

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: P276838

Luminaire Tested: **24CZ2-60HE-RDP-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-RDP-UNV-L93050-W2A1-U-3500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH RDP LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3262.2 lumens  
Efficiency: N/A  
Efficacy: 72.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

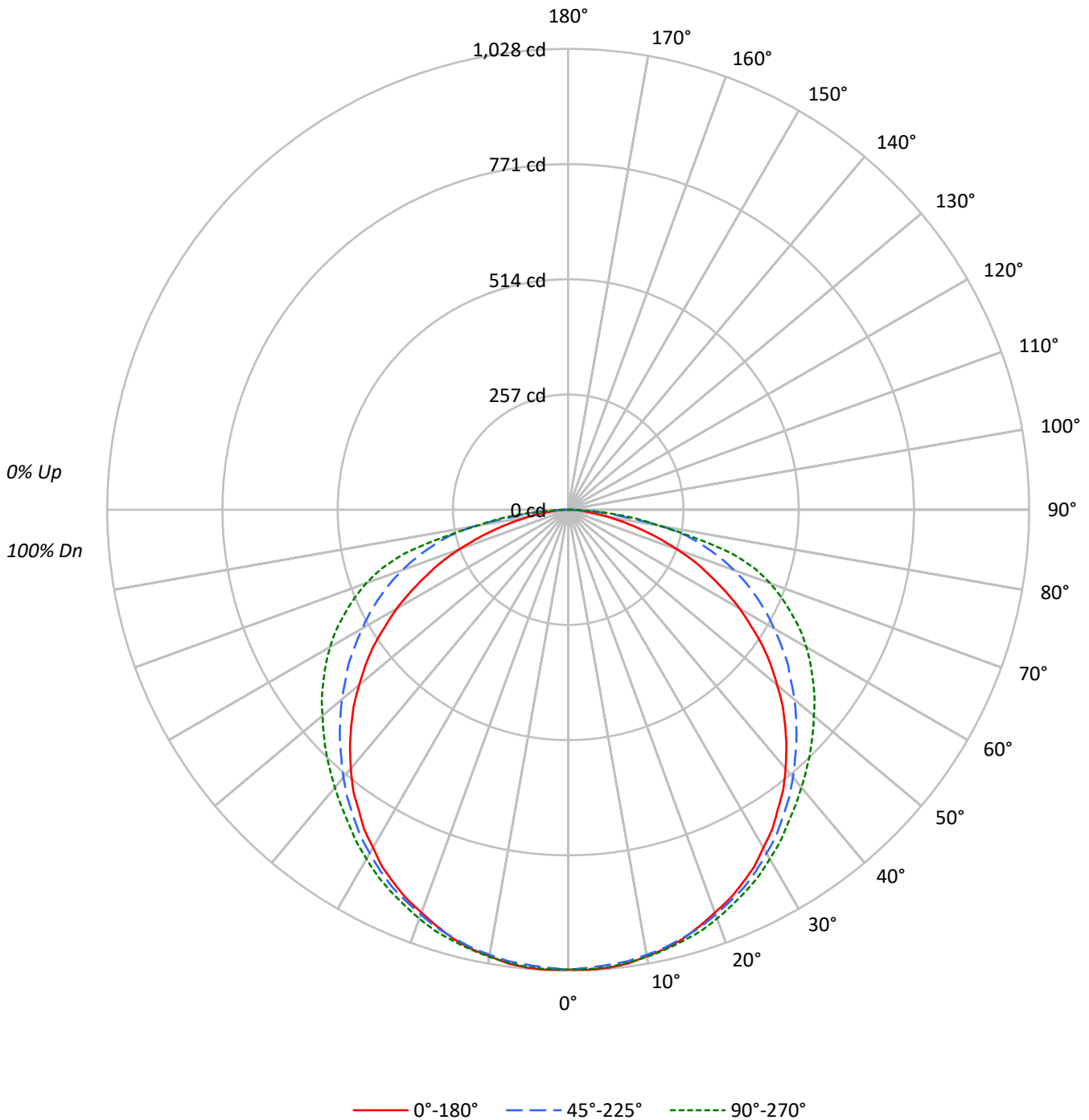
Input Watts (W): 45.109092  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276838

