

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: P276616

Luminaire Tested: **24CZ2-40HE-S-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

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: P276616
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: 24CZ2-40HE-S-UNV-L92765-W2A1-U-3000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3299.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

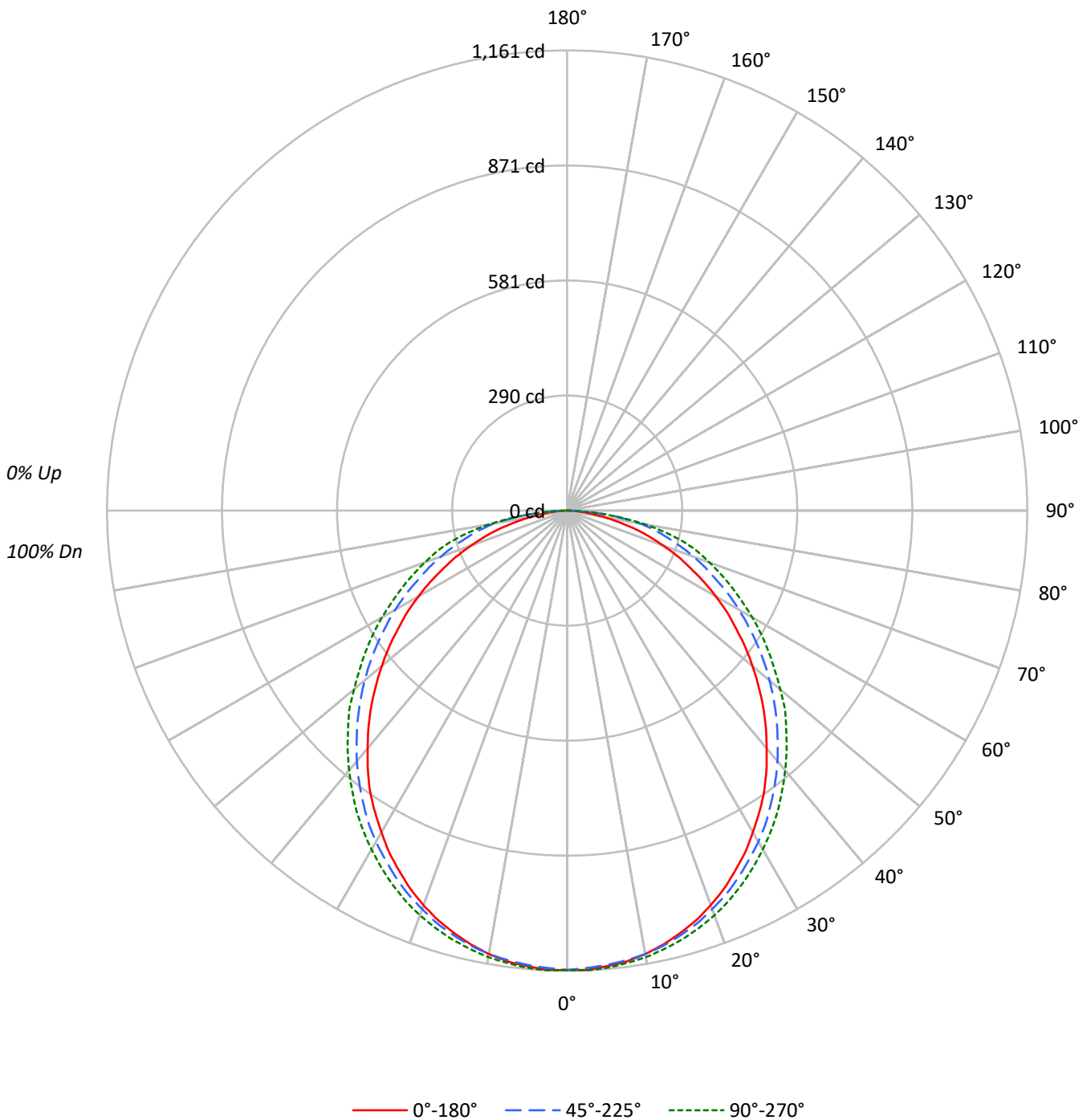
Input Watts (W): 27.993
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1559	1559	1559
5°	1558	1554	1564
10°	1552	1552	1563
15°	1537	1544	1560
20°	1517	1532	1556
25°	1489	1517	1546
30°	1455	1499	1534
35°	1423	1475	1521
40°	1375	1450	1504
45°	1330	1422	1487
50°	1279	1395	1470
55°	1222	1369	1455
60°	1165	1348	1452
65°	1091	1324	1461
70°	1010	1332	1500
75°	905	1356	1585
80°	731	1437	1551
85°	550	1261	1229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	3.3
10°-20°	313.5	9.5
20°-30°	471.3	14.3
30°-40°	561.4	17.0
40°-50°	574.5	17.4
50°-60°	517.3	15.7
60°-70°	406.2	12.3
70°-80°	263.6	8.0
80°-90°	81.5	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°	894.5	27.1
0°-40°	1455.9	44.1
0°-60°	2547.7	77.2
0°-90°	3299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3299.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1159	1159	1159	1159	1159	
5°	1154	1156	1151	1157	1158	110
15°	1103	1107	1109	1118	1120	311
25°	1003	1011	1022	1038	1042	462
35°	867	877	898	920	926	541
45°	699	716	747	776	782	539
