

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: P276395

Luminaire Tested: **24CZ2-35HE-S-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

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: P276395  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35HE-S-UNV-L93050-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3267.0 lumens  
Efficiency: N/A  
Efficacy: 129.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

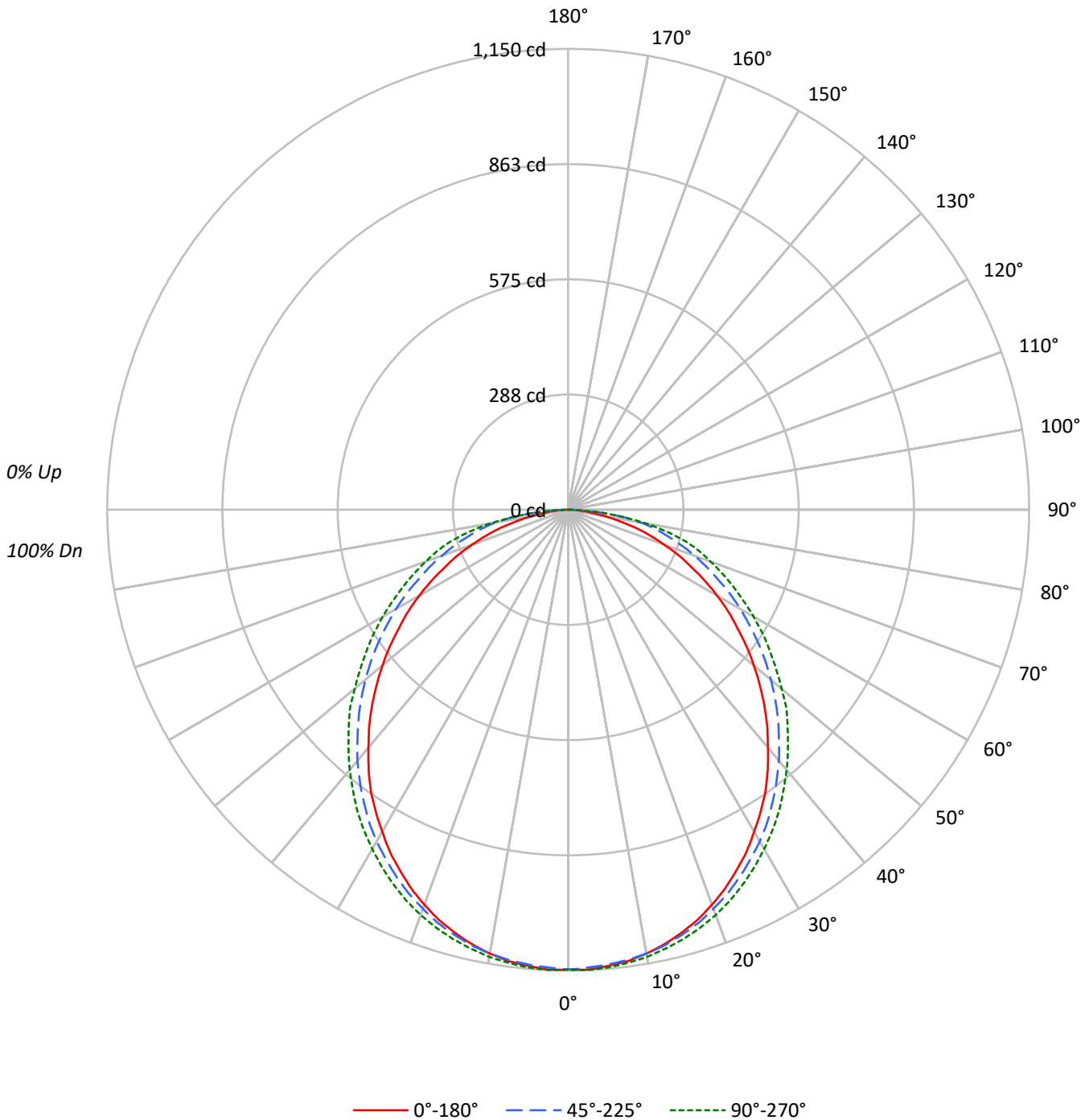
Input Watts (W): 25.19556  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276395

