

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: P388971

Luminaire Tested: **24CZ2-75VHE-UNV-L940-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: P388971  
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: 24CZ2-75VHE-UNV-L940-CD1-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**

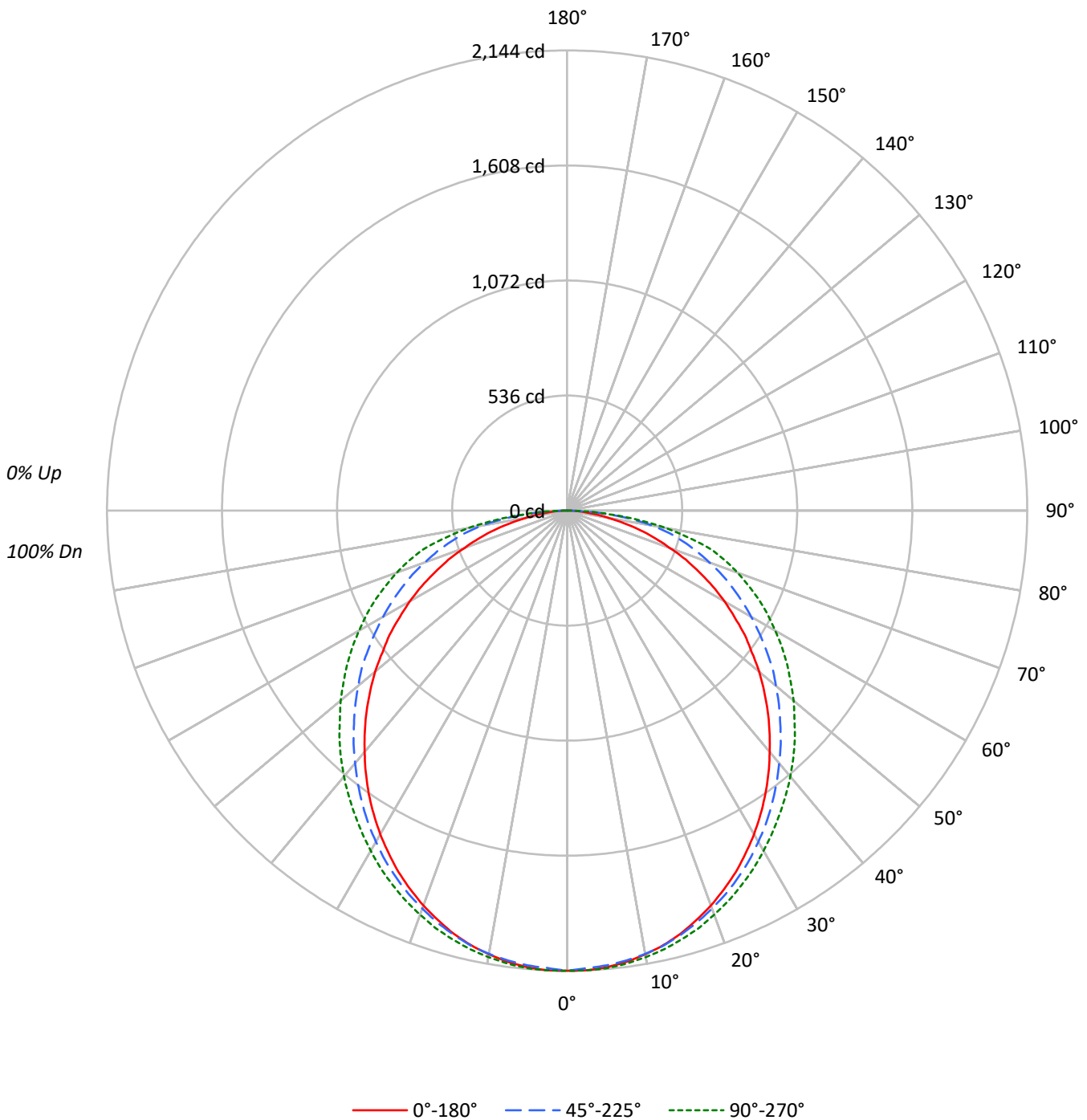
Lumens per Lamp: N/A  
Luminaire Lumens: 6385.9 lumens  
Efficiency: N/A  
Efficacy: 128.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 49.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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°	2885	2885	2885
5°	2884	2873	2890
10°	2868	2865	2886
15°	2844	2850	2880
20°	2804	2826	2869
25°	2759	2800	2857
30°	2705	2768	2844
35°	2646	2734	2836
40°	2579	2699	2841
45°	2514	2672	2855
50°	2445	2659	2882
55°	2370	2655	2935
60°	2277	2667	3011
65°	2158	2707	3142
70°	2004	2775	3320
75°	1828	2914	3601
80°	1502	3137	3600
85°	1152	2896	3092