55°	521	544	584	614	620	467
65°	343	369	416	451	459	341
75°	174	208	261	297	305	184
85°	36	66	82	80	80	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1159.0	1159.0	1159.0	1159.0	1159.0
2.5°	1160.0	1160.0	1154.8	1160.0	1161.1
5°	1153.7	1155.8	1150.6	1156.9	1157.9
7.5°	1147.5	1147.5	1144.3	1150.6	1151.6
10°	1135.9	1137.0	1135.9	1143.3	1144.3
12.5°	1121.3	1123.4	1124.4	1131.7	1132.8
15°	1103.4	1106.6	1108.7	1118.1	1120.2
17.5°	1083.5	1086.7	1091.9	1102.4	1104.5
20°	1059.4	1063.6	1069.9	1083.5	1086.7
22.5°	1033.2	1037.4	1047.9	1060.5	1065.7
25°	1002.8	1011.2	1021.7	1038.5	1041.6
27.5°	972.5	979.8	993.4	1011.2	1015.4
30°	936.8	948.4	965.1	982.9	987.1
32.5°	902.2	913.8	933.7	952.5	957.8
35°	866.6	877.1	898.1	920.1	926.3
37.5°	825.7	839.4	862.4	884.4	890.7
40°	782.8	799.6	825.7	848.8	856.1
42.5°	741.9	759.7	785.9	811.1	819.5
45°	699.0	715.7	747.2	775.5	781.7
47.5°	654.9	673.8	707.3	735.6	746.1
50°	610.9	630.8	666.5	695.8	702.1
52.5°	566.9	587.9	625.6	657.0	660.2
55°	520.8	543.9	583.7	614.1	620.4
57.5°	478.9	498.8	541.8	573.2	580.5
60°	432.8	454.8	500.9	530.2	539.7
62.5°	388.8	411.8	460.0	489.4	497.8
65°	342.7	368.9	416.0	450.6	459.0
67.5°	302.8	328.0	378.3	411.8	420.2
70°	256.7	285.0	338.5	373.1	381.4
72.5°	216.9	246.3	299.7	333.2	345.8
75°	174.0	207.5	260.9	296.6	304.9
77.5°	132.0	170.8	225.3	252.5	252.5
80°	94.3	135.2	185.5	198.1	200.2
82.5°	61.8	101.6	137.3	136.2	136.2
85°	35.6	66.0	81.7	79.6	79.6
87.5°	13.6	27.2	29.3	29.3	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)