

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: P388350

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L940-CD2-SDWPD1-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: P388350
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-SQR-UNV-L940-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9774.1 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

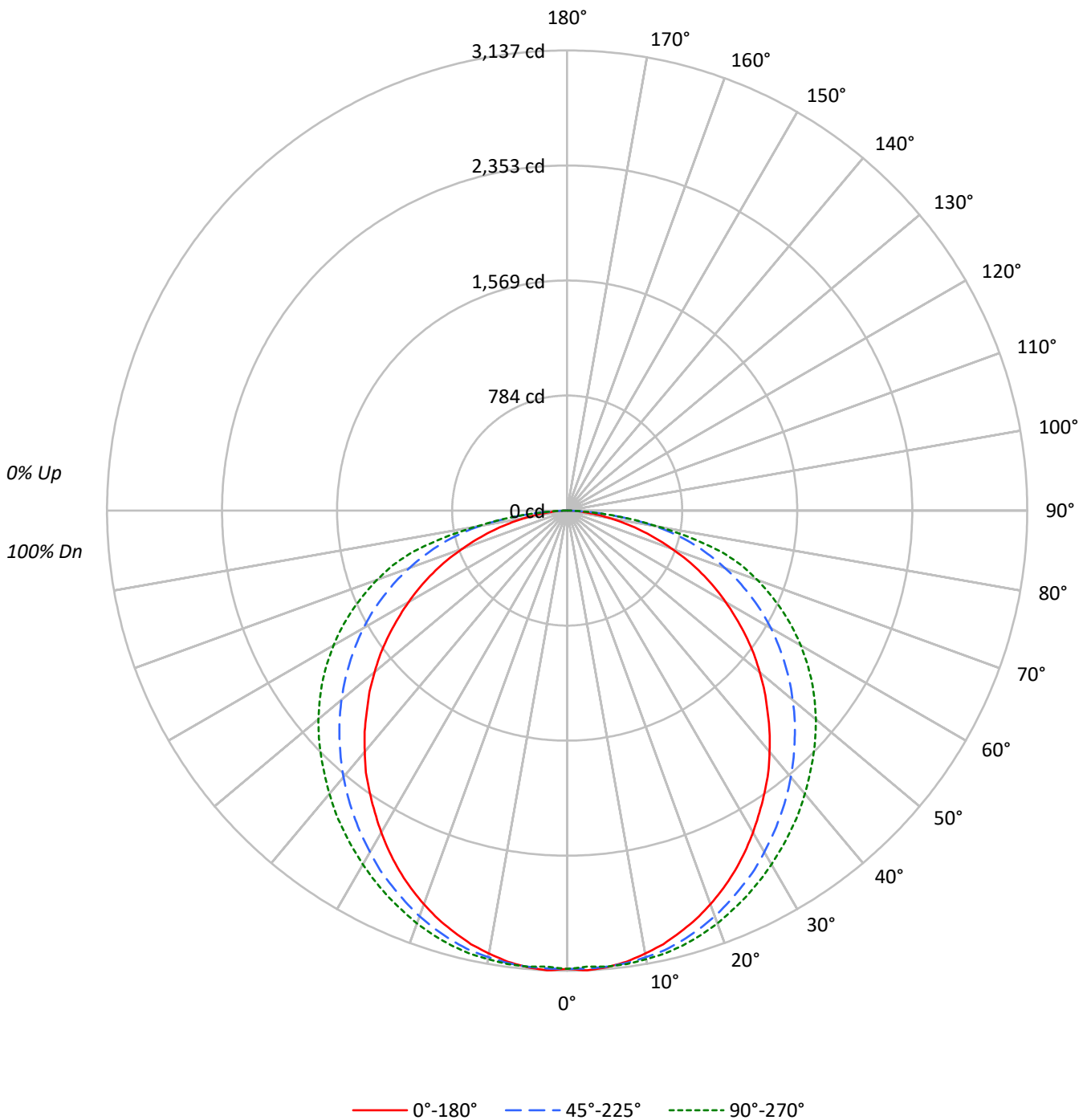
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4204	4204	4204
5°	4220	4215	4215
10°	4189	4224	4242
15°	4145	4226	4271
20°	4090	4215	4289
25°	4020	4193	4303
30°	3936	4177	4328
35°	3854	4167	4368
40°	3770	4167	4427
45°	3673	4176	4514
50°	3587	4202	4635
55°	3483	4248	4777
60°	3361	4317	4951
65°	3216	4398	5158
70°	2984	4508	5422
75°	2701	4665	5671
80°	2276	4677	4877
85°	1744	3538	3538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.6	3.0
10°-20°	853.3	8.7
20°-30°	1296.0	13.3
30°-40°	1576.4	16.1
40°-50°	1678.4	17.2
50°-60°	1598.6	16.4
60°-70°	1336.9	13.7
70°-80°	891.3	9.1
80°-90°	246.6	2.5
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°	2445.8	25.0
0°-40°	4022.3	41.2
0°-60°	7299.3	74.7
0°-90°	9774.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9774.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3124	3124	3124	3124	3124	
5°	3124	3105	3121	3121	3121	296
15°	2976	2982	3034	3056	3066	839
25°	2708	2743	2824	2872	2898	1247
35°	2346	2414	2537	2621	2660	1468
45°	1930	2033	2195	2317	2372	1492
55°	1485	1614	1811	1969	2037	1327
65°	1010	1159	1381	1552	1620	998
75°	520	684	897	1049	1091	550
