

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: P391084

Luminaire Tested: **24CZ2-150VHE-HRP-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: P391084  
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: 24CZ2-150VHE-HRP-UNV-L940-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10745.8 lumens  
Efficiency: N/A  
Efficacy: 103.1 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

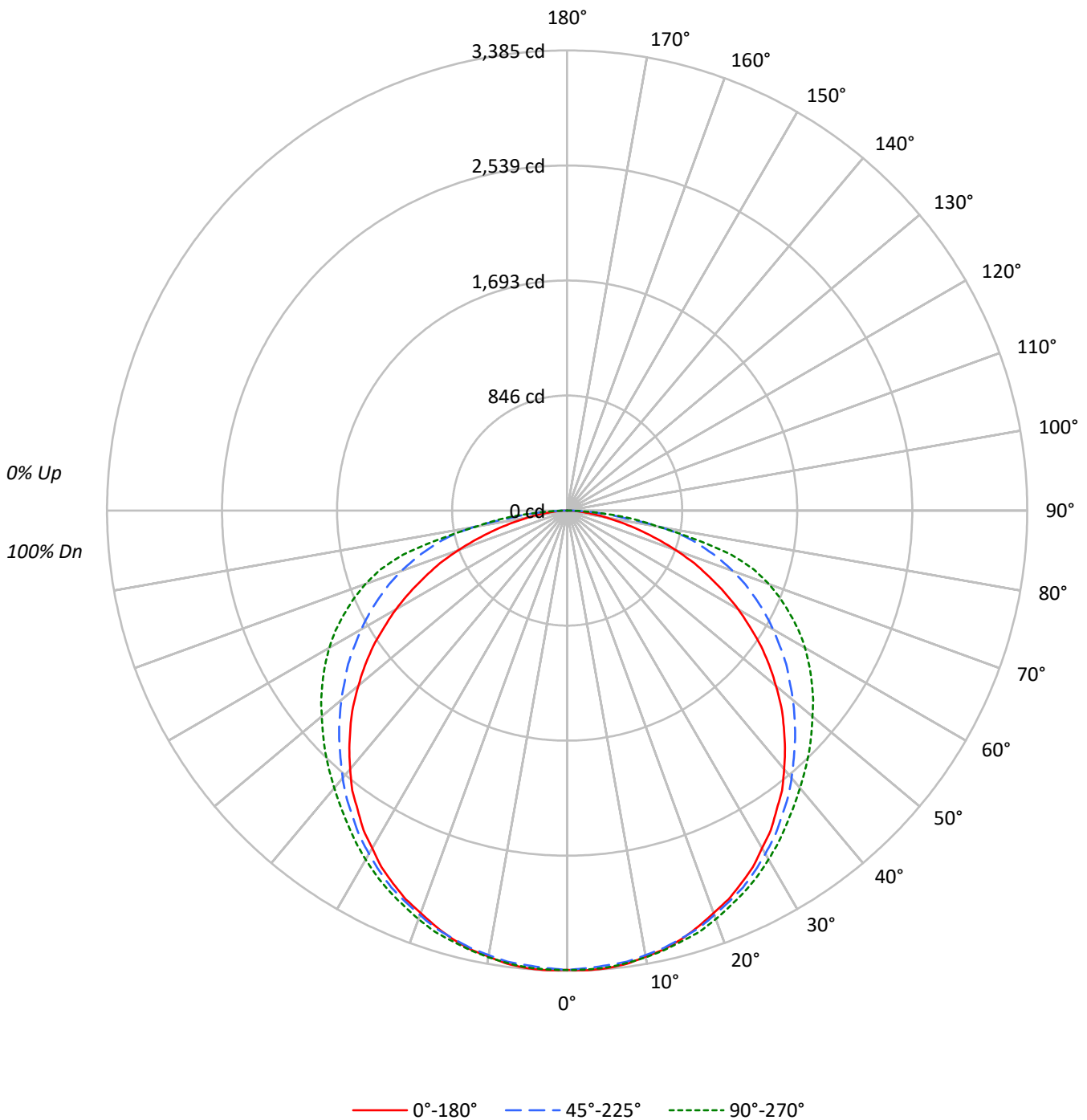
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	4547	4547	4547
5°	4564	4535	4557
10°	4551	4537	4559
15°	4544	4536	4566
20°	4510	4533	4579
25°	4495	4542	4589
30°	4455	4530	4604
35°	4412	4517	4623
40°	4363	4512	4681
45°	4290	4513	4787
50°	4195	4541	4931
55°	4088	4614	5151
60°	3916	4705	5436
65°	3665	4870	5769
70°	3334	5095	6207
75°	2826	5375	6484
80°	2230	5410	5245
85°	1646	4114	4608



