

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: P389911

Luminaire Tested: **24CZ2-75VHE-S-UNV-L950-CD1-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: P389911  
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: 24CZ2-75VHE-S-UNV-L950-CD1-SWPD1-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: 7209.1 lumens  
Efficiency: N/A  
Efficacy: 144.5 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

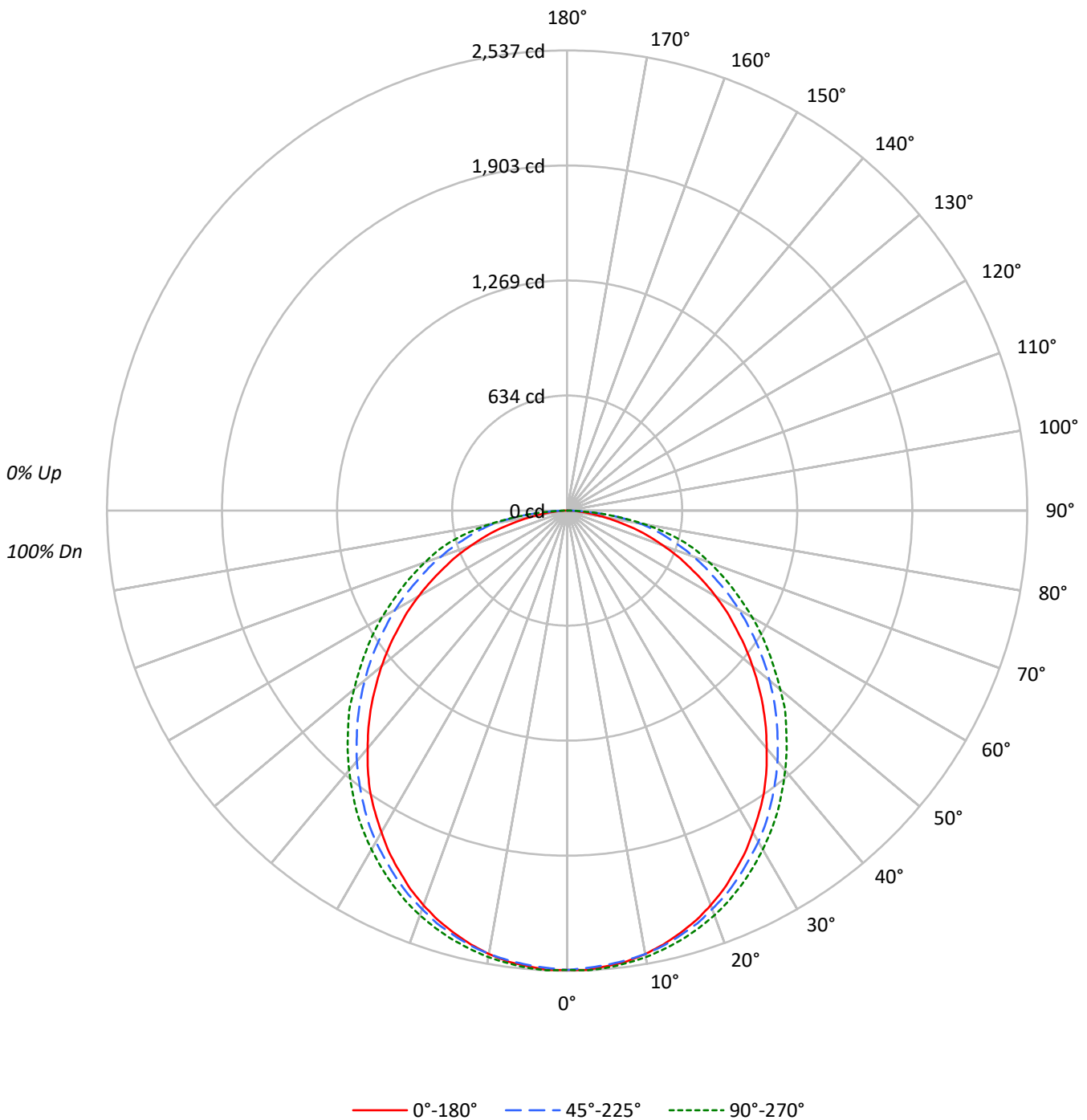
Input Watts (W): 49.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3408	3408	3408
5°	3405	3396	3417
10°	3391	3391	3416
15°	3359	3375	3410
20°	3315	3348	3400
25°	3253	3314	3379
30°	3181	3277	3351
35°	3110	3223	3325
40°	3004	3169	3286
45°	2906	3107	3250
50°	2794	3049	3211
55°	2670	2992	3180
60°	2545	2946	3173
65°	2384	2894	3193
70°	2207	2910	3279
75°	1976	2964	3464
80°	1597	3140	3389
85°	1203	2757	2686



