

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: P388712

Luminaire Tested: **24CZ2-45HE-SQR-UNV-L940-CD1-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: P388712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-SQR-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3759.0 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

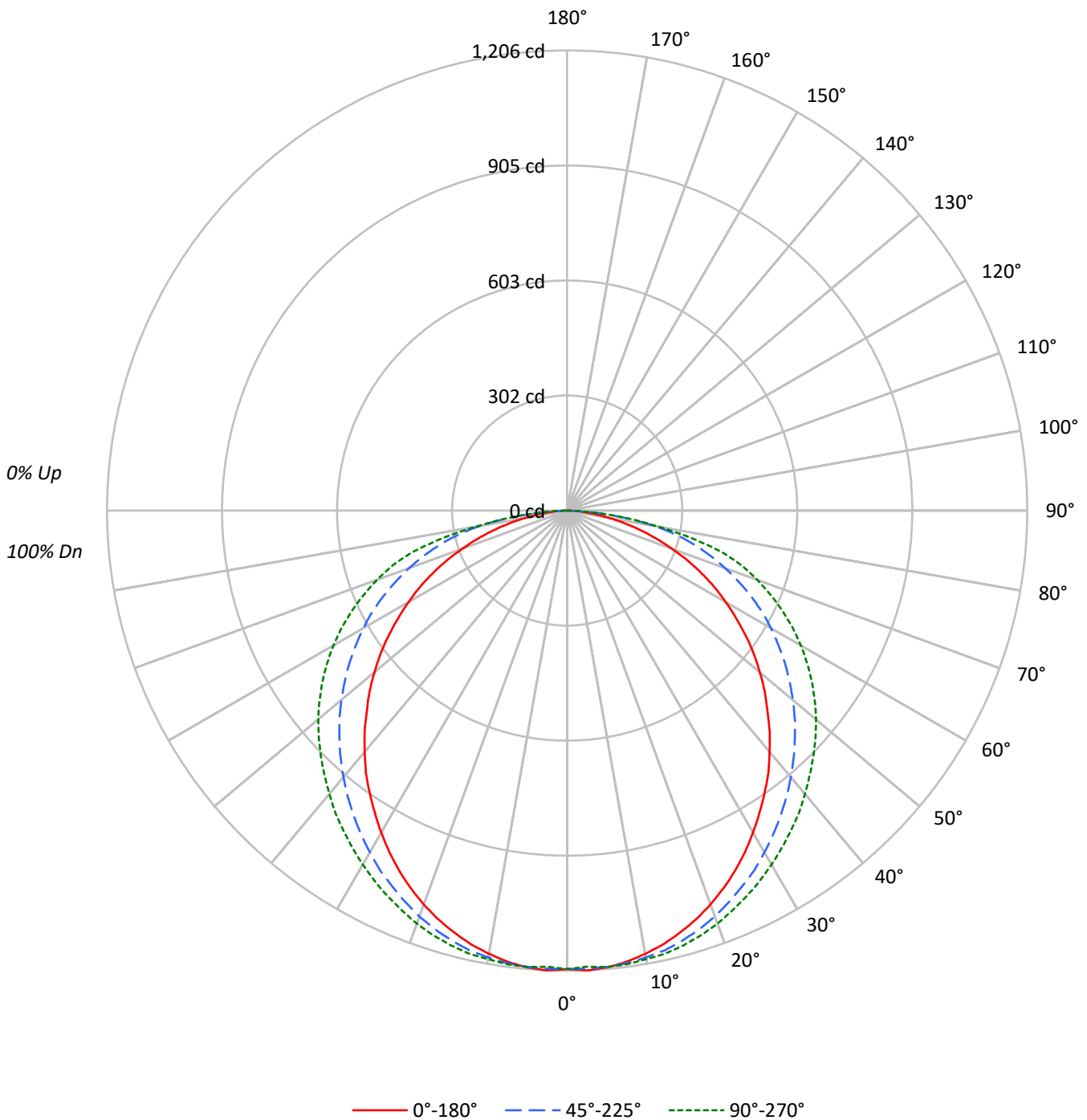
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	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	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1617	1617	1617
5°	1623	1621	1621
10°	1611	1625	1631
15°	1594	1625	1643
20°	1573	1621	1649
25°	1546	1612	1655
30°	1514	1606	1664
35°	1482	1602	1680
40°	1450	1602	1703
45°	1412	1606	1736
50°	1380	1616	1782
55°	1339	1634	1837
60°	1293	1660	1904
65°	1237	1691	1984
70°	1148	1734	2085
75°	1039	1794	2181
80°	876	1798	1875
85°	670	1360	1360



