

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: P276356

Luminaire Tested: **24CZ2-70HE-S-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276356  
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: 24CZ2-70HE-S-UNV-L83050-W2A1-U-5000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7429.0 lumens  
Efficiency: N/A  
Efficacy: 132.0 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

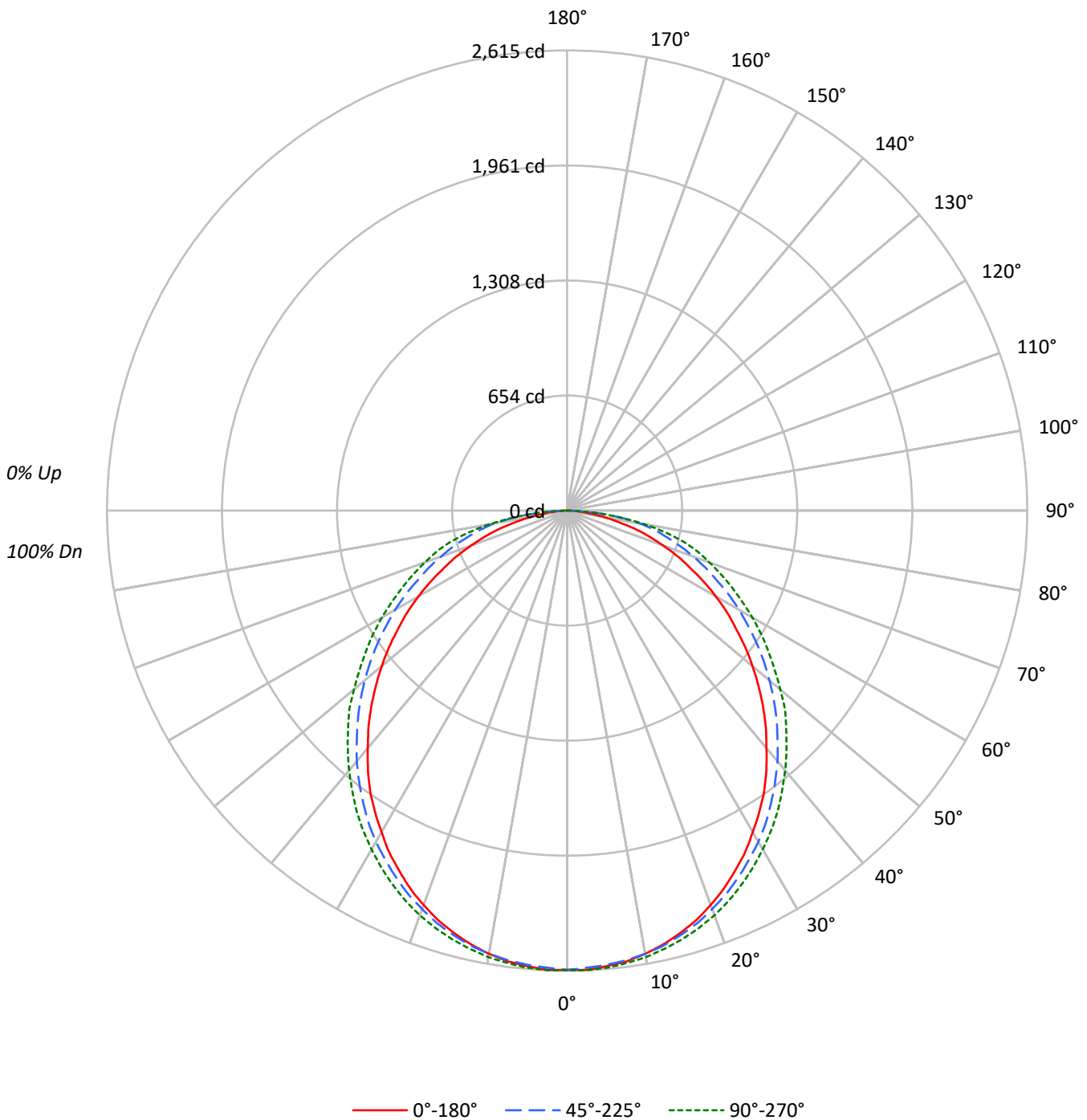
Input Watts (W): 56.290389  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276356

