

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: P277158

Luminaire Tested: **22CZ2-24HE-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277158  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24HE-UNV-L83050-W2A1-U-3500K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2271.0 lumens  
Efficiency: N/A  
Efficacy: 129.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

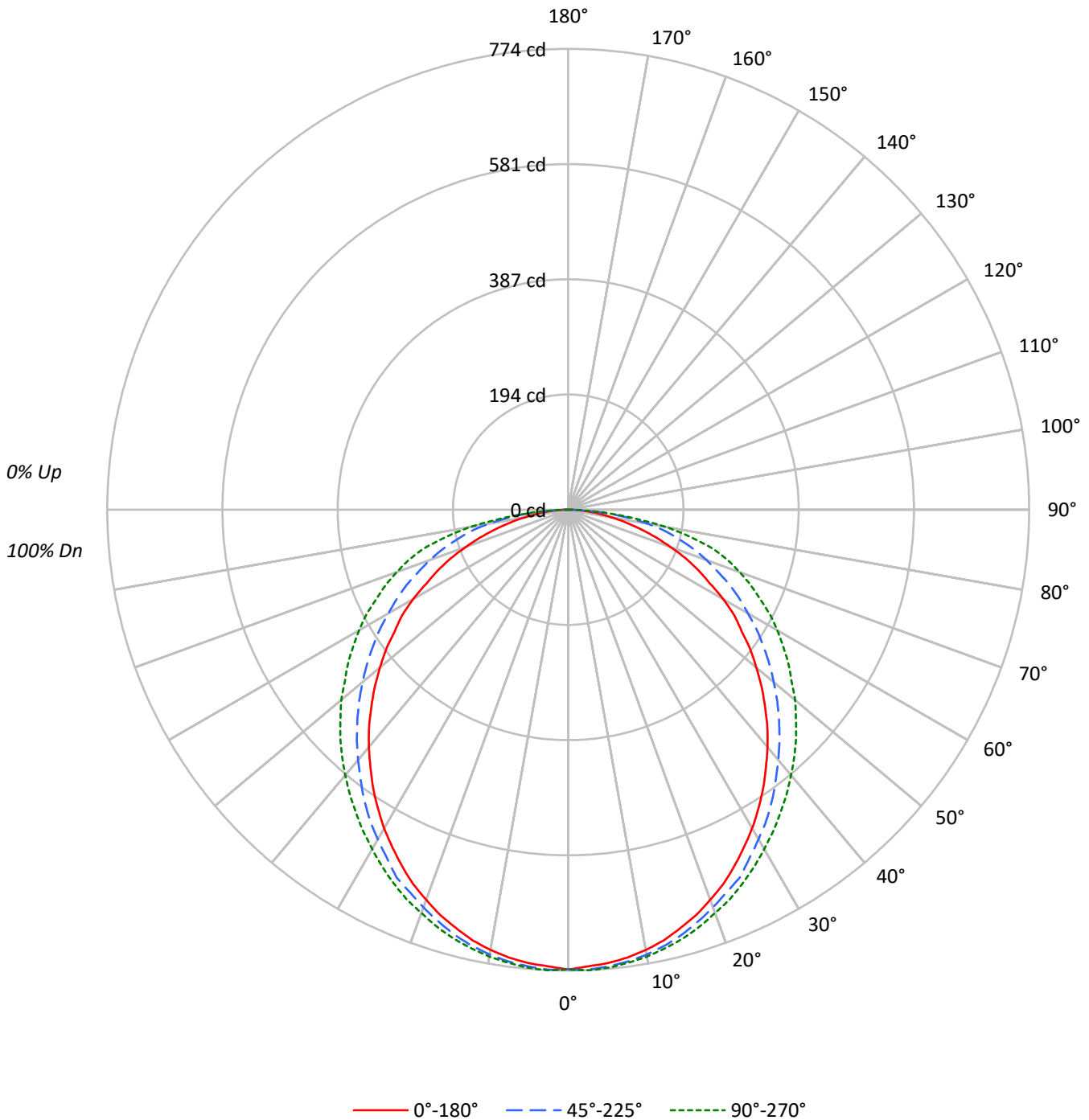
Input Watts (W): 17.577  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P277158

