

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: P389838

Luminaire Tested: **24CZ2-60VHE-S-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: P389838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60VHE-S-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5628.4 lumens  
Efficiency: N/A  
Efficacy: 145.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

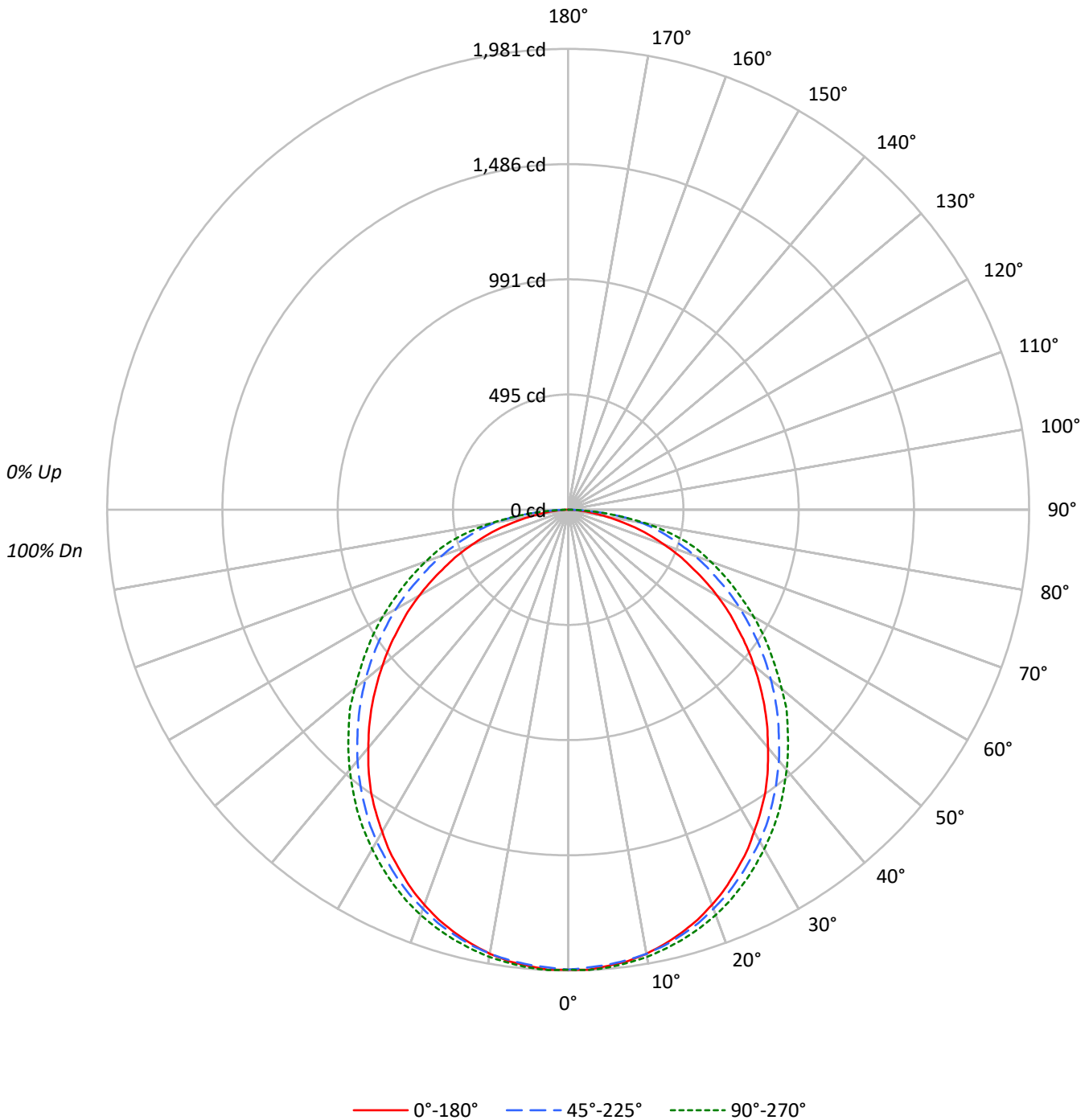
Input Watts (W): 38.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2660	2660	2660
5°	2659	2651	2668
10°	2648	2648	2667
15°	2622	2635	2662
20°	2588	2614	2654
25°	2540	2588	2638
30°	2483	2558	2616
35°	2428	2517	2596
40°	2346	2474	2565
45°	2269	2426	2538
50°	2182	2380	2507
55°	2084	2336	2483
60°	1987	2300	2478
65°	1861	2260	2493
70°	1723	2272	2560
75°	1543	2314	2704
80°	1247	2452	2646
85°	939	2152	2098