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.1	3.0
10°-20°	328.2	8.7
20°-30°	498.4	13.3
30°-40°	606.3	16.1
40°-50°	645.5	17.2
50°-60°	614.8	16.4
60°-70°	514.2	13.7
70°-80°	342.8	9.1
80°-90°	94.8	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°	940.6	25.0
0°-40°	1546.9	41.2
0°-60°	2807.2	74.7
0°-90°	3759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1202	1202	1202	1202	1202	
5°	1202	1194	1200	1200	1200	114
15°	1144	1147	1167	1176	1179	323
25°	1041	1055	1086	1105	1115	479
35°	902	928	976	1008	1023	565
45°	742	782	844	891	912	574
55°	571	621	696	757	783	510
65°	388	446	531	597	623	384
75°	200	263	345	403	420	212
85°	43	81	88	87	88	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1201.6	1201.6	1201.6	1201.6	1201.6
2.5°	1206.5	1197.8	1201.6	1201.6	1196.6
5°	1201.6	1194.1	1200.3	1200.3	1200.3
7.5°	1192.9	1186.7	1196.6	1199.1	1199.1
10°	1179.2	1176.7	1189.1	1192.9	1194.1
12.5°	1164.3	1163.1	1180.5	1185.4	1189.1
15°	1144.5	1146.9	1166.8	1175.5	1179.2
17.5°	1123.4	1128.3	1150.7	1163.1	1166.8
20°	1098.5	1106.0	1132.0	1144.5	1151.9
22.5°	1071.2	1082.4	1109.7	1124.6	1133.3
25°	1041.4	1055.1	1086.1	1104.7	1114.7
27.5°	1009.2	1026.5	1062.5	1083.6	1093.6
30°	974.4	994.3	1034.0	1058.8	1071.2
32.5°	938.4	962.0	1005.4	1032.7	1047.6
35°	902.4	928.5	975.6	1007.9	1022.8
37.5°	866.4	892.5	944.6	979.4	998.0
40°	825.5	856.5	912.3	950.8	969.4
42.5°	785.7	819.2	878.8	921.0	940.9
45°	742.3	782.0	844.1	891.2	912.3
47.5°	702.6	742.3	809.3	859.0	882.6
50°	659.1	701.3	772.1	826.7	851.5
52.5°	616.9	660.4	734.8	793.2	818.0
55°	571.0	620.6	696.4	757.2	783.2
57.5°	525.1	578.4	656.6	719.9	746.0
60°	480.4	535.0	616.9	680.2	707.5
62.5°	435.7	490.3	576.0	640.5	666.6
65°	388.5	445.6	531.3	597.1	623.1
67.5°	341.4	400.9	486.6	552.4	577.2
70°	291.7	355.0	440.7	505.2	530.0
72.5°	245.8	309.1	393.5	456.8	480.4
75°	199.8	263.2	345.1	403.4	419.6
77.5°	155.2	218.5	291.7	330.2	333.9
80°	113.0	172.5	232.1	243.3	242.0
82.5°	75.7	129.1	160.1	161.4	165.1
85°	43.4	80.7	88.1	86.9	88.1
87.5°	17.4	28.5	24.8	18.6	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)