85°	113	210	229	226	229	137
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3124.3	3124.3	3124.3	3124.3	3124.3
2.5°	3137.2	3114.6	3124.3	3124.3	3111.4
5°	3124.3	3104.9	3121.1	3121.1	3121.1
7.5°	3101.7	3085.5	3111.4	3117.8	3117.8
10°	3066.2	3059.7	3092.0	3101.7	3104.9
12.5°	3027.5	3024.2	3069.4	3082.3	3092.0
15°	2975.8	2982.3	3033.9	3056.5	3066.2
17.5°	2920.9	2933.9	2991.9	3024.2	3033.9
20°	2856.4	2875.8	2943.5	2975.8	2995.2
22.5°	2785.4	2814.4	2885.4	2924.2	2946.8
25°	2707.9	2743.4	2824.1	2872.5	2898.3
27.5°	2624.0	2669.2	2762.8	2817.7	2843.5
30°	2533.6	2585.3	2688.6	2753.1	2785.4
32.5°	2440.0	2501.4	2614.3	2685.3	2724.1
35°	2346.4	2414.2	2536.9	2620.8	2659.5
37.5°	2252.8	2320.6	2456.2	2546.5	2595.0
40°	2146.3	2227.0	2372.3	2472.3	2520.7
42.5°	2043.0	2130.2	2285.1	2394.8	2446.5
45°	1930.1	2033.4	2194.7	2317.4	2372.3
47.5°	1826.8	1930.1	2104.4	2233.5	2294.8
50°	1713.8	1823.6	2007.5	2149.6	2214.1
52.5°	1604.1	1717.1	1910.7	2062.4	2127.0
55°	1484.7	1613.8	1810.7	1968.8	2036.6
57.5°	1365.3	1504.0	1707.4	1872.0	1939.8
60°	1249.1	1391.1	1604.1	1768.7	1839.7
62.5°	1132.9	1274.9	1497.6	1665.4	1733.2
65°	1010.2	1158.7	1381.4	1552.5	1620.2
67.5°	887.6	1042.5	1265.2	1436.3	1500.8
70°	758.5	923.1	1145.8	1313.6	1378.2
72.5°	639.1	803.7	1023.1	1187.7	1249.1
75°	519.6	684.2	897.3	1049.0	1090.9
77.5°	403.4	568.1	758.5	858.5	868.2
80°	293.7	448.6	603.6	632.6	629.4
82.5°	196.9	335.7	416.4	419.6	429.3
85°	113.0	209.8	229.2	225.9	229.2
87.5°	45.2	74.2	64.6	48.4	48.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)