

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: P391398

Luminaire Tested: **24CZ2-45VHE-RDP-UNV-L950-CD1-SDWPD1-U**

Issue Date: 2/28/2020

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: P391398  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45VHE-RDP-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2712.5 lumens  
Efficiency: N/A  
Efficacy: 91.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

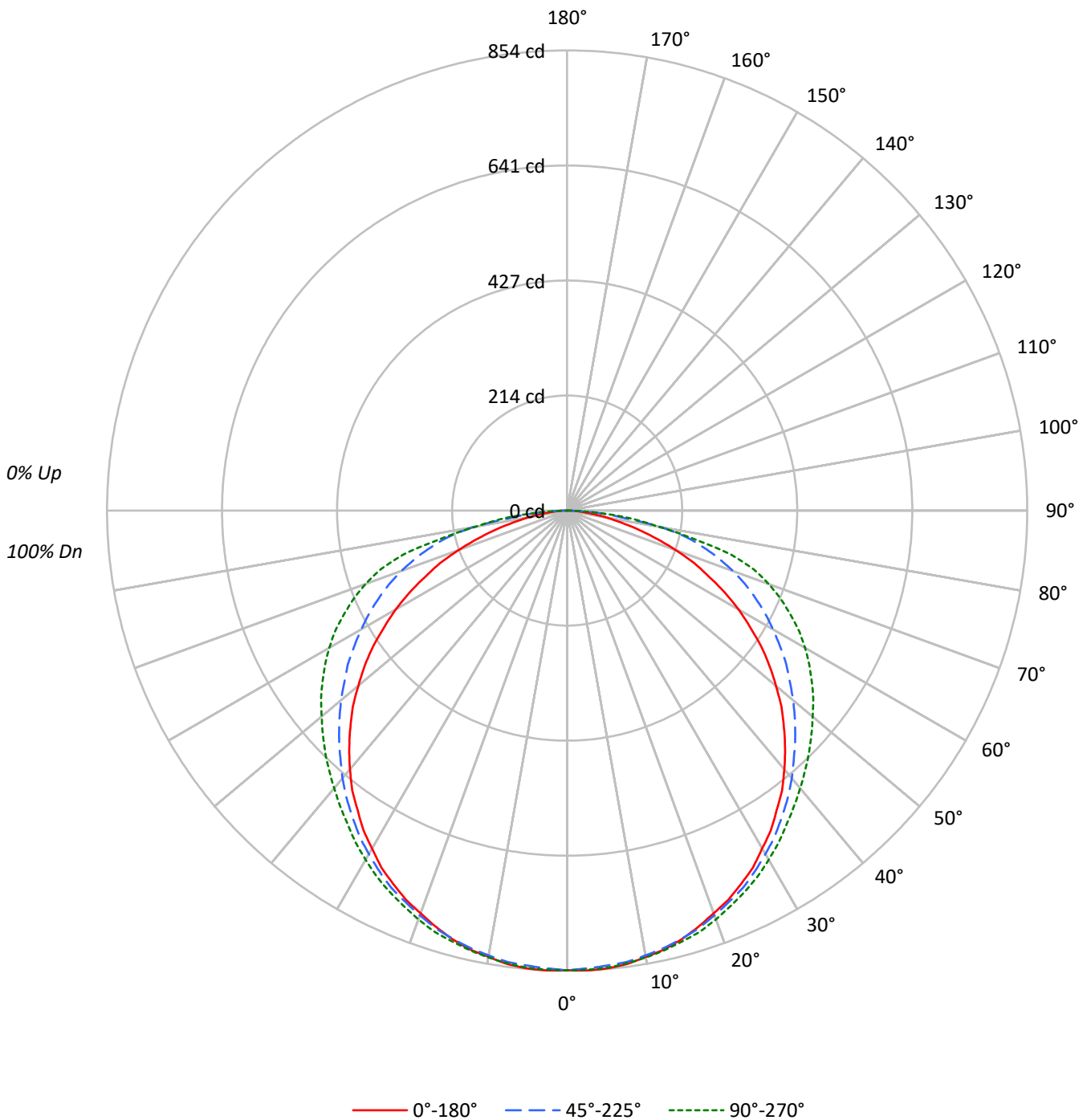
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1148	1148	1148
5°	1152	1145	1150
10°	1149	1145	1151
15°	1147	1145	1153
20°	1139	1144	1156
25°	1135	1147	1159
30°	1125	1143	1162
35°	1114	1140	1167
40°	1101	1139	1182
45°	1083	1139	1208
50°	1059	1146	1245
55°	1032	1165	1300
60°	988	1188	1372
65°	925	1229	1456
70°	841	1286	1566
75°	713	1357	1637
80°	563	1366	1324
85°	415	1039	1162



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.9	3.0
10°-20°	232.9	8.6
20°-30°	356.1	13.1
30°-40°	435.3	16.0
40°-50°	464.0	17.1
50°-60°	443.6	16.4
60°-70°	375.8	13.9
70°-80°	252.6	9.3
80°-90°	71.3	2.6
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°	669.9	24.7
0°-40°	1105.3	40.7
0°-60°	2012.9	74.2
0°-90°	2712.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2712.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	853	852	848	852	852	81
15°	823	823	822	829	827	232
25°	764	767	772	779	780	352
35°	678	684	694	708	710	425
45°	569	578	599	624	635	439
55°	440	456	496	536	554	392
65°	291	320	386	437	457	288
75°	137	187	261	305	315	147
85°	27	55	67	73	75	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	853.0	853.0	853.0	853.0	853.0
2.5°	854.3	854.3	850.3	853.0	853.0
5°	853.0	851.7	847.6	851.7	851.7
7.5°	849.0	847.6	844.9	849.0	847.6
10°	840.9	840.9	838.2	842.2	842.2
12.5°	834.2	832.8	831.5	836.9	835.5
15°	823.4	823.4	822.1	828.8	827.4
17.5°	809.9	811.3	812.6	818.0	819.4
20°	795.2	797.8	799.2	807.3	807.3
22.5°	781.7	783.0	785.7	793.8	793.8
25°	764.2	766.9	772.3	779.0	780.4
27.5°	746.7	748.1	754.8	764.2	765.6
30°	723.8	727.9	736.0	746.7	748.1
32.5°	703.7	707.7	717.1	727.9	730.6
35°	678.1	683.5	694.2	707.7	710.4
37.5°	655.2	659.3	672.7	687.5	691.6
40°	627.0	635.0	648.5	666.0	672.7
42.5°	598.7	606.8	622.9	645.8	653.9
45°	569.1	578.5	598.7	624.3	635.0
47.5°	539.5	550.3	573.2	602.8	614.9
50°	505.9	519.3	547.6	581.2	594.7
52.5°	473.6	489.7	520.7	558.4	575.8
55°	440.0	456.1	496.5	535.5	554.3
57.5°	402.3	423.8	468.2	512.6	532.8
60°	367.3	387.5	441.3	489.7	509.9
62.5°	329.6	356.5	414.4	465.5	485.7
65°	290.6	320.2	386.1	437.3	457.4
67.5°	255.6	287.9	357.9	409.0	429.2
70°	213.9	254.3	326.9	378.1	398.2
72.5°	174.9	219.3	294.6	344.4	363.3
75°	137.2	187.0	261.0	305.4	314.8
77.5°	102.3	154.7	226.0	244.9	238.1
80°	72.7	123.8	176.3	166.8	170.9
82.5°	47.1	94.2	109.0	123.8	127.8
85°	26.9	55.2	67.3	72.7	75.3
87.5°	12.1	20.2	26.9	26.9	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)