

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: P388637

Luminaire Tested: **24CZ2-120VHE-UNV-L940-CD2-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P388637
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-UNV-L940-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10431.0 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

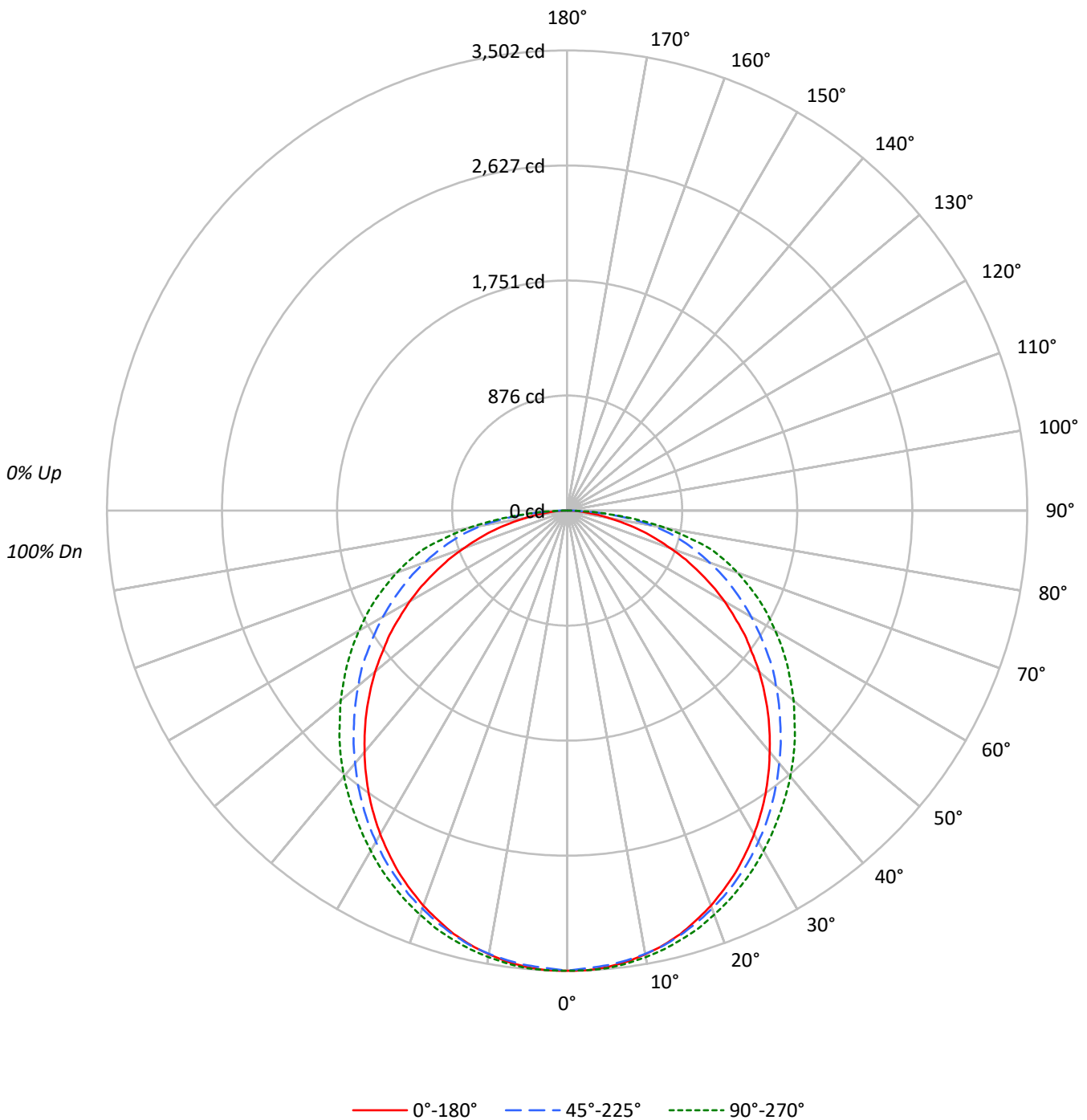
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89		92	89	87		89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	44	38		49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34		46	39	34		45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27		39	32	27		38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25		36	29	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4712	4712	4712
5°	4711	4692	4721
10°	4685	4680	4714
15°	4646	4655	4704
20°	4581	4616	4686
25°	4507	4574	4667
30°	4419	4522	4646
35°	4323	4466	4632
40°	4213	4409	4641
45°	4107	4365	4663
50°	3993	4343	4707
55°	3871	4336	4794
60°	3719	4356	4918
65°	3524	4422	5131
70°	3273	4533	5423
75°	2986	4760	5882
80°	2455	5125	5880
85°	1880	4730	5051



