

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: P230442

Luminaire Tested: **24CZ-LD5-45SE-SQP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230442  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-45SE-SQP-UNV-L940-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SQP LENS  
Light Source: (84) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2786.7 lumens  
Efficiency: N/A  
Efficacy: 69.8 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

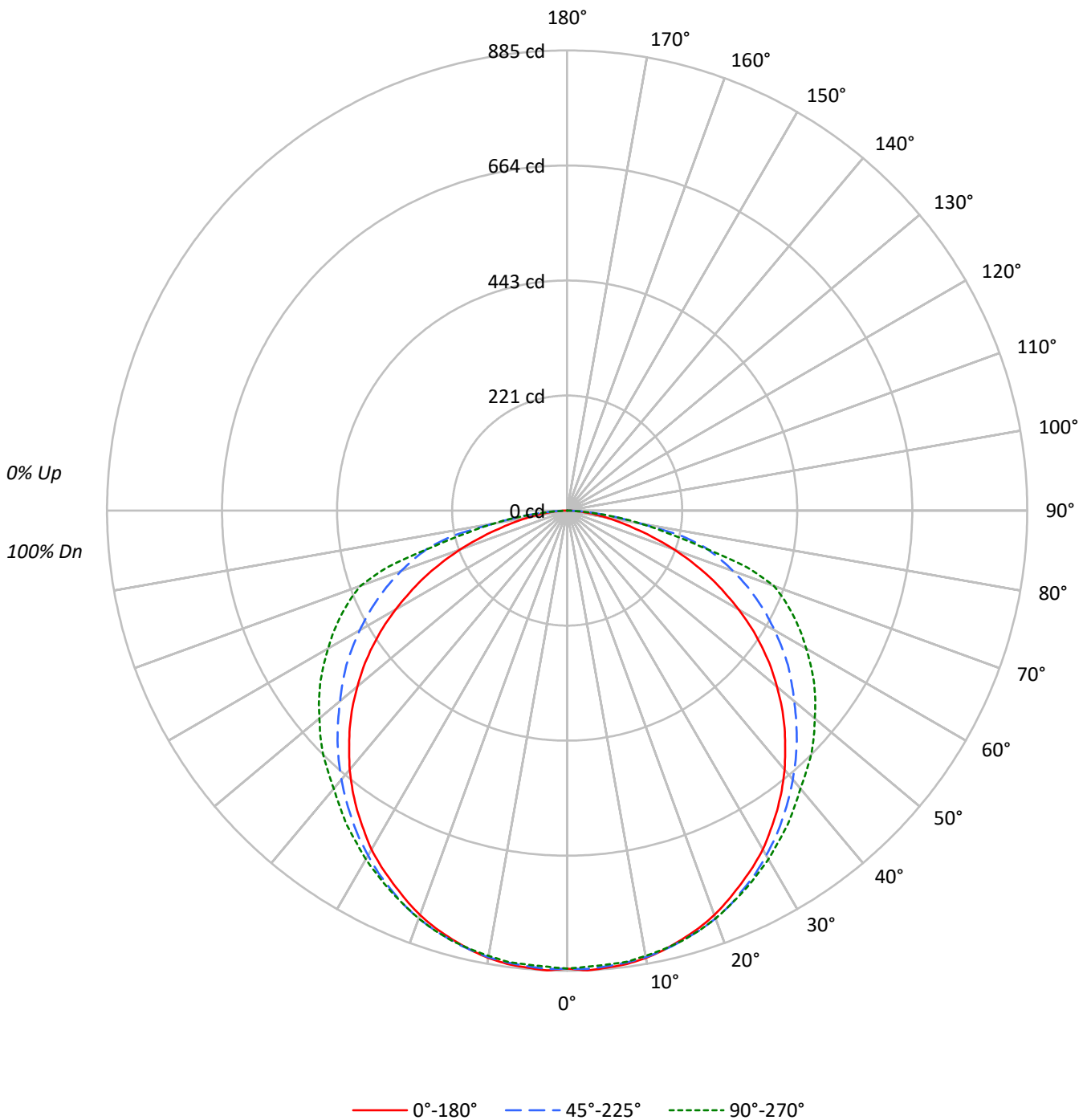
Input Watts (W): 39.91  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	101	97	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	60	70	64	59	67	63	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	51	45	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	29	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	51	38	30	24	50	37	30	24	36	29	24	35	29	24	35	28	24	22

