

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: P389953

Luminaire Tested: **24CZ2-85VHE-S-UNV-L935-CD1-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: P389953  
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: 24CZ2-85VHE-S-UNV-L935-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7545.2 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

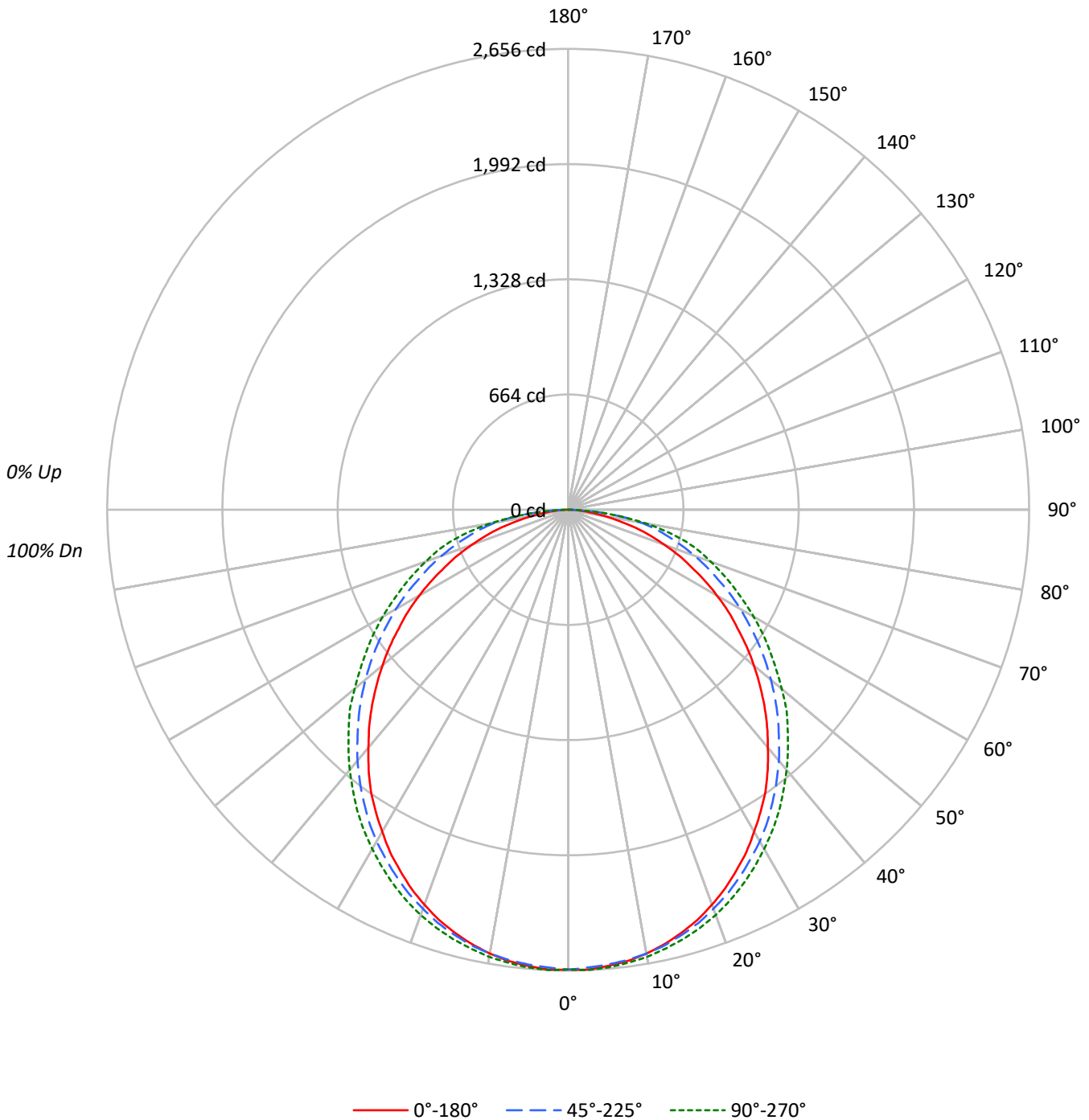
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3566	3566	3566
5°	3564	3554	3577
10°	3550	3550	3576
15°	3515	3532	3569
20°	3469	3504	3559
25°	3405	3469	3537
30°	3329	3429	3507
35°	3256	3374	3480
40°	3145	3317	3439
45°	3042	3252	3402
50°	2925	3191	3361
55°	2794	3131	3328
60°	2664	3083	3321
65°	2495	3029	3342
70°	2310	3045	3432
75°	2068	3103	3625
80°	1671	3287	3547
85°	1258	2885	2811



