

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: P388683

Luminaire Tested: **24CZ2-150VHE-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: P388683  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-150VHE-UNV-L940-CD2-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

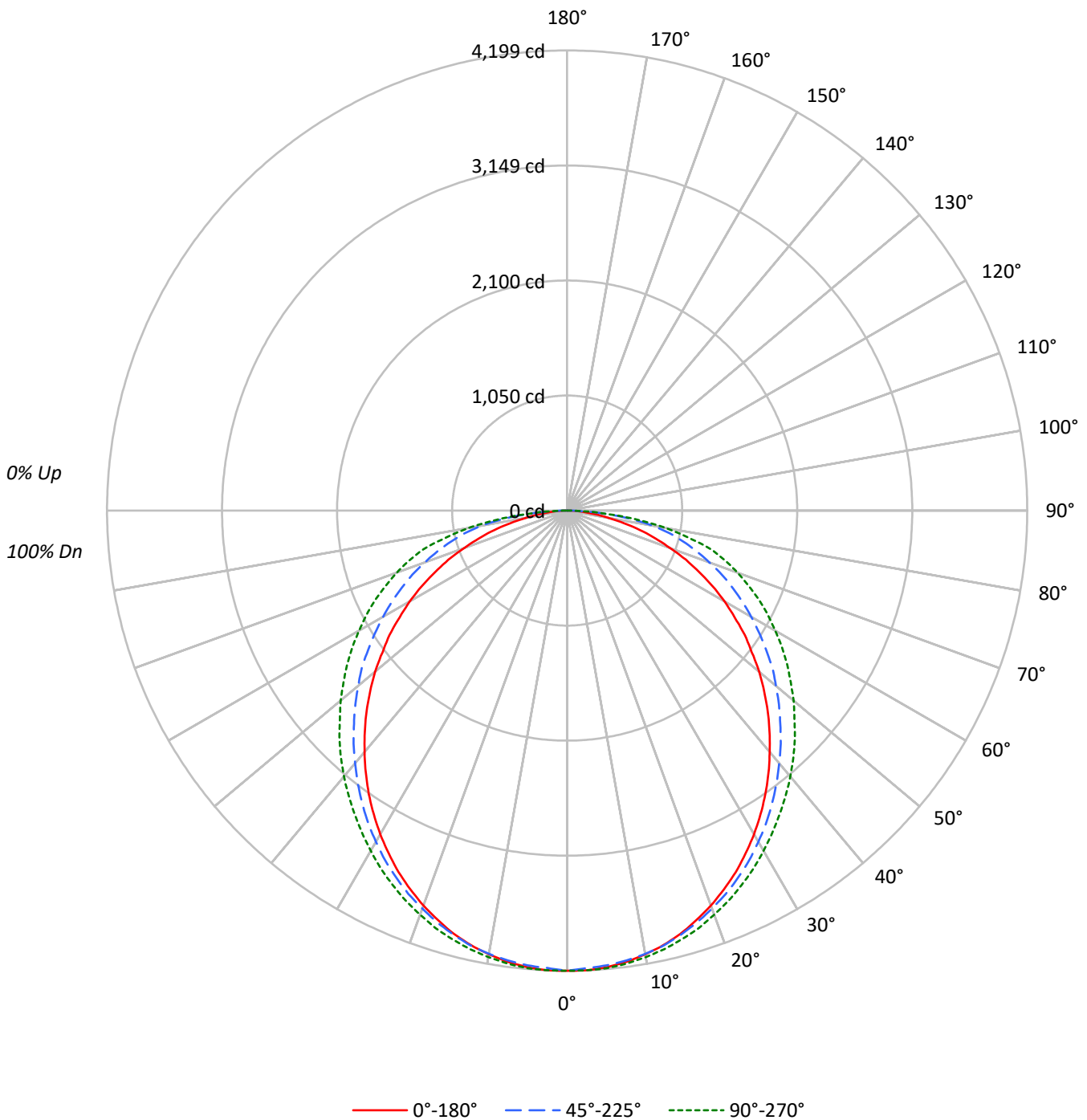
Lumens per Lamp: N/A  
Luminaire Lumens: 12506.8 lumens  
Efficiency: N/A  
Efficacy: 120.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): 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	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	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56					56			
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36					36			
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32					32			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25					25			
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23					23			