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L93050-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276395

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L93050-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	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	1544	1544	1544
5°	1543	1539	1549
10°	1537	1537	1548
15°	1522	1529	1545
20°	1502	1517	1541
25°	1474	1502	1531
30°	1441	1485	1519
35°	1410	1461	1507
40°	1362	1436	1489
45°	1317	1408	1473
50°	1266	1382	1455
55°	1210	1356	1441
60°	1153	1335	1438
65°	1080	1312	1447
70°	1000	1319	1486
75°	896	1343	1570
80°	724	1423	1536
85°	545	1249	1218



TEST NUMBER: P276395

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L93050-W2A1-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.7	3.3
10°-20°	310.5	9.5
20°-30°	466.7	14.3
30°-40°	555.9	17.0
40°-50°	569.0	17.4
50°-60°	512.2	15.7
60°-70°	402.3	12.3
70°-80°	261.1	8.0
80°-90°	80.8	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°	885.8	27.1
0°-40°	1441.7	44.1
0°-60°	2522.9	77.2
0°-90°	3267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3267.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1142	1145	1139	1146	1147	109
15°	1093	1096	1098	1107	1109	308
25°	993	1001	1012	1028	1032	457
35°	858	869	889	911	917	535
45°	692	709	740	768	774	534
55°	516	539	578	608	614	462
65°	339	365	412	446	454	338
75°	172	206	258	294	302	182
85°	35	65	81	79	79	43
90°	0	0	0	0	0	



TEST NUMBER: P276395

CATALOG NUMBER: 24CZ2-35HE-S-UNV-L93050-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1147.7	1147.7	1147.7	1147.7	1147.7
2.5°	1148.8	1148.8	1143.6	1148.8	1149.8
5°	1142.5	1144.6	1139.4	1145.6	1146.7
7.5°	1136.3	1136.3	1133.2	1139.4	1140.5
10°	1124.9	1125.9	1124.9	1132.2	1133.2
12.5°	1110.4	1112.4	1113.5	1120.7	1121.8
15°	1092.7	1095.8	1097.9	1107.2	1109.3
17.5°	1073.0	1076.1	1081.3	1091.7	1093.8
20°	1049.1	1053.3	1059.5	1073.0	1076.1
22.5°	1023.2	1027.3	1037.7	1050.2	1055.4
25°	993.1	1001.4	1011.8	1028.4	1031.5
27.5°	963.0	970.3	983.8	1001.4	1005.6
30°	927.7	939.1	955.7	973.4	977.5
32.5°	893.5	904.9	924.6	943.3	948.5
35°	858.2	868.6	889.3	911.1	917.3
37.5°	817.7	831.2	854.0	875.8	882.1
40°	775.2	791.8	817.7	840.6	847.8
42.5°	734.7	752.3	778.3	803.2	811.5
45°	692.2	708.8	739.9	767.9	774.1
47.5°	648.6	667.3	700.5	728.5	738.9
50°	605.0	624.7	660.0	689.0	695.3
52.5°	561.4	582.2	619.5	650.7	653.8
55°	515.7	538.6	578.0	608.1	614.3
57.5°	474.2	494.0	536.5	567.6	574.9
60°	428.6	450.4	496.0	525.1	534.4
62.5°	385.0	407.8	455.6	484.6	492.9
65°	339.3	365.3	412.0	446.2	454.5
67.5°	299.9	324.8	374.6	407.8	416.1
70°	254.2	282.3	335.2	369.4	377.7
72.5°	214.8	243.9	296.8	330.0	342.4
75°	172.3	205.5	258.4	293.7	302.0
77.5°	130.8	169.1	223.1	250.1	250.1
80°	93.4	133.9	183.7	196.1	198.2
82.5°	61.2	100.7	135.9	134.9	134.9
85°	35.3	65.4	80.9	78.9	78.9
87.5°	13.5	27.0	29.1	29.1	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)