

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: P391564

Luminaire Tested: **24CZ2-65VHE-HRP-UNV-L940-CD1-SWPD1-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: P391564  
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: 24CZ2-65VHE-HRP-UNV-L940-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

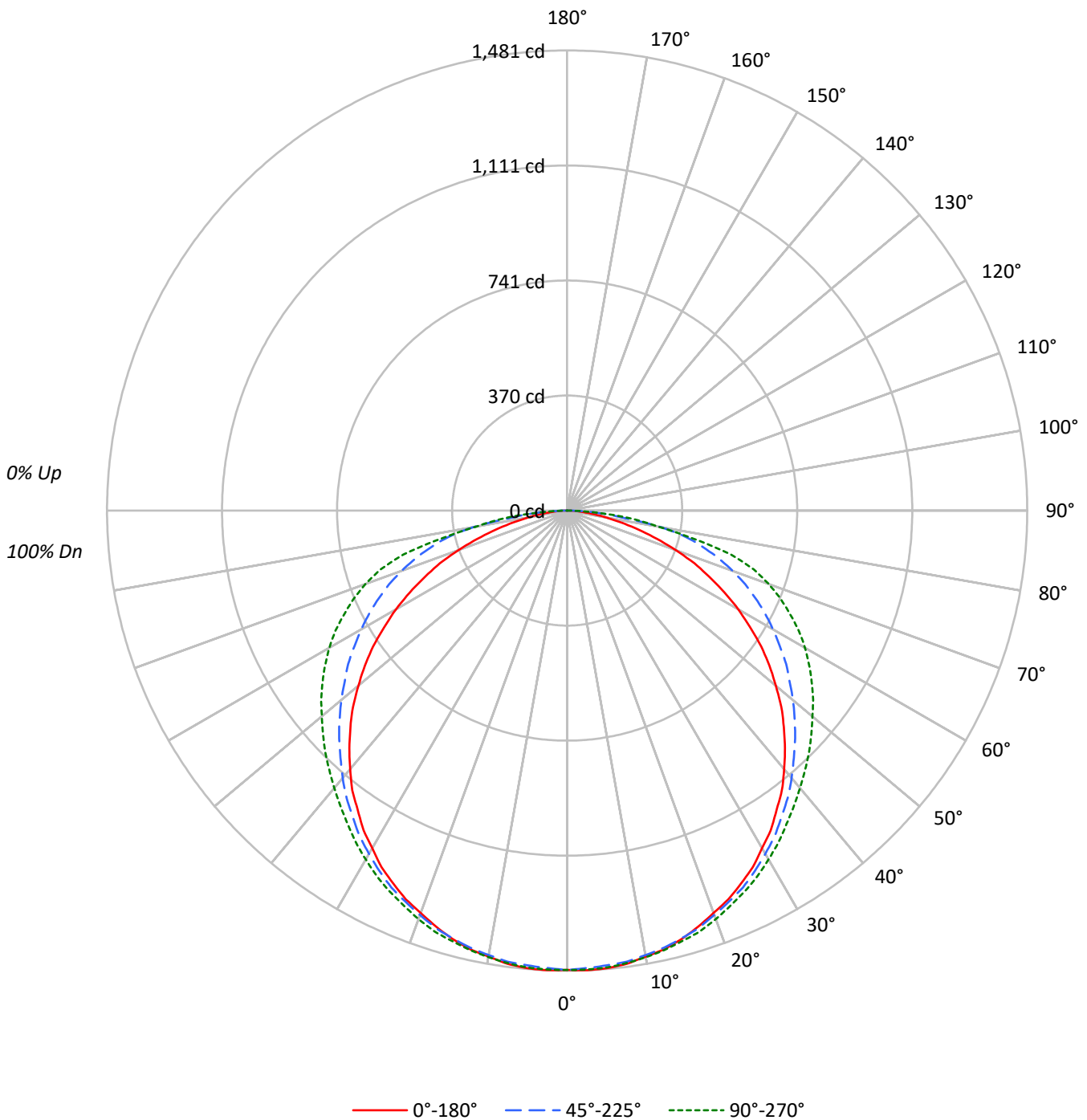
Lumens per Lamp: N/A  
Luminaire Lumens: 4701.2 lumens  
Efficiency: N/A  
Efficacy: 111.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1989	1989	1989
5°	1997	1984	1994
10°	1991	1985	1994
15°	1988	1985	1998
20°	1973	1983	2003
25°	1966	1987	2008
30°	1949	1982	2014
35°	1930	1976	2022
40°	1909	1974	2048
45°	1877	1975	2094
50°	1835	1987	2157
55°	1789	2019	2254
60°	1713	2058	2378
65°	1604	2131	2524
70°	1459	2229	2715
75°	1236	2352	2837
80°	976	2367	2294
85°	719	1800	2016



