

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: P277328

Luminaire Tested: **22CZ2-24HE-S-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277328  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24HE-S-UNV-L83050-W2A1-U-4500K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2539.0 lumens  
Efficiency: N/A  
Efficacy: 137.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

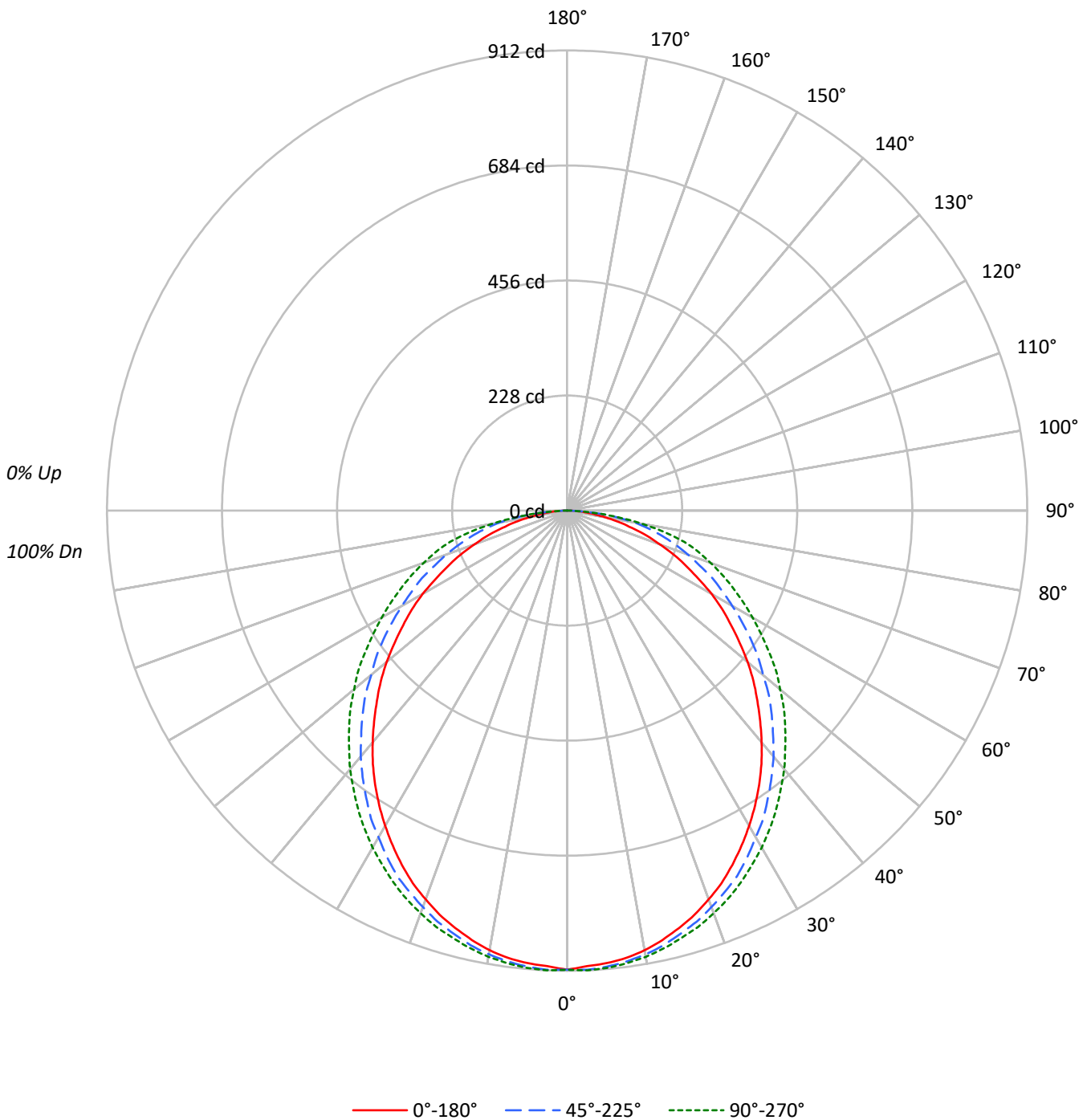
Input Watts (W): 18.414  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P277328

