

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: P390005

Luminaire Tested: **24CZ2-95VHE-S-UNV-L940-CD1-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: P390005  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-95VHE-S-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8545.7 lumens  
Efficiency: N/A  
Efficacy: 130.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

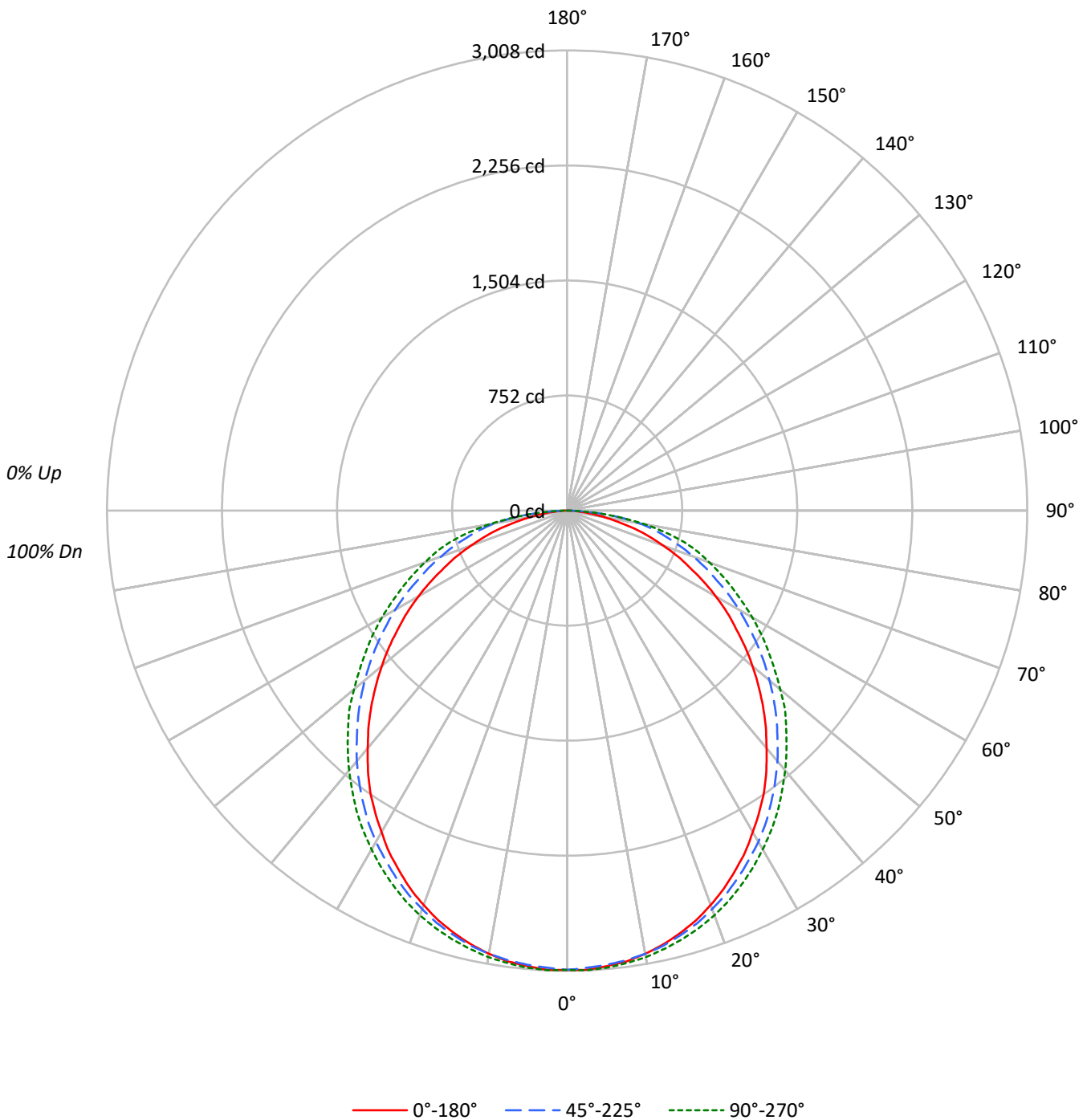
Input Watts (W): 65.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4039	4039	4039
5°	4036	4025	4051
10°	4020	4020	4050
15°	3981	4000	4042
20°	3929	3968	4030
25°	3857	3929	4006
30°	3770	3884	3973
35°	3687	3821	3941
40°	3561	3757	3895
45°	3445	3683	3853
50°	3313	3614	3807
55°	3165	3547	3769
60°	3017	3492	3762
65°	2826	3431	3785
70°	2616	3449	3887
75°	2342	3514	4106
80°	1893	3723	4018
85°	1425	3268	3185