CATALOG NUMBER: 24CZ2-60HE-RDP-UNV-L93050-W2A1-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276838

CATALOG NUMBER: 24CZ2-60HE-RDP-UNV-L93050-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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1380	1380	1380
5°	1386	1377	1383
10°	1382	1377	1384
15°	1379	1377	1386
20°	1369	1376	1390
25°	1364	1379	1393
30°	1352	1375	1398
35°	1339	1371	1403
40°	1324	1370	1421
45°	1302	1370	1453
50°	1274	1379	1497
55°	1241	1401	1564
60°	1189	1428	1650
65°	1113	1479	1751
70°	1012	1547	1884
75°	858	1632	1968
80°	677	1643	1592
85°	500	1249	1399



TEST NUMBER: P276838

CATALOG NUMBER: 24CZ2-60HE-RDP-UNV-L93050-W2A1-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.3	3.0
10°-20°	280.1	8.6
20°-30°	428.3	13.1
30°-40°	523.6	16.0
40°-50°	558.0	17.1
50°-60°	533.5	16.4
60°-70°	452.0	13.9
70°-80°	303.8	9.3
80°-90°	85.7	2.6
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°	805.7	24.7
0°-40°	1329.2	40.7
0°-60°	2420.7	74.2
0°-90°	3262.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3262.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1026	1024	1019	1024	1024	97
15°	990	990	989	997	995	279
25°	919	922	929	937	938	424
35°	816	822	835	851	854	511
45°	684	696	720	751	764	528
55°	529	548	597	644	667	471
65°	350	385	464	526	550	347
75°	165	225	314	367	379	177
85°	32	66	81	87	91	40
90°	0	0	0	0	0	



TEST NUMBER: P276838

CATALOG NUMBER: 24CZ2-60HE-RDP-UNV-L93050-W2A1-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1025.9	1025.9	1025.9	1025.9	1025.9
2.5°	1027.5	1027.5	1022.6	1025.9	1025.9
5°	1025.9	1024.2	1019.4	1024.2	1024.2
7.5°	1021.0	1019.4	1016.1	1021.0	1019.4
10°	1011.3	1011.3	1008.1	1012.9	1012.9
12.5°	1003.2	1001.6	1000.0	1006.4	1004.8
15°	990.3	990.3	988.6	996.7	995.1
17.5°	974.1	975.7	977.3	983.8	985.4
20°	956.3	959.5	961.1	970.8	970.8
22.5°	940.1	941.7	945.0	954.7	954.7
25°	919.1	922.3	928.8	936.9	938.5
27.5°	898.0	899.6	907.7	919.1	920.7
30°	870.5	875.4	885.1	898.0	899.6
32.5°	846.2	851.1	862.4	875.4	878.6
35°	815.5	822.0	834.9	851.1	854.3
37.5°	788.0	792.9	809.0	826.8	831.7
40°	754.0	763.7	779.9	800.9	809.0
42.5°	720.0	729.7	749.2	776.7	786.4
45°	684.4	695.8	720.0	750.8	763.7
47.5°	648.8	661.8	689.3	724.9	739.5
50°	608.4	624.6	658.6	699.0	715.2
52.5°	569.6	589.0	626.2	671.5	692.5
55°	529.1	548.5	597.1	644.0	666.6
57.5°	483.8	509.7	563.1	616.5	640.8
60°	441.7	466.0	530.7	589.0	613.2
62.5°	396.4	428.8	498.4	559.9	584.1
65°	349.5	385.1	464.4	525.9	550.1
67.5°	307.4	346.3	430.4	491.9	516.2
70°	257.3	305.8	393.2	454.7	478.9
72.5°	210.3	263.7	354.4	414.2	436.9
75°	165.0	224.9	313.9	367.3	378.6
77.5°	123.0	186.1	271.8	294.5	286.4
80°	87.4	148.9	212.0	200.6	205.5
82.5°	56.6	113.3	131.1	148.9	153.7
85°	32.4	66.3	80.9	87.4	90.6
87.5°	14.6	24.3	32.4	32.4	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)