

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: P276328

Luminaire Tested: **24CZ2-45HE-S-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276328  
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-L83050-W2A1-U-3500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4458.0 lumens  
Efficiency: N/A  
Efficacy: 141.8 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

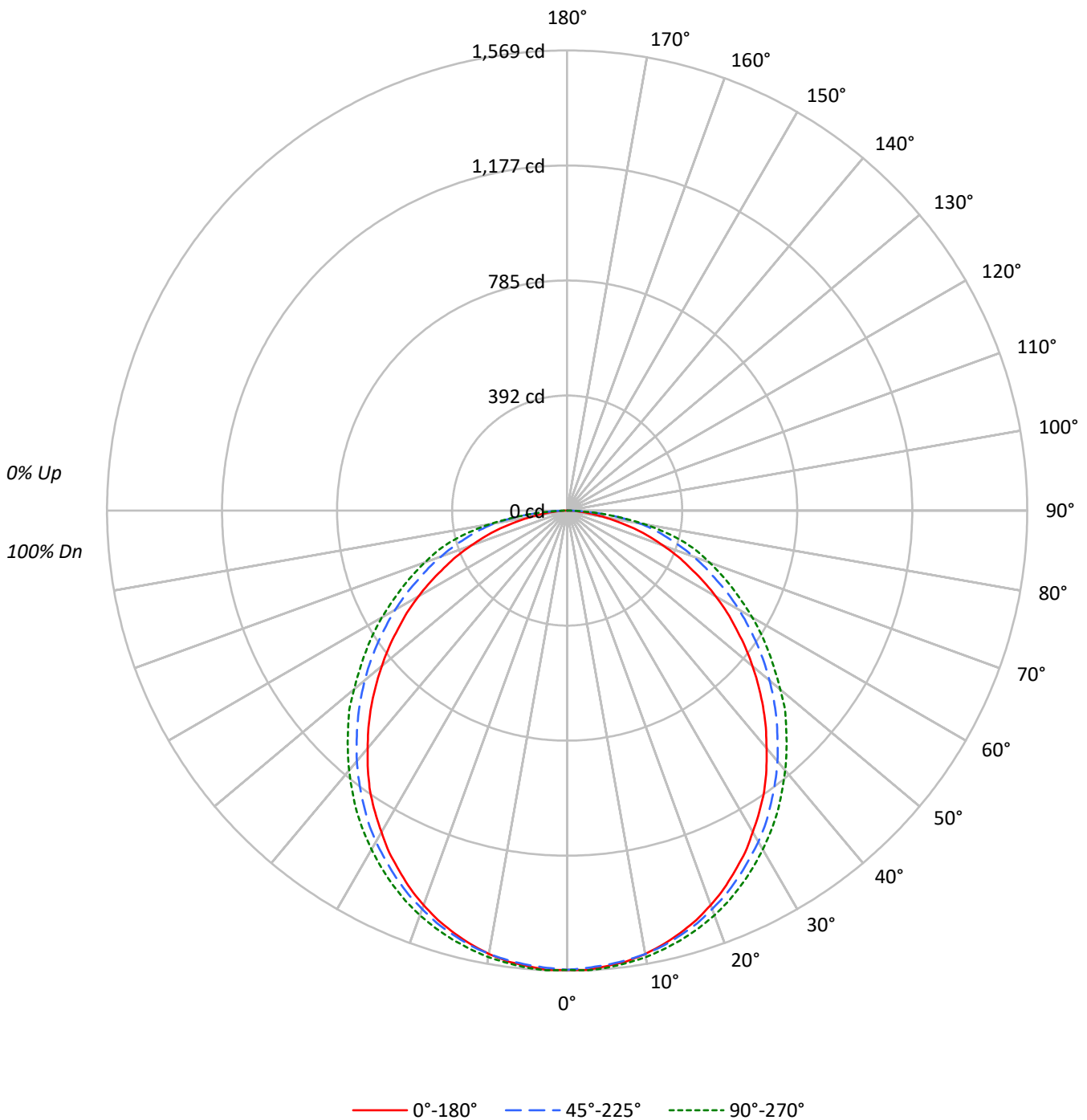
Input Watts (W): 31.434  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2107	2107	2107
5°	2106	2100	2113
10°	2097	2097	2113
15°	2077	2087	2109
20°	2050	2070	2103
25°	2012	2050	2090
30°	1967	2026	2072
35°	1924	1993	2056
40°	1858	1960	2032
45°	1797	1921	2010
50°	1728	1885	1986
55°	1651	1850	1966
60°	1574	1822	1963
65°	1474	1790	1975
70°	1365	1799	2028
75°	1222	1833	2142
80°	987	1942	2096
85°	743	1706	1661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.3	3.3
10°-20°	423.7	9.5
20°-30°	636.8	14.3
30°-40°	758.6	17.0
40°-50°	776.4	17.4
50°-60°	699.0	15.7
60°-70°	548.9	12.3
70°-80°	356.3	8.0
80°-90°	110.2	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°	1208.8	27.1
0°-40°	1967.3	44.1
0°-60°	3442.7	77.2
0°-90°	4458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4458.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1566	1566	1566	1566	1566	
5°	1559	1562	1555	1563	1565	148
15°	1491	1495	1498	1511	1514	420
25°	1355	1366	1381	1403	1408	624
35°	1171	1185	1214	1243	1252	731
45°	944	967	1010	1048	1056	728
55°	704	735	789	830	838	631
