

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: P388636

Luminaire Tested: **24CZ2-120VHE-UNV-L940-CD2-SWPD1-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: P388636  
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-SWPD1-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: 10301.6 lumens  
Efficiency: N/A  
Efficacy: 123.2 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

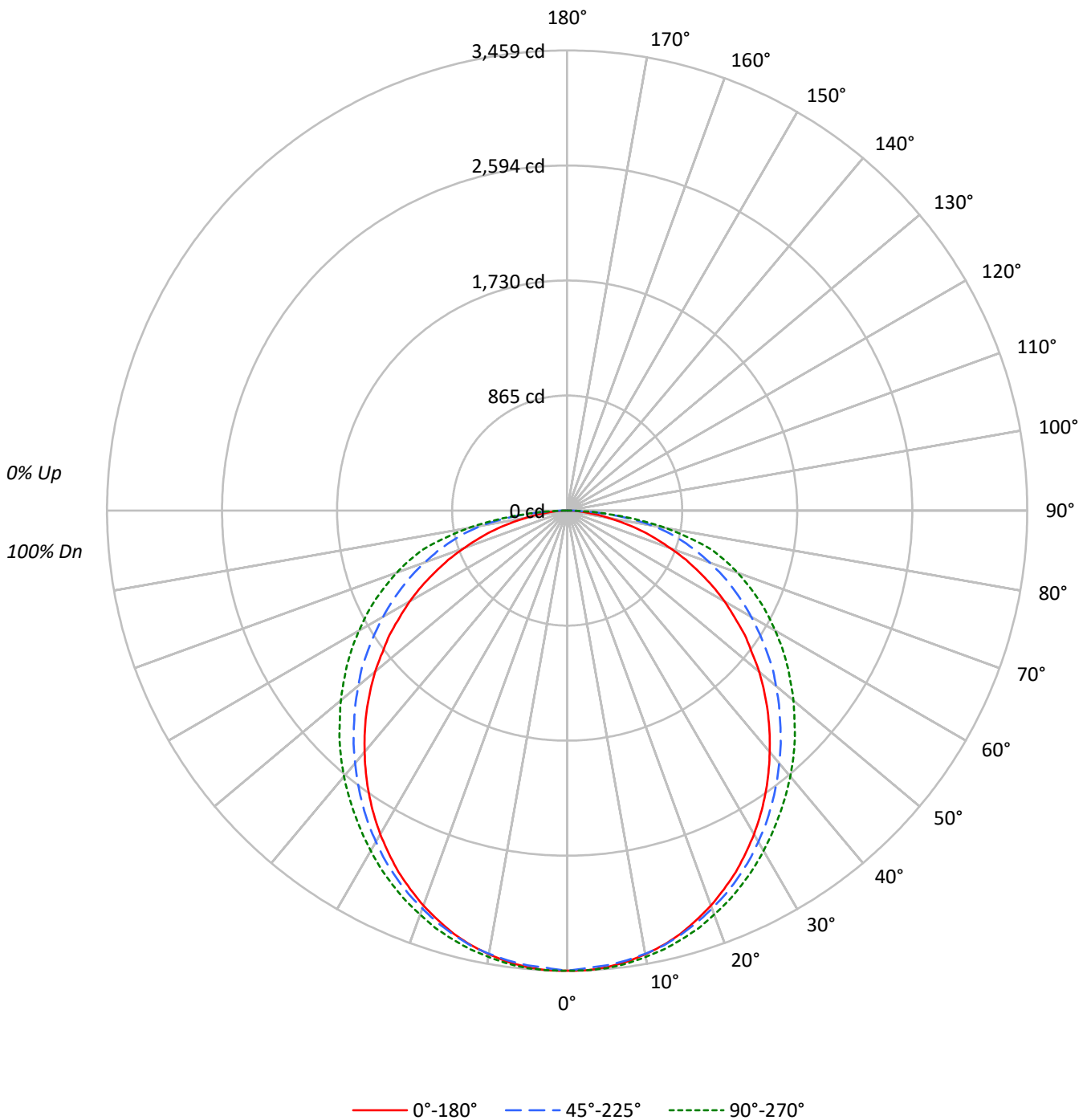
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4654	4654	4654
5°	4653	4634	4662
10°	4627	4622	4655
15°	4588	4598	4645
20°	4524	4559	4627
25°	4451	4517	4609
30°	4364	4465	4588
35°	4269	4411	4574
40°	4161	4354	4583
45°	4056	4311	4606
50°	3944	4289	4649
55°	3823	4282	4734
60°	3673	4302	4857
65°	3481	4367	5068
70°	3233	4477	5356
75°	2949	4701	5809
80°	2424	5061	5807
85°	1857	4671	4989



