

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: P277343

Luminaire Tested: **22CZ2-39HE-S-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277343  
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: 22CZ2-39HE-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: 4103.0 lumens  
Efficiency: N/A  
Efficacy: 129.8 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

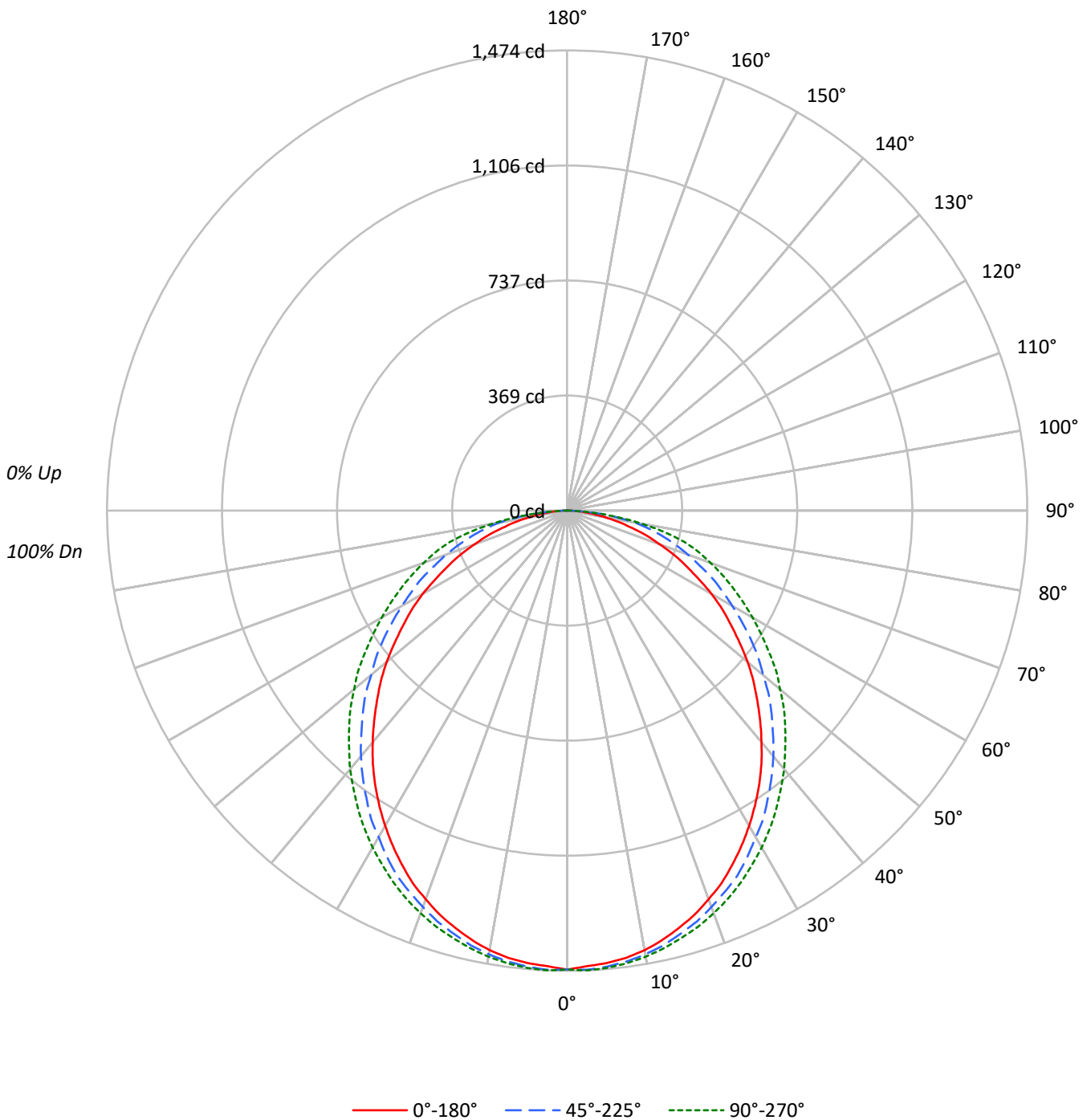
Input Watts (W): 31.62  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3956	3956	3956
5°	3930	3961	3971
10°	3907	3944	3965
15°	3856	3909	3947
20°	3794	3870	3931
25°	3717	3831	3905
30°	3622	3754	3873
35°	3522	3685	3836
40°	3403	3611	3799
45°	3279	3526	3759
50°	3158	3430	3727
55°	3009	3368	3700
60°	2875	3287	3688
65°	2682	3266	3730
70°	2471	3238	3841
75°	2229	3284	4040
80°	1928	3381	3797
85°	1596	2837	2837



