

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: P276626

Luminaire Tested: **24CZ2-45HE-S-UNV-L92765-W2A1-U-3500K**

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: P276626  
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: 24CZ2-45HE-S-UNV-L92765-W2A1-U-3500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3814.0 lumens  
Efficiency: N/A  
Efficacy: 121.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

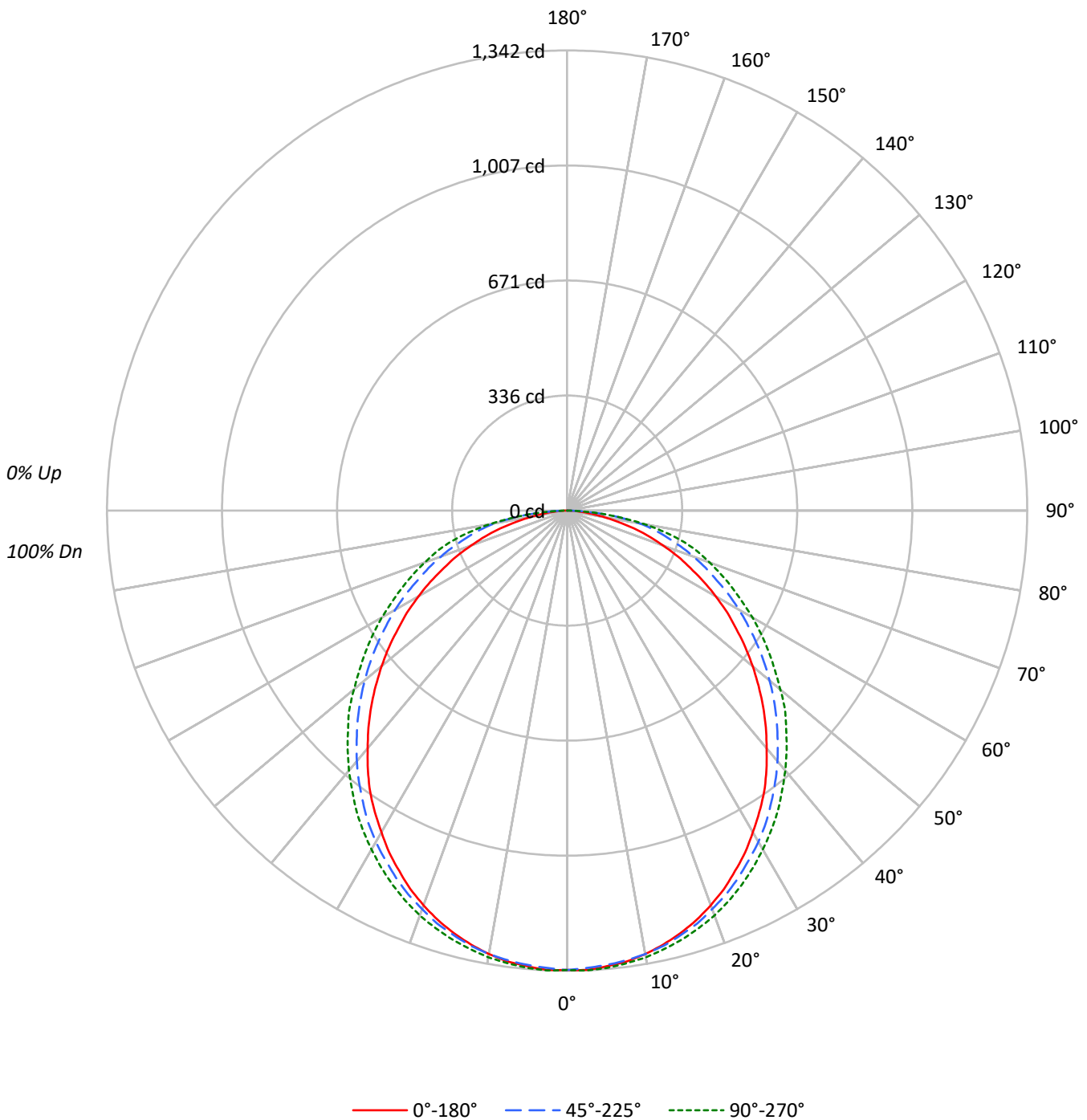
Input Watts (W): 31.527  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	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°	1803	1803	1803
5°	1801	1797	1808
10°	1794	1794	1807
15°	1777	1785	1804
20°	1754	1771	1799
25°	1721	1754	1788
30°	1683	1733	1773
35°	1646	1705	1759
40°	1590	1677	1738
45°	1537	1644	1720
50°	1478	1613	1699
55°	1412	1583	1682
60°	1346	1558	1679
65°	1261	1531	1689
70°	1168	1539	1735
75°	1045	1568	1832
80°	845	1661	1793
85°	636	1459	1422