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	327.1	3.2
10°-20°	933.9	9.1
20°-30°	1405.3	13.6
30°-40°	1684.1	16.3
40°-50°	1755.1	17.0
50°-60°	1632.9	15.9
60°-70°	1344.9	13.1
70°-80°	915.9	8.9
80°-90°	302.4	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°	2666.3	25.9
0°-40°	4350.5	42.2
0°-60°	7738.4	75.1
0°-90°	10301.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10301.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3459	3459	3459	3459	3459	
5°	3445	3445	3431	3448	3452	327
15°	3294	3297	3301	3332	3335	928
25°	2998	3012	3043	3094	3105	1380
35°	2599	2630	2685	2757	2785	1625
45°	2132	2176	2266	2379	2420	1644
55°	1630	1685	1826	1970	2018	1453
65°	1093	1186	1372	1533	1592	1085
75°	567	694	904	1066	1117	598
85°	120	234	303	323	323	149
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3458.7	3458.7	3458.7	3458.7	3458.7
2.5°	3458.7	3458.7	3441.5	3458.7	3458.7
5°	3445.0	3445.0	3431.2	3448.4	3451.9
7.5°	3420.9	3424.3	3410.6	3431.2	3434.7
10°	3386.5	3390.0	3383.1	3403.7	3407.2
12.5°	3345.3	3348.7	3348.7	3372.8	3376.2
15°	3293.7	3297.1	3300.6	3331.5	3335.0
17.5°	3228.4	3238.7	3245.6	3283.4	3290.3
20°	3159.6	3169.9	3183.7	3224.9	3231.8
22.5°	3080.5	3094.3	3118.4	3163.0	3173.4
25°	2998.0	3011.8	3042.7	3094.3	3104.6
27.5°	2905.2	2925.8	2963.6	3018.6	3032.4
30°	2808.9	2829.6	2874.2	2932.7	2953.3
32.5°	2705.8	2733.3	2784.9	2850.2	2870.8
35°	2599.2	2630.1	2685.2	2757.4	2784.9
37.5°	2485.7	2520.1	2585.4	2664.5	2698.9
40°	2368.8	2410.1	2478.9	2571.7	2609.5
42.5°	2252.0	2289.8	2375.7	2475.4	2516.7
45°	2131.6	2176.3	2265.7	2379.2	2420.4
47.5°	2007.8	2052.5	2159.1	2279.5	2317.3
50°	1884.1	1928.8	2049.1	2176.3	2221.0
52.5°	1750.0	1808.4	1946.0	2073.2	2117.9
55°	1629.7	1684.7	1825.6	1970.0	2018.2
57.5°	1492.1	1557.5	1712.2	1863.4	1915.0
60°	1364.9	1433.7	1598.7	1753.4	1805.0
62.5°	1234.3	1309.9	1485.3	1643.4	1701.9
65°	1093.3	1186.1	1371.8	1533.4	1591.8
67.5°	966.1	1062.4	1258.3	1423.4	1474.9
70°	821.7	938.6	1138.0	1303.0	1361.5
72.5°	697.9	814.8	1024.6	1186.1	1244.6
75°	567.3	694.5	904.2	1065.8	1117.4
77.5°	436.6	577.6	787.3	911.1	928.3
80°	312.9	460.7	653.2	725.4	749.5
82.5°	220.0	354.1	481.3	529.5	543.2
85°	120.3	233.8	302.6	323.2	323.2
87.5°	51.6	99.7	120.3	123.8	127.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)