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

	0°	45°	90°
0°	5650	5650	5650
5°	5649	5626	5660
10°	5617	5612	5651
15°	5570	5582	5640
20°	5493	5534	5618
25°	5404	5484	5596
30°	5298	5421	5571
35°	5183	5355	5553
40°	5051	5286	5564
45°	4924	5234	5591
50°	4788	5207	5644
55°	4641	5199	5748
60°	4459	5223	5897
65°	4226	5302	6153
70°	3925	5435	6502
75°	3580	5707	7052
80°	2943	6145	7050
85°	2255	5670	6058



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	397.1	3.2
10°-20°	1133.8	9.1
20°-30°	1706.2	13.6
30°-40°	2044.7	16.3
40°-50°	2130.7	17.0
50°-60°	1982.4	15.9
60°-70°	1632.8	13.1
70°-80°	1112.0	8.9
80°-90°	367.1	2.9
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°	3237.1	25.9
0°-40°	5281.8	42.2
0°-60°	9394.9	75.1
0°-90°	12506.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12506.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4199	4199	4199	4199	4199	
5°	4182	4182	4166	4187	4191	397
15°	3999	4003	4007	4045	4049	1127
25°	3640	3656	3694	3757	3769	1676
35°	3156	3193	3260	3348	3381	1973
45°	2588	2642	2751	2888	2938	1996
55°	1978	2045	2216	2392	2450	1764
65°	1327	1440	1666	1862	1933	1318
75°	689	843	1098	1294	1357	726
85°	146	284	367	392	392	181
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4199.1	4199.1	4199.1	4199.1	4199.1
2.5°	4199.1	4199.1	4178.2	4199.1	4199.1
5°	4182.4	4182.4	4165.7	4186.6	4190.8
7.5°	4153.2	4157.4	4140.7	4165.7	4169.9
10°	4111.5	4115.6	4107.3	4132.3	4136.5
12.5°	4061.4	4065.5	4065.5	4094.8	4098.9
15°	3998.8	4002.9	4007.1	4044.7	4048.8
17.5°	3919.5	3932.0	3940.3	3986.2	3994.6
20°	3836.0	3848.5	3865.2	3915.3	3923.6
22.5°	3740.0	3756.7	3785.9	3840.1	3852.7
25°	3639.8	3656.5	3694.1	3756.7	3769.2
27.5°	3527.1	3552.1	3598.0	3664.8	3681.5
30°	3410.2	3435.3	3489.5	3560.5	3585.5
32.5°	3285.0	3318.4	3381.0	3460.3	3485.3
35°	3155.6	3193.2	3259.9	3347.6	3381.0
37.5°	3017.9	3059.6	3138.9	3234.9	3276.6
40°	2875.9	2926.0	3009.5	3122.2	3168.1
42.5°	2734.0	2779.9	2884.3	3005.3	3055.4
45°	2587.9	2642.2	2750.7	2888.5	2938.5
47.5°	2437.7	2491.9	2621.3	2767.4	2813.3
50°	2287.4	2341.7	2487.7	2642.2	2696.4
52.5°	2124.6	2195.6	2362.5	2517.0	2571.2
55°	1978.5	2045.3	2216.4	2391.7	2450.2
57.5°	1811.5	1890.9	2078.7	2262.3	2325.0
60°	1657.1	1740.6	1940.9	2128.8	2191.4
62.5°	1498.5	1590.3	1803.2	1995.2	2066.2
65°	1327.4	1440.1	1665.5	1861.6	1932.6
67.5°	1172.9	1289.8	1527.7	1728.1	1790.7
70°	997.6	1139.5	1381.6	1582.0	1652.9
72.5°	847.3	989.3	1243.9	1440.1	1511.0
75°	688.7	843.2	1097.8	1294.0	1356.6
77.5°	530.1	701.2	955.9	1106.1	1127.0
80°	379.8	559.3	793.1	880.7	909.9
82.5°	267.1	429.9	584.4	642.8	659.5
85°	146.1	283.8	367.3	392.4	392.4
87.5°	62.6	121.0	146.1	150.3	154.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)