

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: P390894

Luminaire Tested: **24CZ2-100VHE-HRP-UNV-L950-CD1-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: P390894  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-HRP-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

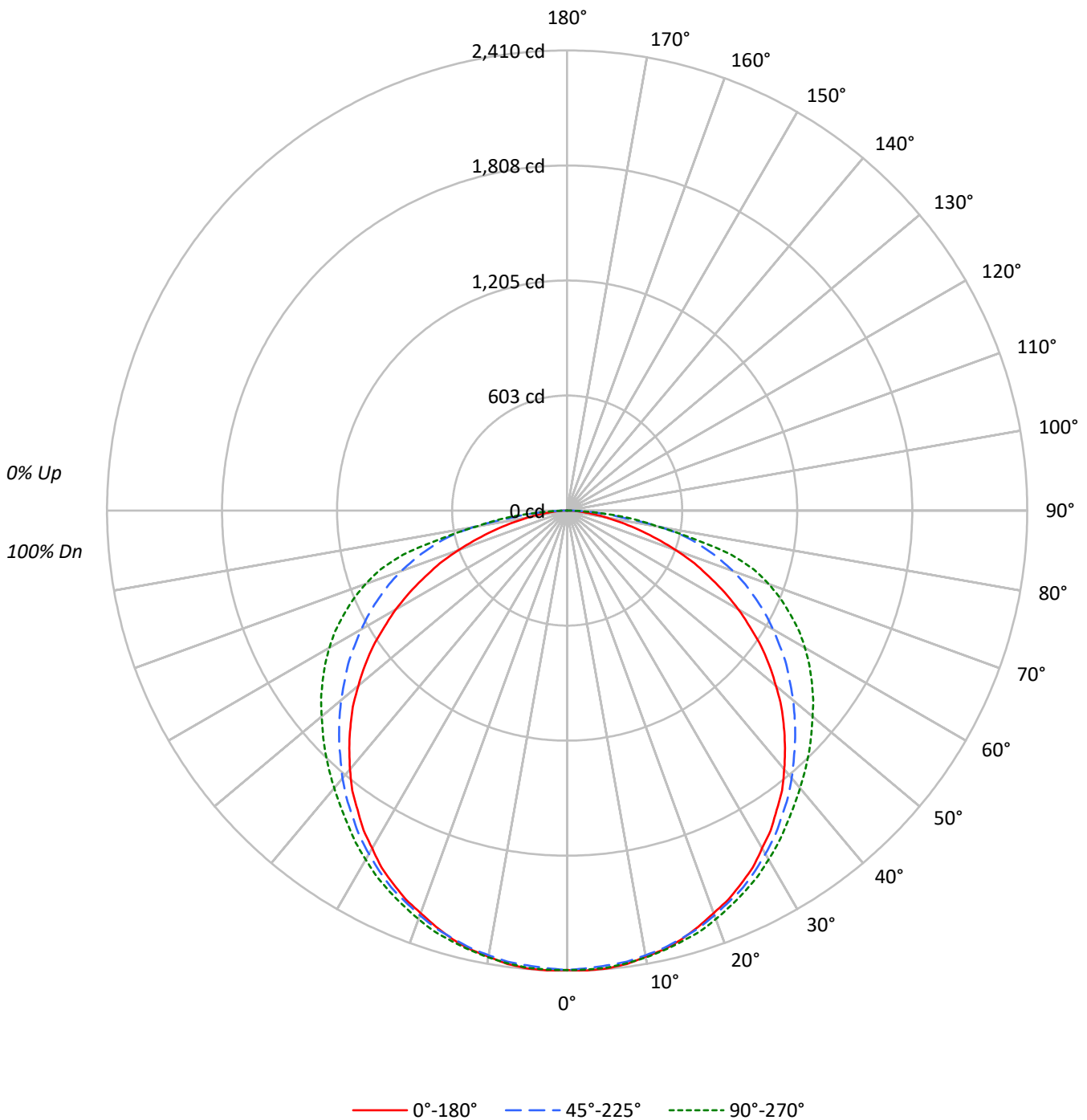
Lumens per Lamp: N/A  
Luminaire Lumens: 7652.7 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82					82			
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67					67			
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35					35			
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27					27			
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