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L83050-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P277328

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L83050-W2A1-U-4500K

**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	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					100			
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49					49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37					37			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27					27			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

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

	0°	45°	90°
0°	2448	2448	2448
5°	2432	2451	2458
10°	2418	2441	2454
15°	2386	2419	2442
20°	2348	2395	2432
25°	2301	2371	2416
30°	2242	2323	2396
35°	2179	2281	2374
40°	2106	2235	2351
45°	2029	2182	2326
50°	1954	2123	2306
55°	1862	2084	2290
60°	1779	2034	2282
65°	1659	2022	2308
70°	1529	2004	2377
75°	1380	2033	2501
80°	1193	2092	2349
85°	988	1757	1757



TEST NUMBER: P277328

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L83050-W2A1-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.0	3.4
10°-20°	244.8	9.6
20°-30°	366.4	14.4
30°-40°	433.9	17.1
40°-50°	442.2	17.4
50°-60°	396.3	15.6
60°-70°	310.3	12.2
70°-80°	200.1	7.9
80°-90°	59.1	2.3
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°	697.2	27.5
0°-40°	1131.1	44.5
0°-60°	1969.6	77.6
0°-90°	2539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2539.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	900	903	907	909	910	85
15°	856	861	868	875	877	241
25°	775	782	798	809	814	357
35°	663	672	694	716	723	415
45°	533	545	573	603	611	412
55°	397	410	444	475	488	356
65°	261	276	318	348	362	259
75°	133	153	196	229	240	142
85°	32	44	57	57	57	38
90°	0	0	0	0	0	



TEST NUMBER: P277328

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L83050-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	909.8	909.8	909.8	909.8	909.8
2.5°	903.9	906.2	911.0	912.2	912.2
5°	900.3	902.7	907.4	908.6	909.8
7.5°	894.4	895.6	901.5	903.9	905.1
10°	884.9	887.3	893.2	896.8	898.0
12.5°	871.9	875.4	882.6	887.3	888.5
15°	856.5	861.2	868.3	875.4	876.6
17.5°	839.9	844.6	854.1	862.4	864.8
20°	819.8	825.7	836.4	845.8	849.4
22.5°	799.6	804.4	817.4	829.2	832.8
25°	774.8	781.9	798.4	809.1	813.8
27.5°	748.7	757.0	773.6	787.8	792.5
30°	721.4	729.7	747.5	765.3	771.2
32.5°	693.0	702.5	723.8	741.6	747.5
35°	663.4	671.7	694.2	715.5	722.6
37.5°	632.6	639.7	665.8	688.3	695.4
40°	599.4	608.9	636.2	662.2	669.3
42.5°	566.3	576.9	604.2	632.6	639.7
45°	533.1	544.9	573.4	603.0	611.3
47.5°	501.1	510.6	542.6	571.0	582.8
50°	466.7	476.2	507.0	539.0	550.9
52.5°	431.2	444.2	477.4	508.2	522.4
55°	396.9	409.9	444.2	475.0	488.1
57.5°	364.9	375.5	411.1	443.1	456.1
60°	330.5	340.0	377.9	412.3	424.1
62.5°	293.8	308.0	347.1	379.1	393.3
65°	260.6	276.0	317.5	348.3	362.5
67.5°	229.8	244.0	284.3	317.5	332.9
70°	194.3	213.2	254.7	287.9	302.1
72.5°	165.8	182.4	225.1	258.3	273.7
75°	132.7	152.8	195.5	228.6	240.5
77.5°	105.4	125.6	165.8	191.9	197.8
80°	77.0	97.1	135.0	148.1	151.6
82.5°	52.1	71.1	97.1	100.7	101.9
85°	32.0	43.8	56.9	56.9	56.9
87.5°	15.4	17.8	20.1	19.0	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)