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

	0°	45°	90°
0°	1185	1185	1185
5°	1192	1188	1184
10°	1194	1192	1188
15°	1189	1193	1193
20°	1185	1195	1195
25°	1175	1192	1197
30°	1170	1190	1203
35°	1156	1187	1213
40°	1143	1186	1226
45°	1126	1189	1263
50°	1103	1193	1302
55°	1074	1216	1361
60°	1026	1239	1429
65°	962	1279	1531
70°	861	1336	1665
75°	711	1429	1377
80°	580	1104	1115
85°	466	733	689



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.7	3.0
10°-20°	241.4	8.7
20°-30°	369.0	13.2
30°-40°	451.3	16.2
40°-50°	482.9	17.3
50°-60°	462.4	16.6
60°-70°	391.1	14.0
70°-80°	247.9	8.9
80°-90°	57.0	2.0
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°	694.1	24.9
0°-40°	1145.4	41.1
0°-60°	2090.6	75.0
0°-90°	2786.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2786.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	882	878	880	878	877	84
15°	854	852	856	856	856	241
25°	792	792	803	806	806	365
35°	704	708	723	733	738	440
45°	592	602	625	651	664	456
55°	458	472	518	561	580	408
65°	302	331	402	456	481	298
75°	137	193	275	274	265	149
85°	30	46	48	43	45	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	880.9	880.9	880.9	880.9	880.9
2.5°	885.2	880.9	882.4	880.9	878.0
5°	882.4	878.0	879.5	878.0	876.6
7.5°	879.5	875.2	876.6	875.2	875.2
10°	873.7	869.4	872.3	870.8	869.4
12.5°	865.1	862.2	865.1	863.7	863.7
15°	853.6	852.1	856.5	856.5	856.5
17.5°	842.1	840.6	846.4	846.4	846.4
20°	827.7	826.2	834.9	834.9	834.9
22.5°	810.4	809.0	820.5	820.5	820.5
25°	791.7	791.7	803.2	806.1	806.1
27.5°	773.0	773.0	785.9	790.2	790.2
30°	752.8	752.8	765.8	771.5	774.4
32.5°	728.3	731.2	745.6	752.8	755.7
35°	703.9	708.2	722.6	732.7	738.4
37.5°	678.0	682.3	699.6	711.1	718.3
40°	650.6	656.4	675.1	689.5	698.1
42.5°	620.4	629.0	650.6	669.3	680.8
45°	591.6	601.7	624.7	650.6	663.6
47.5°	559.9	571.4	597.4	630.5	643.4
50°	526.8	538.3	570.0	607.4	621.8
52.5°	493.7	506.7	544.1	584.4	601.7
55°	457.7	472.1	518.2	561.4	580.1
57.5°	420.3	437.6	489.4	535.5	555.6
60°	381.4	403.0	460.6	509.6	531.1
62.5°	341.1	367.1	431.8	483.6	506.7
65°	302.3	331.1	401.6	456.3	480.8
67.5°	260.5	296.5	371.4	430.4	453.4
70°	218.8	260.5	339.7	400.2	423.2
72.5°	177.0	227.4	308.0	362.7	362.7
75°	136.7	192.9	274.9	273.5	264.9
77.5°	103.6	161.2	226.0	192.9	194.3
80°	74.8	129.5	142.5	142.5	143.9
82.5°	50.4	99.3	92.1	90.7	93.6
85°	30.2	46.1	47.5	43.2	44.6
87.5°	14.4	15.8	13.0	8.6	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)