65°	463	498	562	609	620	461
75°	235	280	353	401	412	249
85°	48	89	110	108	108	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1566.1	1566.1	1566.1	1566.1	1566.1
2.5°	1567.5	1567.5	1560.5	1567.5	1569.0
5°	1559.0	1561.9	1554.8	1563.3	1564.7
7.5°	1550.5	1550.5	1546.3	1554.8	1556.2
10°	1535.0	1536.4	1535.0	1544.9	1546.3
12.5°	1515.1	1518.0	1519.4	1529.3	1530.7
15°	1491.1	1495.3	1498.2	1510.9	1513.7
17.5°	1464.2	1468.4	1475.5	1489.7	1492.5
20°	1431.6	1437.3	1445.8	1464.2	1468.4
22.5°	1396.2	1401.9	1416.0	1433.0	1440.1
25°	1355.1	1366.5	1380.6	1403.3	1407.5
27.5°	1314.1	1324.0	1342.4	1366.5	1372.1
30°	1265.9	1281.5	1304.2	1328.2	1333.9
32.5°	1219.2	1234.8	1261.7	1287.2	1294.2
35°	1171.1	1185.2	1213.5	1243.3	1251.8
37.5°	1115.8	1134.2	1165.4	1195.1	1203.6
40°	1057.8	1080.4	1115.8	1147.0	1156.9
42.5°	1002.5	1026.6	1062.0	1096.0	1107.3
45°	944.5	967.1	1009.6	1047.9	1056.4
47.5°	885.0	910.5	955.8	994.1	1008.2
50°	825.5	852.4	900.6	940.2	948.7
52.5°	766.1	794.4	845.4	887.8	892.1
55°	703.8	734.9	788.7	829.8	838.3
57.5°	647.1	674.0	732.1	774.6	784.5
60°	584.8	614.6	676.9	716.5	729.3
62.5°	525.3	556.5	621.6	661.3	672.6
65°	463.0	498.4	562.2	608.9	620.2
67.5°	409.2	443.2	511.2	556.5	567.8
70°	346.9	385.2	457.4	504.1	515.4
72.5°	293.1	332.8	405.0	450.3	467.3
75°	235.1	280.4	352.6	400.7	412.1
77.5°	178.4	230.8	304.4	341.3	341.3
80°	127.4	182.7	250.6	267.6	270.5
82.5°	83.5	137.4	185.5	184.1	184.1
85°	48.1	89.2	110.5	107.6	107.6
87.5°	18.4	36.8	39.6	39.6	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)