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	331.2	3.2
10°-20°	945.6	9.1
20°-30°	1423.0	13.6
30°-40°	1705.3	16.3
40°-50°	1777.1	17.0
50°-60°	1653.4	15.9
60°-70°	1361.8	13.1
70°-80°	927.4	8.9
80°-90°	306.2	2.9
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°	2699.8	25.9
0°-40°	4405.1	42.2
0°-60°	7835.6	75.1
0°-90°	10431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10431.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3502	3502	3502	3502	3502	
5°	3488	3488	3474	3492	3495	331
15°	3335	3339	3342	3373	3377	940
25°	3036	3050	3081	3133	3144	1397
35°	2632	2663	2719	2792	2820	1645
45°	2158	2204	2294	2409	2451	1665
55°	1650	1706	1849	1995	2044	1471
65°	1107	1201	1389	1553	1612	1099
75°	574	703	916	1079	1131	606
85°	122	237	306	327	327	151
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3502.2	3502.2	3502.2	3502.2	3502.2
2.5°	3502.2	3502.2	3484.8	3502.2	3502.2
5°	3488.2	3488.2	3474.3	3491.7	3495.2
7.5°	3463.9	3467.4	3453.4	3474.3	3477.8
10°	3429.1	3432.5	3425.6	3446.5	3450.0
12.5°	3387.3	3390.8	3390.8	3415.1	3418.6
15°	3335.1	3338.6	3342.0	3373.4	3376.8
17.5°	3268.9	3279.4	3286.3	3324.6	3331.6
20°	3199.3	3209.7	3223.7	3265.4	3272.4
22.5°	3119.2	3133.2	3157.5	3202.8	3213.2
25°	3035.7	3049.6	3080.9	3133.2	3143.6
27.5°	2941.7	2962.6	3000.9	3056.6	3070.5
30°	2844.2	2865.1	2910.4	2969.5	2990.4
32.5°	2739.8	2767.6	2819.8	2886.0	2906.9
35°	2631.9	2663.2	2718.9	2792.0	2819.8
37.5°	2517.0	2551.8	2617.9	2698.0	2732.8
40°	2398.6	2440.4	2510.0	2604.0	2642.3
42.5°	2280.2	2318.5	2405.6	2506.5	2548.3
45°	2158.4	2203.7	2294.2	2409.0	2450.8
47.5°	2033.1	2078.3	2186.2	2308.1	2346.4
50°	1907.7	1953.0	2074.8	2203.7	2248.9
52.5°	1772.0	1831.2	1970.4	2099.2	2144.5
55°	1650.1	1705.8	1848.6	1994.8	2043.5
57.5°	1510.9	1577.0	1733.7	1886.9	1939.1
60°	1382.1	1451.7	1618.8	1775.5	1827.7
62.5°	1249.8	1326.4	1503.9	1664.1	1723.2
65°	1107.0	1201.0	1389.0	1552.7	1611.8
67.5°	978.2	1075.7	1274.1	1441.3	1493.5
70°	832.0	950.4	1152.3	1319.4	1378.6
72.5°	706.7	825.1	1037.4	1201.0	1260.2
75°	574.4	703.2	915.6	1079.2	1131.4
77.5°	442.1	584.9	797.2	922.5	939.9
80°	316.8	466.5	661.4	734.6	758.9
82.5°	222.8	358.6	487.4	536.1	550.0
85°	121.8	236.7	306.4	327.2	327.2
87.5°	52.2	101.0	121.8	125.3	128.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)