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.2	3.3
10°-20°	534.9	9.5
20°-30°	804.0	14.3
30°-40°	957.7	17.0
40°-50°	980.2	17.4
50°-60°	882.5	15.7
60°-70°	693.0	12.3
70°-80°	449.8	8.0
80°-90°	139.1	2.5
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°	1526.1	27.1
0°-40°	2483.8	44.1
0°-60°	4346.5	77.2
0°-90°	5628.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5628.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1977	1977	1977	1977	1977	
5°	1968	1972	1963	1974	1976	187
15°	1882	1888	1892	1908	1911	531
25°	1711	1725	1743	1772	1777	788
35°	1478	1496	1532	1570	1580	922
45°	1192	1221	1275	1323	1334	919
55°	888	928	996	1048	1058	797
65°	585	629	710	769	783	582
75°	297	354	445	506	520	314
85°	61	113	139	136	136	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1977.3	1977.3	1977.3	1977.3	1977.3
2.5°	1979.1	1979.1	1970.1	1979.1	1980.9
5°	1968.4	1971.9	1963.0	1973.7	1975.5
7.5°	1957.6	1957.6	1952.3	1963.0	1964.8
10°	1938.0	1939.8	1938.0	1950.5	1952.3
12.5°	1912.9	1916.5	1918.3	1930.8	1932.6
15°	1882.5	1887.9	1891.5	1907.6	1911.1
17.5°	1848.6	1853.9	1862.9	1880.8	1884.3
20°	1807.5	1814.6	1825.3	1848.6	1853.9
22.5°	1762.8	1769.9	1787.8	1809.2	1818.2
25°	1710.9	1725.2	1743.1	1771.7	1777.1
27.5°	1659.1	1671.6	1694.8	1725.2	1732.4
30°	1598.3	1617.9	1646.6	1676.9	1684.1
32.5°	1539.3	1559.0	1592.9	1625.1	1634.0
35°	1478.5	1496.4	1532.1	1569.7	1580.4
37.5°	1408.8	1432.0	1471.3	1508.9	1519.6
40°	1335.5	1364.1	1408.8	1448.1	1460.6
42.5°	1265.8	1296.1	1340.8	1383.7	1398.1
45°	1192.5	1221.1	1274.7	1323.0	1333.7
47.5°	1117.4	1149.5	1206.8	1255.0	1272.9
50°	1042.3	1076.2	1137.0	1187.1	1197.8
52.5°	967.2	1002.9	1067.3	1120.9	1126.3
55°	888.5	927.9	995.8	1047.6	1058.4
57.5°	817.0	851.0	924.3	977.9	990.4
60°	738.4	775.9	854.6	904.6	920.7
62.5°	663.3	702.6	784.8	834.9	849.2
65°	584.6	629.3	709.8	768.7	783.1
67.5°	516.7	559.6	645.4	702.6	716.9
70°	438.0	486.3	577.5	636.5	650.8
72.5°	370.1	420.1	511.3	568.5	590.0
75°	296.8	354.0	445.2	505.9	520.2
77.5°	225.3	291.4	384.4	430.9	430.9
80°	160.9	230.6	316.4	337.9	341.5
82.5°	105.5	173.4	234.2	232.4	232.4
85°	60.8	112.6	139.4	135.9	135.9
87.5°	23.2	46.5	50.1	50.1	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)