

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: P387774

Luminaire Tested: **22CZ2-24VHE-SQR-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: P387774  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24VHE-SQR-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2001.9 lumens  
Efficiency: N/A  
Efficacy: 114.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

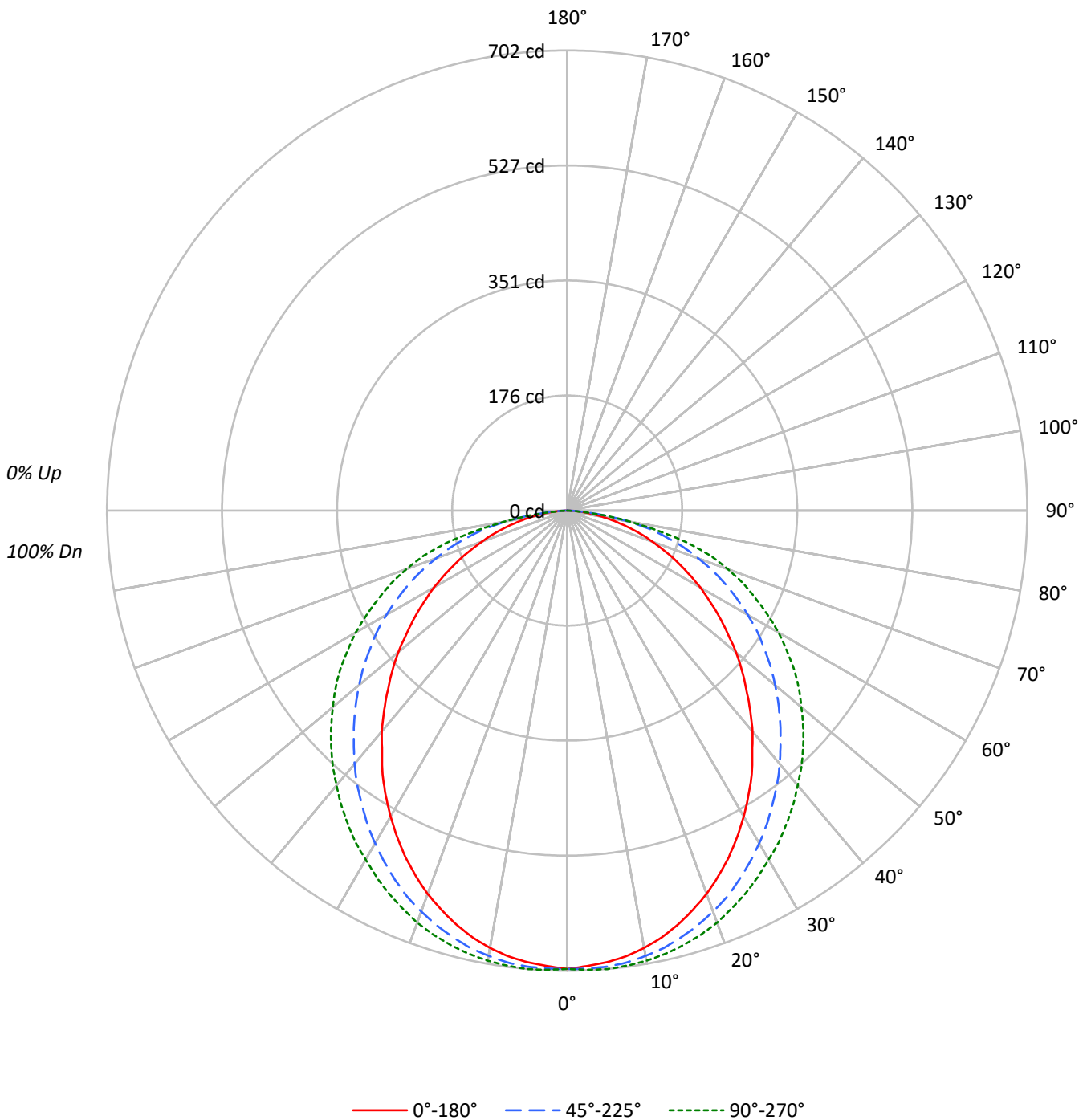
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	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°	1882	1882	1882
5°	1868	1887	1897
10°	1851	1885	1906
15°	1821	1877	1911
20°	1782	1864	1916
25°	1732	1845	1913
30°	1674	1821	1910
35°	1614	1795	1917
40°	1545	1772	1923
45°	1472	1750	1938
50°	1408	1734	1953
55°	1333	1721	1984
60°	1263	1713	2005
65°	1180	1700	2021
70°	1084	1674	2048
75°	978	1630	1975
80°	840	1443	1488
85°	676	852	676



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.3	3.3
10°-20°	189.6	9.5
20°-30°	284.7	14.2
30°-40°	339.5	17.0
40°-50°	351.1	17.5
50°-60°	322.8	16.1
60°-70°	256.9	12.8
70°-80°	157.0	7.8
80°-90°	34.1	1.7
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°	540.5	27.0
0°-40°	880.1	44.0
0°-60°	1553.9	77.6
0°-90°	2001.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2001.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	699	699	699	699	699	
5°	692	694	698	701	702	66
15°	654	661	674	683	686	184
25°	583	598	621	638	644	268
35°	491	512	546	575	583	306
45°	387	414	460	497	509	299
55°	284	316	367	409	423	254
65°	185	217	267	304	317	184
75°	94	122	157	184	190	100
85°	22	27	28	24	22	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	699.3	699.3	699.3	699.3	699.3
2.5°	695.5	696.5	699.3	701.2	701.2
5°	691.7	693.6	698.4	701.2	702.2
7.5°	686.0	688.9	695.5	699.3	700.3
10°	677.5	681.3	689.8	695.5	697.4
12.5°	667.0	672.7	683.2	690.8	692.7
15°	653.7	661.3	673.7	683.2	686.0
17.5°	638.5	648.0	663.2	674.6	678.4
20°	622.3	631.9	650.9	664.2	668.9
22.5°	603.3	615.7	637.6	652.8	656.6
25°	583.4	597.6	621.4	638.5	644.2
27.5°	561.5	578.6	604.3	625.2	630.0
30°	538.7	556.8	586.2	609.0	614.7
32.5°	515.0	535.9	567.2	592.9	600.5
35°	491.2	512.1	546.3	574.8	583.4
37.5°	463.7	488.4	526.4	555.8	566.3
40°	439.9	463.7	504.5	536.8	547.3
42.5°	413.3	439.0	481.7	516.9	529.2
45°	386.7	414.3	459.9	496.9	509.3
47.5°	362.0	389.6	437.1	476.0	488.4
50°	336.4	364.9	414.3	454.2	466.5
52.5°	308.8	340.2	391.5	431.4	445.6
55°	284.1	315.5	366.8	408.6	422.8
57.5°	258.4	290.7	344.0	383.9	397.2
60°	234.7	266.0	318.3	357.3	372.5
62.5°	209.0	241.3	292.6	330.7	344.9
65°	185.3	216.6	267.0	304.0	317.4
67.5°	161.5	192.9	240.4	275.5	290.7
70°	137.8	169.1	212.8	247.0	260.3
72.5°	116.9	144.4	186.2	217.6	229.9
75°	94.1	121.6	156.8	184.3	190.0
77.5°	73.2	97.9	127.3	139.7	141.6
80°	54.2	73.2	93.1	96.0	96.0
82.5°	36.1	50.4	58.0	58.9	58.0
85°	21.9	26.6	27.6	23.8	21.9
87.5°	7.6	7.6	4.8	2.9	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)