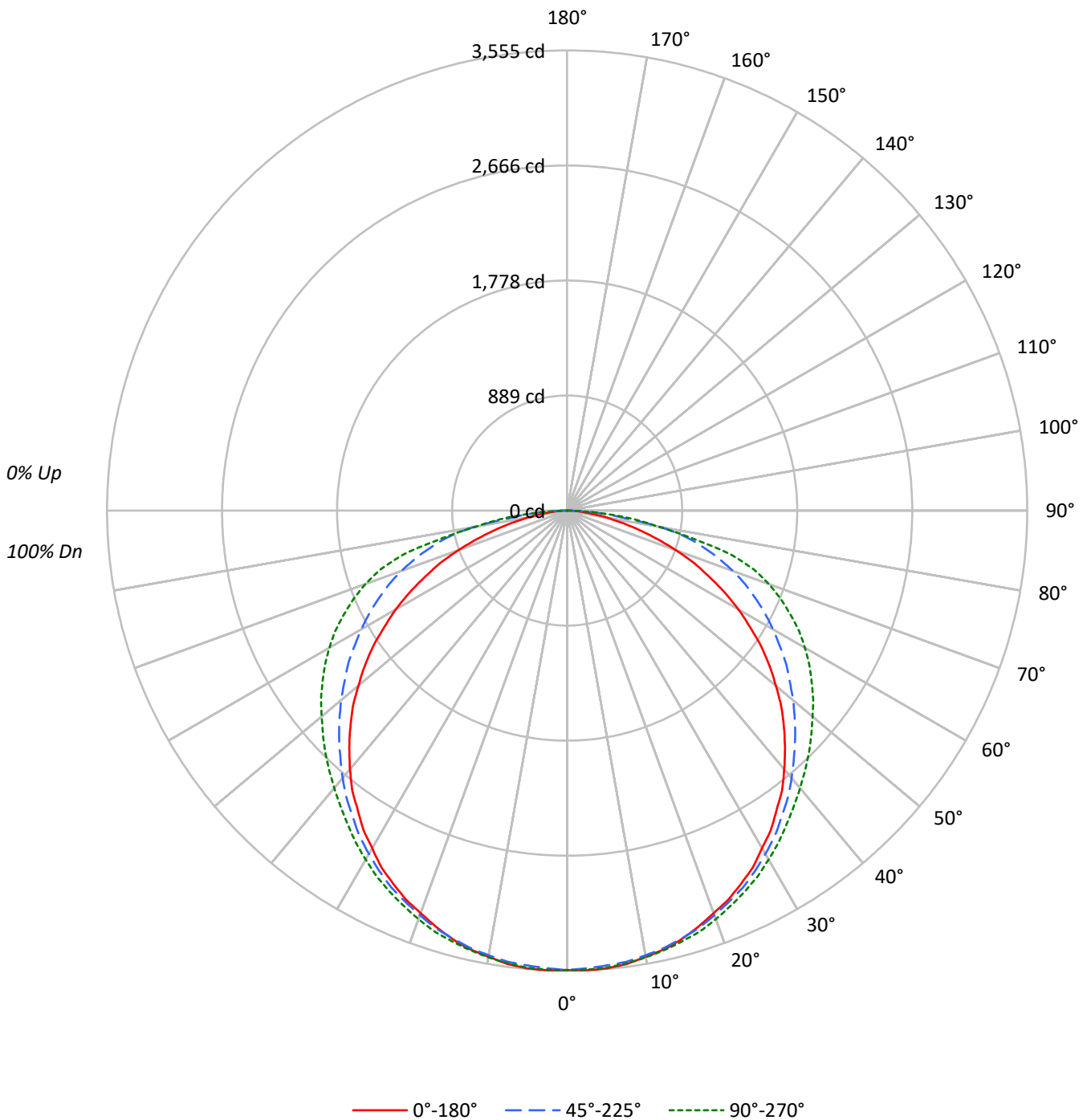
Input Watts (W): 122.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474307

CATALOG NUMBER: 24CZ2-165VHE-RDP-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474307