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L83050-W2A1-U-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P276356

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L83050-W2A1-U-5000K

**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°	3512	3512	3512
5°	3509	3499	3522
10°	3495	3495	3521
15°	3461	3478	3514
20°	3416	3450	3504
25°	3353	3416	3482
30°	3278	3377	3454
35°	3205	3322	3426
40°	3096	3266	3386
45°	2995	3201	3350
50°	2880	3141	3309
55°	2751	3083	3277
60°	2623	3035	3270
65°	2457	2982	3291
70°	2274	2998	3379
75°	2036	3055	3570
80°	1646	3236	3492
85°	1238	2842	2768



TEST NUMBER: P276356

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L83050-W2A1-U-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.1	3.3
10°-20°	706.0	9.5
20°-30°	1061.3	14.3
30°-40°	1264.1	17.0
40°-50°	1293.8	17.4
50°-60°	1164.8	15.7
60°-70°	914.7	12.3
70°-80°	593.7	8.0
80°-90°	183.6	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°	2014.3	27.1
0°-40°	3278.4	44.1
0°-60°	5737.0	77.2
0°-90°	7429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7429.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2610	2610	2610	2610	2610	
5°	2598	2603	2591	2605	2608	247
15°	2485	2492	2497	2518	2522	701
25°	2258	2277	2301	2338	2346	1040
35°	1952	1975	2022	2072	2086	1217
45°	1574	1612	1682	1746	1760	1213
55°	1173	1225	1314	1383	1397	1051
65°	772	831	937	1015	1034	768
75°	392	467	588	668	687	415
85°	80	149	184	179	179	97
90°	0	0	0	0	0	



TEST NUMBER: P276356

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L83050-W2A1-U-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2609.9	2609.9	2609.9	2609.9	2609.9
2.5°	2612.2	2612.2	2600.4	2612.2	2614.6
5°	2598.1	2602.8	2591.0	2605.1	2607.5
7.5°	2583.9	2583.9	2576.8	2591.0	2593.3
10°	2557.9	2560.3	2557.9	2574.5	2576.8
12.5°	2524.9	2529.6	2532.0	2548.5	2550.9
15°	2484.8	2491.9	2496.6	2517.8	2522.5
17.5°	2440.0	2447.0	2458.8	2482.4	2487.2
20°	2385.7	2395.1	2409.3	2440.0	2447.0
22.5°	2326.7	2336.1	2359.7	2388.0	2399.8
25°	2258.3	2277.1	2300.7	2338.5	2345.6
27.5°	2189.8	2206.3	2237.0	2277.1	2286.6
30°	2109.6	2135.6	2173.3	2213.4	2222.9
32.5°	2031.7	2057.7	2102.5	2145.0	2156.8
35°	1951.5	1975.1	2022.3	2071.8	2086.0
37.5°	1859.5	1890.1	1942.1	1991.6	2005.8
40°	1762.7	1800.5	1859.5	1911.4	1927.9
42.5°	1670.7	1710.8	1769.8	1826.4	1845.3
45°	1573.9	1611.7	1682.5	1746.2	1760.4
47.5°	1474.8	1517.3	1592.8	1656.5	1680.1
50°	1375.7	1420.6	1500.8	1566.9	1581.0
52.5°	1276.6	1323.8	1408.8	1479.5	1486.6
55°	1172.8	1224.7	1314.4	1382.8	1397.0
57.5°	1078.4	1123.2	1220.0	1290.8	1307.3
60°	974.6	1024.1	1127.9	1194.0	1215.3
62.5°	875.5	927.4	1035.9	1102.0	1120.9
65°	771.6	830.6	936.8	1014.7	1033.6
67.5°	682.0	738.6	851.9	927.4	946.2
70°	578.1	641.8	762.2	840.1	858.9
72.5°	488.5	554.5	674.9	750.4	778.7
75°	391.7	467.2	587.6	667.8	686.7
77.5°	297.3	384.6	507.3	568.7	568.7
80°	212.4	304.4	417.7	446.0	450.7
82.5°	139.2	228.9	309.1	306.8	306.8
85°	80.2	148.7	184.1	179.3	179.3
87.5°	30.7	61.4	66.1	66.1	63.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)