CATALOG NUMBER: 22CZ2-24HE-UNV-L83050-W2A1-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P277158

CATALOG NUMBER: 22CZ2-24HE-UNV-L83050-W2A1-U-3500K

**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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	2078	2078	2078
5°	2065	2080	2086
10°	2052	2073	2082
15°	2027	2058	2077
20°	1997	2035	2064
25°	1961	2024	2057
30°	1920	1986	2045
35°	1876	1960	2041
40°	1829	1927	2045
45°	1778	1905	2058
50°	1726	1885	2082
55°	1667	1877	2118
60°	1618	1877	2183
65°	1537	1907	2263
70°	1433	1943	2409
75°	1313	2010	2602
80°	1144	2095	2563
85°	1000	1862	2035



TEST NUMBER: P277158

CATALOG NUMBER: 22CZ2-24HE-UNV-L83050-W2A1-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.0	3.2
10°-20°	208.0	9.2
20°-30°	312.3	13.7
30°-40°	373.1	16.4
40°-50°	388.0	17.1
50°-60°	359.6	15.8
60°-70°	295.0	13.0
70°-80°	199.4	8.8
80°-90°	62.6	2.8
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°	593.3	26.1
0°-40°	966.4	42.6
0°-60°	1714.0	75.5
0°-90°	2271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2271.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	764	766	770	771	772	73
15°	728	731	739	743	745	205
25°	660	666	682	690	693	304
35°	571	579	597	615	621	357
45°	467	476	501	530	541	361
55°	355	366	400	436	452	319
65°	241	255	300	339	355	239
75°	126	148	193	232	250	134
85°	32	45	60	67	66	37
90°	0	0	0	0	0	



TEST NUMBER: P277158

CATALOG NUMBER: 22CZ2-24HE-UNV-L83050-W2A1-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	772.2	772.2	772.2	772.2	772.2
2.5°	767.7	769.9	773.3	774.4	774.4
5°	764.4	765.5	769.9	771.1	772.2
7.5°	758.8	761.0	765.5	766.6	767.7
10°	750.9	753.2	758.8	761.0	762.1
12.5°	740.9	743.1	749.8	753.2	754.3
15°	727.5	730.8	738.7	743.1	745.4
17.5°	714.1	717.4	725.2	732.0	734.2
20°	697.3	705.1	710.7	719.7	720.8
22.5°	680.5	685.0	695.1	704.0	708.5
25°	660.4	666.0	681.7	689.5	692.8
27.5°	639.2	647.0	659.3	671.6	676.1
30°	618.0	623.6	639.2	653.7	658.2
32.5°	594.5	602.3	619.1	633.6	640.3
35°	571.0	578.9	596.7	614.6	621.3
37.5°	545.3	554.3	572.2	593.4	602.3
40°	520.7	527.5	548.7	574.4	582.2
42.5°	495.0	502.9	525.2	553.2	562.1
45°	467.1	476.0	500.6	529.7	540.9
47.5°	440.3	449.2	476.0	505.1	518.5
50°	412.4	423.5	450.3	483.9	497.3
52.5°	385.5	395.6	425.8	460.4	472.7
55°	355.4	366.5	400.1	435.8	451.5
57.5°	330.8	338.6	375.5	412.4	428.0
60°	300.6	310.7	348.7	387.8	405.6
62.5°	268.2	285.0	324.1	364.3	382.2
65°	241.4	254.8	299.5	338.6	355.4
67.5°	213.4	228.0	271.5	312.9	331.9
70°	182.1	201.1	247.0	288.3	306.2
72.5°	154.2	174.3	221.3	261.5	280.5
75°	126.3	147.5	193.3	232.4	250.3
77.5°	99.5	122.9	167.6	197.8	209.0
80°	73.8	96.1	135.2	156.4	165.4
82.5°	51.4	70.4	99.5	110.6	112.9
85°	32.4	44.7	60.3	67.0	65.9
87.5°	14.5	17.9	22.3	24.6	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)