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.0	3.4
10°-20°	395.7	9.6
20°-30°	592.0	14.4
30°-40°	701.1	17.1
40°-50°	714.5	17.4
50°-60°	640.4	15.6
60°-70°	501.4	12.2
70°-80°	323.3	7.9
80°-90°	95.5	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°	1126.7	27.5
0°-40°	1827.9	44.5
0°-60°	3182.8	77.6
0°-90°	4103.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4103.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1470	1470	1470	1470	1470	
5°	1455	1459	1466	1468	1470	138
15°	1384	1392	1403	1415	1417	390
25°	1252	1264	1290	1308	1315	576
35°	1072	1085	1122	1156	1168	670
45°	862	881	927	974	988	665
55°	641	662	718	768	789	575
65°	421	446	513	563	586	418
75°	214	247	316	370	389	230
85°	52	71	92	92	92	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1470.2	1470.2	1470.2	1470.2	1470.2
2.5°	1460.7	1464.5	1472.1	1474.1	1474.1
5°	1454.9	1458.7	1466.4	1468.3	1470.2
7.5°	1445.3	1447.3	1456.8	1460.7	1462.6
10°	1430.0	1433.9	1443.4	1449.2	1451.1
12.5°	1409.0	1414.7	1426.2	1433.9	1435.8
15°	1384.1	1391.7	1403.2	1414.7	1416.6
17.5°	1357.3	1364.9	1380.3	1393.7	1397.5
20°	1324.7	1334.3	1351.5	1366.9	1372.6
22.5°	1292.2	1299.9	1320.9	1340.1	1345.8
25°	1252.0	1263.5	1290.3	1307.5	1315.2
27.5°	1209.9	1223.3	1250.1	1273.1	1280.7
30°	1165.8	1179.2	1208.0	1236.7	1246.3
32.5°	1119.9	1135.2	1169.7	1198.4	1208.0
35°	1072.0	1085.4	1121.8	1156.3	1167.8
37.5°	1022.3	1033.8	1075.9	1112.2	1123.7
40°	968.7	984.0	1028.0	1070.1	1081.6
42.5°	915.1	932.3	976.3	1022.3	1033.8
45°	861.5	880.6	926.6	974.4	987.8
47.5°	809.8	825.1	876.8	922.7	941.9
50°	754.3	769.6	819.3	871.0	890.2
52.5°	696.8	717.9	771.5	821.3	844.2
55°	641.3	662.4	717.9	767.7	788.7
57.5°	589.6	606.9	664.3	716.0	737.0
60°	534.1	549.4	610.7	666.2	685.3
62.5°	474.8	497.7	560.9	612.6	635.6
65°	421.2	446.0	513.0	562.8	585.8
67.5°	371.4	394.4	459.4	513.0	537.9
70°	314.0	344.6	411.6	465.2	488.2
72.5°	268.0	294.8	363.7	417.3	442.2
75°	214.4	247.0	315.9	369.5	388.6
77.5°	170.4	202.9	268.0	310.1	319.7
80°	124.4	157.0	218.2	239.3	245.0
82.5°	84.2	114.9	157.0	162.7	164.6
85°	51.7	70.8	91.9	91.9	91.9
87.5°	24.9	28.7	32.5	30.6	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)