

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: P388681

Luminaire Tested: **24CZ2-150VHE-UNV-L935-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: P388681  
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-L935-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12529.9 lumens  
Efficiency: N/A  
Efficacy: 120.2 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

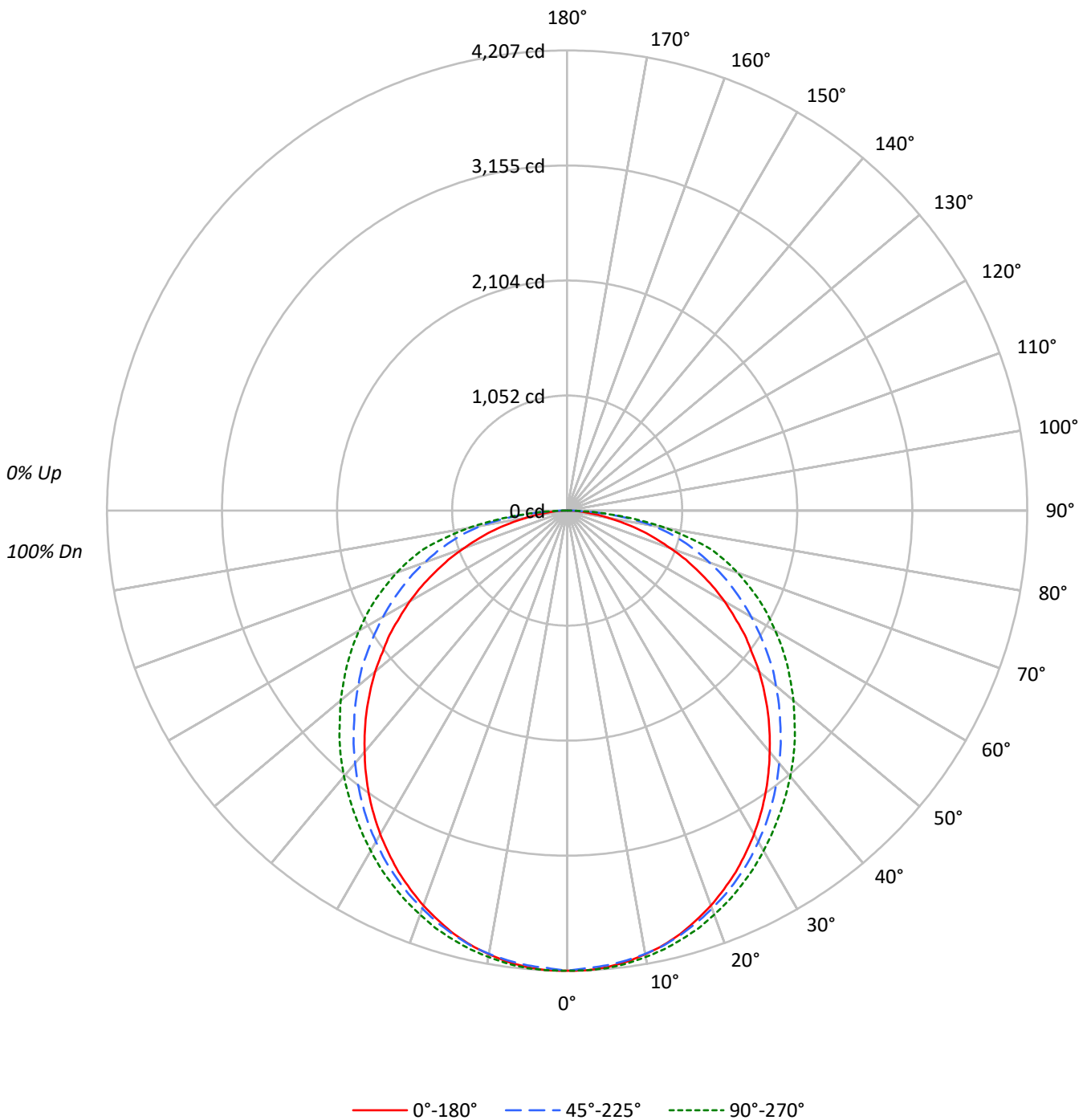
Input Watts (W): 104.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	5660	5660	5660
5°	5659	5637	5671
10°	5628	5622	5662
15°	5580	5592	5650
20°	5503	5545	5628
25°	5414	5494	5606
30°	5308	5432	5581
35°	5193	5365	5564
40°	5061	5296	5575
45°	4933	5244	5602
50°	4797	5217	5655
55°	4650	5209	5758
60°	4468	5233	5908
65°	4234	5312	6164
70°	3932	5445	6515
75°	3587	5717	7065
80°	2948	6156	7063
85°	2260	5681	6069