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	284.2	3.3
10°-20°	812.1	9.5
20°-30°	1220.8	14.3
30°-40°	1454.2	17.0
40°-50°	1488.3	17.4
50°-60°	1339.9	15.7
60°-70°	1052.2	12.3
70°-80°	682.9	8.0
80°-90°	211.2	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°	2317.1	27.1
0°-40°	3771.3	44.1
0°-60°	6599.4	77.2
0°-90°	8545.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8545.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3002	3002	3002	3002	3002	
5°	2989	2994	2980	2997	2999	284
15°	2858	2866	2872	2896	2902	806
25°	2598	2619	2647	2690	2698	1197
35°	2245	2272	2326	2383	2400	1400
45°	1810	1854	1935	2009	2025	1396
55°	1349	1409	1512	1591	1607	1209
65°	888	956	1078	1167	1189	884
75°	451	538	676	768	790	477
85°	92	171	212	206	206	111
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3002.2	3002.2	3002.2	3002.2	3002.2
2.5°	3004.9	3004.9	2991.3	3004.9	3007.6
5°	2988.6	2994.0	2980.4	2996.7	2999.4
7.5°	2972.3	2972.3	2964.2	2980.4	2983.2
10°	2942.4	2945.2	2942.4	2961.4	2964.2
12.5°	2904.4	2909.9	2912.6	2931.6	2934.3
15°	2858.3	2866.4	2871.9	2896.3	2901.7
17.5°	2806.7	2814.9	2828.4	2855.6	2861.0
20°	2744.3	2755.1	2771.4	2806.7	2814.9
22.5°	2676.4	2687.3	2714.4	2747.0	2760.6
25°	2597.7	2619.4	2646.6	2690.0	2698.1
27.5°	2519.0	2538.0	2573.3	2619.4	2630.3
30°	2426.7	2456.6	2500.0	2546.1	2557.0
32.5°	2337.1	2367.0	2418.6	2467.4	2481.0
35°	2244.8	2272.0	2326.3	2383.3	2399.6
37.5°	2139.0	2174.3	2234.0	2291.0	2307.3
40°	2027.7	2071.1	2139.0	2198.7	2217.7
42.5°	1921.8	1968.0	2035.8	2101.0	2122.7
45°	1810.5	1854.0	1935.4	2008.7	2025.0
47.5°	1696.5	1745.4	1832.2	1905.5	1932.7
50°	1582.5	1634.1	1726.4	1802.4	1818.7
52.5°	1468.5	1522.8	1620.5	1701.9	1710.1
55°	1349.1	1408.8	1511.9	1590.7	1606.9
57.5°	1240.5	1292.1	1403.4	1484.8	1503.8
60°	1121.1	1178.1	1297.5	1373.5	1397.9
62.5°	1007.1	1066.8	1191.6	1267.6	1289.4
65°	887.6	955.5	1077.6	1167.2	1188.9
67.5°	784.5	849.6	979.9	1066.8	1088.5
70°	665.0	738.3	876.8	966.3	988.1
72.5°	561.9	637.9	776.3	863.2	895.8
75°	450.6	537.5	675.9	768.2	789.9
77.5°	342.0	442.5	583.6	654.2	654.2
80°	244.3	350.2	480.5	513.0	518.5
82.5°	160.2	263.3	355.6	352.9	352.9
85°	92.3	171.0	211.7	206.3	206.3
87.5°	35.3	70.6	76.0	76.0	73.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)