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	250.9	3.3
10°-20°	717.0	9.5
20°-30°	1077.9	14.3
30°-40°	1283.9	17.0
40°-50°	1314.0	17.4
50°-60°	1183.0	15.7
60°-70°	929.0	12.3
70°-80°	603.0	8.0
80°-90°	186.5	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°	2045.8	27.1
0°-40°	3329.7	44.1
0°-60°	5826.7	77.2
0°-90°	7545.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7545.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2651	2651	2651	2651	2651	
5°	2639	2644	2632	2646	2648	251
15°	2524	2531	2536	2557	2562	712
25°	2294	2313	2337	2375	2382	1057
35°	1982	2006	2054	2104	2119	1236
45°	1599	1637	1709	1774	1788	1232
55°	1191	1244	1335	1404	1419	1068
65°	784	844	952	1031	1050	780
75°	398	474	597	678	697	421
85°	82	151	187	182	182	98
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2650.7	2650.7	2650.7	2650.7	2650.7
2.5°	2653.1	2653.1	2641.1	2653.1	2655.5
5°	2638.7	2643.5	2631.5	2645.9	2648.3
7.5°	2624.3	2624.3	2617.1	2631.5	2633.9
10°	2598.0	2600.3	2598.0	2614.7	2617.1
12.5°	2564.4	2569.2	2571.6	2588.4	2590.8
15°	2523.7	2530.8	2535.6	2557.2	2562.0
17.5°	2478.1	2485.3	2497.3	2521.3	2526.1
20°	2423.0	2432.6	2447.0	2478.1	2485.3
22.5°	2363.1	2372.7	2396.6	2425.4	2437.4
25°	2293.6	2312.8	2336.7	2375.1	2382.3
27.5°	2224.1	2240.9	2272.0	2312.8	2322.3
30°	2142.6	2169.0	2207.3	2248.0	2257.6
32.5°	2063.5	2089.9	2135.4	2178.5	2190.5
35°	1982.0	2006.0	2053.9	2104.2	2118.6
37.5°	1888.5	1919.7	1972.4	2022.8	2037.1
40°	1790.3	1828.6	1888.5	1941.3	1958.1
42.5°	1696.8	1737.6	1797.5	1855.0	1874.2
45°	1598.6	1636.9	1708.8	1773.5	1787.9
47.5°	1497.9	1541.0	1617.7	1682.4	1706.4
50°	1397.2	1442.8	1524.3	1591.4	1605.7
52.5°	1296.6	1344.5	1430.8	1502.7	1509.9
55°	1191.1	1243.9	1334.9	1404.4	1418.8
57.5°	1095.3	1140.8	1239.1	1311.0	1327.7
60°	989.8	1040.1	1145.6	1212.7	1234.3
62.5°	889.2	941.9	1052.1	1119.2	1138.4
65°	783.7	843.6	951.5	1030.6	1049.7
67.5°	692.6	750.1	865.2	941.9	961.1
70°	587.2	651.9	774.1	853.2	872.4
72.5°	496.1	563.2	685.4	762.1	790.9
75°	397.8	474.5	596.8	678.2	697.4
77.5°	302.0	390.7	515.3	577.6	577.6
80°	215.7	309.2	424.2	453.0	457.8
82.5°	141.4	232.5	314.0	311.6	311.6
85°	81.5	151.0	186.9	182.1	182.1
87.5°	31.2	62.3	67.1	67.1	64.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)