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	397.9	3.2
10°-20°	1135.9	9.1
20°-30°	1709.3	13.6
30°-40°	2048.4	16.3
40°-50°	2134.7	17.0
50°-60°	1986.1	15.9
60°-70°	1635.8	13.1
70°-80°	1114.0	8.9
80°-90°	367.8	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°	3243.1	25.9
0°-40°	5291.5	42.2
0°-60°	9412.3	75.1
0°-90°	12529.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12529.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4207	4207	4207	4207	4207	
5°	4190	4190	4173	4194	4198	398
15°	4006	4010	4014	4052	4056	1129
25°	3646	3663	3701	3764	3776	1679
35°	3161	3199	3266	3354	3387	1976
45°	2593	2647	2756	2894	2944	2000
55°	1982	2049	2220	2396	2455	1767
65°	1330	1443	1668	1865	1936	1320
75°	690	845	1100	1296	1359	728
85°	146	284	368	393	393	181
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4206.9	4206.9	4206.9	4206.9	4206.9
2.5°	4206.9	4206.9	4186.0	4206.9	4206.9
5°	4190.1	4190.1	4173.4	4194.3	4198.5
7.5°	4160.9	4165.1	4148.3	4173.4	4177.6
10°	4119.1	4123.2	4114.9	4140.0	4144.1
12.5°	4068.9	4073.1	4073.1	4102.3	4106.5
15°	4006.1	4010.3	4014.5	4052.1	4056.3
17.5°	3926.7	3939.2	3947.6	3993.6	4002.0
20°	3843.1	3855.6	3872.3	3922.5	3930.9
22.5°	3746.9	3763.6	3792.9	3847.2	3859.8
25°	3646.5	3663.2	3700.9	3763.6	3776.1
27.5°	3533.6	3558.7	3604.7	3671.6	3688.3
30°	3416.5	3441.6	3496.0	3567.1	3592.1
32.5°	3291.1	3324.5	3387.2	3466.7	3491.8
35°	3161.4	3199.1	3266.0	3353.8	3387.2
37.5°	3023.4	3065.2	3144.7	3240.9	3282.7
40°	2881.2	2931.4	3015.1	3128.0	3174.0
42.5°	2739.1	2785.1	2889.6	3010.9	3061.1
45°	2592.7	2647.1	2755.8	2893.8	2944.0
47.5°	2442.2	2496.5	2626.2	2772.5	2818.5
50°	2291.6	2346.0	2492.3	2647.1	2701.4
52.5°	2128.5	2199.6	2366.9	2521.6	2576.0
55°	1982.2	2049.1	2220.5	2396.2	2454.7
57.5°	1814.9	1894.3	2082.5	2266.5	2329.3
60°	1660.2	1743.8	1944.5	2132.7	2195.4
62.5°	1501.3	1593.3	1806.5	1998.9	2070.0
65°	1329.8	1442.7	1668.5	1865.1	1936.2
67.5°	1175.1	1292.2	1530.5	1731.3	1794.0
70°	999.4	1141.6	1384.2	1584.9	1656.0
72.5°	848.9	991.1	1246.2	1442.7	1513.8
75°	690.0	844.7	1099.8	1296.4	1359.1
77.5°	531.1	702.5	957.6	1108.2	1129.1
80°	380.5	560.4	794.5	882.4	911.6
82.5°	267.6	430.7	585.4	644.0	660.7
85°	146.4	284.4	368.0	393.1	393.1
87.5°	62.7	121.3	146.4	150.5	154.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)