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.8	3.3
10°-20°	685.1	9.5
20°-30°	1029.8	14.3
30°-40°	1226.7	17.0
40°-50°	1255.5	17.4
50°-60°	1130.3	15.7
60°-70°	887.6	12.3
70°-80°	576.1	8.0
80°-90°	178.2	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°	1954.7	27.1
0°-40°	3181.4	44.1
0°-60°	5567.2	77.2
0°-90°	7209.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7209.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2533	2533	2533	2533	2533	
5°	2521	2526	2514	2528	2530	240
15°	2411	2418	2423	2443	2448	680
25°	2191	2210	2233	2269	2276	1010
35°	1894	1917	1962	2010	2024	1181
45°	1527	1564	1633	1694	1708	1178
55°	1138	1188	1276	1342	1356	1020
65°	749	806	909	985	1003	745
75°	380	453	570	648	666	402
85°	78	144	179	174	174	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2532.6	2532.6	2532.6	2532.6	2532.6
2.5°	2534.9	2534.9	2523.4	2534.9	2537.2
5°	2521.2	2525.7	2514.3	2528.0	2530.3
7.5°	2507.4	2507.4	2500.5	2514.3	2516.6
10°	2482.2	2484.5	2482.2	2498.3	2500.5
12.5°	2450.2	2454.7	2457.0	2473.1	2475.4
15°	2411.2	2418.1	2422.7	2443.3	2447.9
17.5°	2367.7	2374.6	2386.1	2409.0	2413.5
20°	2315.1	2324.2	2338.0	2367.7	2374.6
22.5°	2257.8	2267.0	2289.9	2317.4	2328.8
25°	2191.4	2209.7	2232.6	2269.3	2276.1
27.5°	2125.0	2141.0	2170.8	2209.7	2218.9
30°	2047.2	2072.3	2109.0	2147.9	2157.1
32.5°	1971.6	1996.8	2040.3	2081.5	2092.9
35°	1893.7	1916.6	1962.4	2010.5	2024.3
37.5°	1804.4	1834.2	1884.6	1932.7	1946.4
40°	1710.5	1747.2	1804.4	1854.8	1870.8
42.5°	1621.2	1660.2	1717.4	1772.4	1790.7
45°	1527.3	1564.0	1632.7	1694.5	1708.2
47.5°	1431.2	1472.4	1545.7	1607.5	1630.4
50°	1335.0	1378.5	1456.4	1520.5	1534.2
52.5°	1238.8	1284.6	1367.1	1435.8	1442.6
55°	1138.1	1188.4	1275.5	1341.9	1355.6
57.5°	1046.5	1090.0	1183.9	1252.6	1268.6
60°	945.7	993.8	1094.6	1158.7	1179.3
62.5°	849.5	899.9	1005.3	1069.4	1087.7
65°	748.8	806.0	909.1	984.6	1003.0
67.5°	661.8	716.7	826.6	899.9	918.2
70°	561.0	622.8	739.6	815.2	833.5
72.5°	474.0	538.1	654.9	728.2	755.7
75°	380.1	453.4	570.2	648.0	666.4
77.5°	288.5	373.2	492.3	551.9	551.9
80°	206.1	295.4	405.3	432.8	437.4
82.5°	135.1	222.1	300.0	297.7	297.7
85°	77.9	144.3	178.6	174.0	174.0
87.5°	29.8	59.5	64.1	64.1	61.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)