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.8	3.2
10°-20°	578.9	9.1
20°-30°	871.2	13.6
30°-40°	1044.0	16.3
40°-50°	1087.9	17.0
50°-60°	1012.2	15.9
60°-70°	833.7	13.1
70°-80°	567.8	8.9
80°-90°	187.4	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°	1652.8	25.9
0°-40°	2696.8	42.2
0°-60°	4797.0	75.1
0°-90°	6385.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6385.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2144	2144	2144	2144	2144	
5°	2136	2136	2127	2138	2140	203
15°	2042	2044	2046	2065	2067	575
25°	1858	1867	1886	1918	1924	856
35°	1611	1630	1664	1709	1726	1007
45°	1321	1349	1404	1475	1500	1019
55°	1010	1044	1132	1221	1251	900
65°	678	735	850	950	987	673
75°	352	430	560	661	693	371
85°	75	145	188	200	200	92
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2144.0	2144.0	2144.0	2144.0	2144.0
2.5°	2144.0	2144.0	2133.4	2144.0	2144.0
5°	2135.5	2135.5	2127.0	2137.6	2139.8
7.5°	2120.6	2122.7	2114.2	2127.0	2129.1
10°	2099.3	2101.4	2097.2	2109.9	2112.1
12.5°	2073.7	2075.8	2075.8	2090.8	2092.9
15°	2041.7	2043.9	2046.0	2065.2	2067.3
17.5°	2001.2	2007.6	2011.9	2035.3	2039.6
20°	1958.6	1965.0	1973.5	1999.1	2003.4
22.5°	1909.6	1918.1	1933.0	1960.8	1967.1
25°	1858.5	1867.0	1886.2	1918.1	1924.5
27.5°	1800.9	1813.7	1837.1	1871.2	1879.8
30°	1741.2	1754.0	1781.7	1818.0	1830.7
32.5°	1677.3	1694.3	1726.3	1766.8	1779.6
35°	1611.2	1630.4	1664.5	1709.3	1726.3
37.5°	1540.9	1562.2	1602.7	1651.7	1673.0
40°	1468.4	1494.0	1536.6	1594.2	1617.6
42.5°	1396.0	1419.4	1472.7	1534.5	1560.1
45°	1321.4	1349.1	1404.5	1474.8	1500.4
47.5°	1244.7	1272.4	1338.4	1413.0	1436.5
50°	1167.9	1195.6	1270.2	1349.1	1376.8
52.5°	1084.8	1121.0	1206.3	1285.1	1312.9
55°	1010.2	1044.3	1131.7	1221.2	1251.0
57.5°	925.0	965.5	1061.4	1155.1	1187.1
60°	846.1	888.7	991.0	1086.9	1118.9
62.5°	765.1	812.0	920.7	1018.7	1055.0
65°	677.7	735.3	850.4	950.5	986.8
67.5°	598.9	658.6	780.0	882.3	914.3
70°	509.4	581.8	705.4	807.7	844.0
72.5°	432.6	505.1	635.1	735.3	771.5
75°	351.7	430.5	560.5	660.7	692.7
77.5°	270.7	358.1	488.1	564.8	575.4
80°	193.9	285.6	404.9	449.7	464.6
82.5°	136.4	219.5	298.4	328.2	336.7
85°	74.6	144.9	187.6	200.3	200.3
87.5°	32.0	61.8	74.6	76.7	78.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)