CATALOG NUMBER: 24CZ2-165VHE-RDP-UNV-L840-CD1-U

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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82					82			
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67					67			
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35					35			
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27					27			
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4776	4776	4776
5°	4794	4764	4787
10°	4781	4766	4789
15°	4773	4765	4796
20°	4738	4762	4810
25°	4721	4771	4821
30°	4680	4758	4836
35°	4635	4745	4856
40°	4583	4740	4917
45°	4507	4741	5028
50°	4406	4770	5180
55°	4294	4846	5411
60°	4114	4941	5710
65°	3850	5115	6060
70°	3502	5353	6519
75°	2967	5647	6812
80°	2344	5682	5508
85°	1729	4324	4843



TEST NUMBER: P474307

CATALOG NUMBER: 24CZ2-165VHE-RDP-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.7	3.0
10°-20°	969.1	8.6
20°-30°	1481.9	13.1
30°-40°	1811.5	16.0
40°-50°	1930.9	17.1
50°-60°	1846.1	16.4
60°-70°	1563.9	13.9
70°-80°	1051.0	9.3
80°-90°	296.6	2.6
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°	2787.8	24.7
0°-40°	4599.3	40.7
0°-60°	8376.2	74.2
0°-90°	11287.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11287.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3550	3550	3550	3550	3550	
5°	3550	3544	3527	3544	3544	337
15°	3427	3427	3421	3449	3443	966
25°	3180	3191	3214	3242	3247	1466
35°	2822	2844	2889	2945	2956	1768
45°	2368	2408	2492	2598	2642	1827
55°	1831	1898	2066	2228	2307	1631
65°	1209	1333	1607	1820	1904	1201
75°	571	778	1086	1271	1310	611
85°	112	230	280	302	314	139
90°	0	0	0	0	0	



TEST NUMBER: P474307

CATALOG NUMBER: 24CZ2-165VHE-RDP-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3549.8	3549.8	3549.8	3549.8	3549.8
2.5°	3555.4	3555.4	3538.6	3549.8	3549.8
5°	3549.8	3544.2	3527.4	3544.2	3544.2
7.5°	3533.0	3527.4	3516.2	3533.0	3527.4
10°	3499.4	3499.4	3488.2	3505.0	3505.0
12.5°	3471.4	3465.8	3460.2	3482.6	3477.0
15°	3426.6	3426.6	3421.0	3449.0	3443.4
17.5°	3370.6	3376.2	3381.8	3404.2	3409.8
20°	3309.0	3320.2	3325.8	3359.4	3359.4
22.5°	3253.0	3258.6	3269.8	3303.4	3303.4
25°	3180.1	3191.3	3213.7	3241.7	3247.3
27.5°	3107.3	3112.9	3140.9	3180.1	3185.7
30°	3012.1	3028.9	3062.5	3107.3	3112.9
32.5°	2928.0	2944.9	2984.1	3028.9	3040.1
35°	2821.6	2844.0	2888.8	2944.9	2956.1
37.5°	2726.4	2743.2	2799.2	2860.8	2877.6
40°	2609.3	2642.4	2698.4	2771.2	2799.2
42.5°	2491.7	2525.3	2592.5	2687.2	2720.8
45°	2368.4	2407.6	2491.7	2598.1	2642.4
47.5°	2245.2	2290.0	2385.2	2508.5	2558.9
50°	2105.1	2161.2	2278.8	2418.8	2474.9
52.5°	1970.7	2037.9	2166.8	2323.6	2396.4
55°	1830.7	1897.9	2065.9	2228.4	2306.8
57.5°	1673.8	1763.4	1948.3	2133.2	2217.2
60°	1528.7	1612.2	1836.3	2037.9	2122.0
62.5°	1371.9	1483.9	1724.2	1937.1	2021.1
65°	1209.4	1332.7	1606.6	1819.5	1903.5
67.5°	1063.8	1198.2	1489.5	1701.8	1785.8
70°	890.1	1058.2	1360.7	1573.0	1657.0
72.5°	727.7	912.5	1226.2	1433.5	1511.9
75°	570.8	778.1	1086.2	1271.0	1310.3
77.5°	425.7	643.6	940.5	1019.0	991.0
80°	302.5	515.4	733.3	694.1	710.9
82.5°	196.1	392.1	453.7	515.4	531.6
85°	112.0	229.7	280.1	302.5	313.7
87.5°	50.4	84.0	112.0	112.0	106.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)