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

	0°	45°	90°
0°	3238	3238	3238
5°	3250	3230	3245
10°	3241	3231	3246
15°	3236	3231	3252
20°	3212	3228	3261
25°	3201	3235	3268
30°	3173	3226	3279
35°	3142	3217	3292
40°	3107	3214	3333
45°	3055	3214	3409
50°	2987	3234	3512
55°	2912	3286	3669
60°	2789	3350	3871
65°	2610	3468	4109
70°	2374	3629	4420
75°	2013	3828	4617
80°	1588	3853	3735
85°	1172	2930	3282



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.3	3.0
10°-20°	657.0	8.6
20°-30°	1004.7	13.1
30°-40°	1228.2	16.0
40°-50°	1309.0	17.1
50°-60°	1251.6	16.4
60°-70°	1060.3	13.9
70°-80°	712.6	9.3
80°-90°	201.0	2.6
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°	1890.0	24.7
0°-40°	3118.2	40.7
0°-60°	5678.8	74.2
0°-90°	7652.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7652.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2407	2407	2407	2407	2407	
5°	2407	2403	2391	2403	2403	229
15°	2323	2323	2319	2338	2334	655
25°	2156	2164	2179	2198	2202	994
35°	1913	1928	1959	1997	2004	1198
45°	1606	1632	1689	1761	1792	1238
55°	1241	1287	1401	1511	1564	1106
65°	820	903	1089	1234	1291	814
75°	387	528	736	862	888	415
85°	76	156	190	205	213	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2406.6	2406.6	2406.6	2406.6	2406.6
2.5°	2410.4	2410.4	2399.0	2406.6	2406.6
5°	2406.6	2402.8	2391.4	2402.8	2402.8
7.5°	2395.2	2391.4	2383.8	2395.2	2391.4
10°	2372.4	2372.4	2364.8	2376.2	2376.2
12.5°	2353.4	2349.6	2345.8	2361.0	2357.2
15°	2323.0	2323.0	2319.3	2338.2	2334.4
17.5°	2285.1	2288.9	2292.7	2307.9	2311.7
20°	2243.3	2250.9	2254.7	2277.5	2277.5
22.5°	2205.4	2209.2	2216.8	2239.5	2239.5
25°	2156.0	2163.6	2178.8	2197.8	2201.6
27.5°	2106.7	2110.5	2129.5	2156.0	2159.8
30°	2042.2	2053.5	2076.3	2106.7	2110.5
32.5°	1985.2	1996.6	2023.2	2053.5	2061.1
35°	1913.1	1928.3	1958.6	1996.6	2004.2
37.5°	1848.6	1860.0	1897.9	1939.7	1951.1
40°	1768.9	1791.6	1829.6	1878.9	1897.9
42.5°	1689.1	1711.9	1757.5	1822.0	1844.8
45°	1605.6	1632.2	1689.1	1761.3	1791.6
47.5°	1522.1	1552.5	1617.0	1700.5	1734.7
50°	1427.2	1465.2	1544.9	1639.8	1677.8
52.5°	1336.1	1381.7	1469.0	1575.3	1624.6
55°	1241.2	1286.8	1400.7	1510.7	1563.9
57.5°	1135.0	1195.7	1320.9	1446.2	1503.1
60°	1036.3	1093.2	1245.0	1381.7	1438.6
62.5°	930.0	1005.9	1169.1	1313.4	1370.3
65°	819.9	903.4	1089.4	1233.6	1290.6
67.5°	721.2	812.3	1009.7	1153.9	1210.9
70°	603.5	717.4	922.4	1066.6	1123.6
72.5°	493.5	618.7	831.3	971.7	1024.9
75°	387.2	527.6	736.4	861.7	888.2
77.5°	288.5	436.5	637.7	690.8	671.9
80°	205.0	349.2	497.3	470.7	482.1
82.5°	132.9	265.7	307.5	349.2	360.6
85°	75.9	155.6	189.8	205.0	212.6
87.5°	34.2	56.9	75.9	75.9	72.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)