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.8	3.3
10°-20°	362.4	9.5
20°-30°	544.8	14.3
30°-40°	649.0	17.0
40°-50°	664.2	17.4
50°-60°	598.0	15.7
60°-70°	469.6	12.3
70°-80°	304.8	8.0
80°-90°	94.3	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°	1034.1	27.1
0°-40°	1683.1	44.1
0°-60°	2945.3	77.2
0°-90°	3814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3814.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1340	1340	1340	1340	1340	
5°	1334	1336	1330	1337	1339	127
15°	1276	1279	1282	1293	1295	360
25°	1159	1169	1181	1201	1204	534
35°	1002	1014	1038	1064	1071	625
45°	808	827	864	896	904	623
55°	602	629	675	710	717	540
65°	396	426	481	521	531	394
75°	201	240	302	343	352	213
85°	41	76	94	92	92	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1339.9	1339.9	1339.9	1339.9	1339.9
2.5°	1341.1	1341.1	1335.0	1341.1	1342.3
5°	1333.8	1336.2	1330.2	1337.4	1338.7
7.5°	1326.5	1326.5	1322.9	1330.2	1331.4
10°	1313.2	1314.4	1313.2	1321.7	1322.9
12.5°	1296.3	1298.7	1299.9	1308.4	1309.6
15°	1275.7	1279.3	1281.7	1292.6	1295.0
17.5°	1252.6	1256.3	1262.3	1274.4	1276.9
20°	1224.8	1229.6	1236.9	1252.6	1256.3
22.5°	1194.5	1199.3	1211.5	1226.0	1232.0
25°	1159.4	1169.1	1181.2	1200.6	1204.2
27.5°	1124.2	1132.7	1148.5	1169.1	1173.9
30°	1083.0	1096.4	1115.7	1136.3	1141.2
32.5°	1043.1	1056.4	1079.4	1101.2	1107.3
35°	1001.9	1014.0	1038.2	1063.7	1070.9
37.5°	954.6	970.4	997.0	1022.5	1029.7
40°	905.0	924.3	954.6	981.3	989.8
42.5°	857.7	878.3	908.6	937.7	947.4
45°	808.0	827.4	863.8	896.5	903.7
47.5°	757.2	779.0	817.7	850.4	862.6
50°	706.3	729.3	770.5	804.4	811.7
52.5°	655.4	679.6	723.2	759.6	763.2
55°	602.1	628.7	674.8	709.9	717.2
57.5°	553.6	576.7	626.3	662.7	671.1
60°	500.3	525.8	579.1	613.0	623.9
62.5°	449.4	476.1	531.8	565.7	575.4
65°	396.1	426.4	480.9	520.9	530.6
67.5°	350.1	379.2	437.3	476.1	485.8
70°	296.8	329.5	391.3	431.3	441.0
72.5°	250.8	284.7	346.5	385.2	399.8
75°	201.1	239.9	301.7	342.8	352.5
77.5°	152.6	197.5	260.5	292.0	292.0
80°	109.0	156.3	214.4	229.0	231.4
82.5°	71.5	117.5	158.7	157.5	157.5
85°	41.2	76.3	94.5	92.1	92.1
87.5°	15.7	31.5	33.9	33.9	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)