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	320.6	3.0
10°-20°	922.6	8.6
20°-30°	1410.8	13.1
30°-40°	1724.7	16.0
40°-50°	1838.1	17.1
50°-60°	1757.5	16.4
60°-70°	1488.8	13.9
70°-80°	1000.6	9.3
80°-90°	282.3	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°	2653.9	24.7
0°-40°	4378.5	40.7
0°-60°	7974.1	74.2
0°-90°	10745.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10745.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3379	3379	3379	3379	3379	
5°	3379	3374	3358	3374	3374	321
15°	3262	3262	3257	3283	3278	920
25°	3028	3038	3059	3086	3091	1395
35°	2686	2708	2750	2804	2814	1683
45°	2255	2292	2372	2473	2516	1739
55°	1743	1807	1967	2121	2196	1552
65°	1151	1269	1530	1732	1812	1143
75°	544	741	1034	1210	1247	582
85°	107	218	266	288	298	132
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3379.2	3379.2	3379.2	3379.2	3379.2
2.5°	3384.6	3384.6	3368.6	3379.2	3379.2
5°	3379.2	3373.9	3357.9	3373.9	3373.9
7.5°	3363.3	3357.9	3347.3	3363.3	3357.9
10°	3331.3	3331.3	3320.6	3336.6	3336.6
12.5°	3304.6	3299.3	3294.0	3315.3	3310.0
15°	3262.0	3262.0	3256.7	3283.3	3278.0
17.5°	3208.7	3214.0	3219.3	3240.7	3246.0
20°	3150.1	3160.7	3166.0	3198.0	3198.0
22.5°	3096.8	3102.1	3112.7	3144.7	3144.7
25°	3027.5	3038.1	3059.4	3086.1	3091.4
27.5°	2958.2	2963.5	2990.2	3027.5	3032.8
30°	2867.6	2883.6	2915.5	2958.2	2963.5
32.5°	2787.6	2803.6	2840.9	2883.6	2894.2
35°	2686.3	2707.7	2750.3	2803.6	2814.3
37.5°	2595.7	2611.7	2665.0	2723.7	2739.6
40°	2483.8	2515.8	2569.1	2638.4	2665.0
42.5°	2371.9	2403.8	2467.8	2558.4	2590.4
45°	2254.6	2291.9	2371.9	2473.1	2515.8
47.5°	2137.3	2180.0	2270.6	2387.9	2435.8
50°	2004.1	2057.4	2169.3	2302.6	2355.9
52.5°	1876.2	1940.1	2062.7	2212.0	2281.3
55°	1742.9	1806.9	1966.8	2121.4	2196.0
57.5°	1593.7	1679.0	1854.9	2030.7	2110.7
60°	1455.1	1535.1	1748.3	1940.1	2020.1
62.5°	1305.9	1412.5	1641.7	1844.2	1924.1
65°	1151.3	1268.6	1529.7	1732.3	1812.2
67.5°	1012.7	1140.6	1417.8	1620.3	1700.3
70°	847.5	1007.4	1295.2	1497.7	1577.7
72.5°	692.9	868.8	1167.3	1364.5	1439.1
75°	543.7	740.9	1034.0	1209.9	1247.2
77.5°	405.1	613.0	895.4	970.1	943.4
80°	287.8	490.4	698.2	660.9	676.9
82.5°	186.6	373.1	431.7	490.4	506.4
85°	106.6	218.5	266.5	287.8	298.5
87.5°	48.0	80.0	106.6	106.6	101.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)