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.2	3.0
10°-20°	403.6	8.6
20°-30°	617.2	13.1
30°-40°	754.5	16.0
40°-50°	804.2	17.1
50°-60°	768.9	16.4
60°-70°	651.3	13.9
70°-80°	437.8	9.3
80°-90°	123.5	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°	1161.0	24.7
0°-40°	1915.6	40.7
0°-60°	3488.6	74.2
0°-90°	4701.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4701.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1478	1478	1478	1478	1478	
5°	1478	1476	1469	1476	1476	140
15°	1427	1427	1425	1436	1434	402
25°	1324	1329	1338	1350	1352	610
35°	1175	1185	1203	1227	1231	736
45°	986	1003	1038	1082	1101	761
55°	762	790	860	928	961	679
65°	504	555	669	758	793	500
75°	238	324	452	529	546	255
85°	47	96	117	126	131	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1478.4	1478.4	1478.4	1478.4	1478.4
2.5°	1480.7	1480.7	1473.7	1478.4	1478.4
5°	1478.4	1476.1	1469.1	1476.1	1476.1
7.5°	1471.4	1469.1	1464.4	1471.4	1469.1
10°	1457.4	1457.4	1452.7	1459.7	1459.7
12.5°	1445.7	1443.4	1441.1	1450.4	1448.1
15°	1427.1	1427.1	1424.8	1436.4	1434.1
17.5°	1403.8	1406.1	1408.4	1417.8	1420.1
20°	1378.1	1382.8	1385.1	1399.1	1399.1
22.5°	1354.8	1357.1	1361.8	1375.8	1375.8
25°	1324.5	1329.2	1338.5	1350.1	1352.5
27.5°	1294.2	1296.5	1308.2	1324.5	1326.8
30°	1254.5	1261.5	1275.5	1294.2	1296.5
32.5°	1219.6	1226.6	1242.9	1261.5	1266.2
35°	1175.3	1184.6	1203.2	1226.6	1231.2
37.5°	1135.6	1142.6	1165.9	1191.6	1198.6
40°	1086.6	1100.6	1124.0	1154.3	1165.9
42.5°	1037.7	1051.7	1079.6	1119.3	1133.3
45°	986.4	1002.7	1037.7	1082.0	1100.6
47.5°	935.1	953.7	993.4	1044.7	1065.7
50°	876.8	900.1	949.1	1007.4	1030.7
52.5°	820.8	848.8	902.4	967.7	998.0
55°	762.5	790.5	860.5	928.1	960.7
57.5°	697.2	734.5	811.5	888.4	923.4
60°	636.6	671.6	764.8	848.8	883.8
62.5°	571.3	617.9	718.2	806.8	841.8
65°	503.7	555.0	669.2	757.9	792.8
67.5°	443.1	499.0	620.3	708.9	743.9
70°	370.8	440.7	566.6	655.2	690.2
72.5°	303.1	380.1	510.7	597.0	629.6
75°	237.8	324.1	452.4	529.3	545.7
77.5°	177.2	268.2	391.8	424.4	412.7
80°	125.9	214.5	305.5	289.1	296.1
82.5°	81.6	163.2	188.9	214.5	221.5
85°	46.6	95.6	116.6	125.9	130.6
87.5°	21.0	35.0	46.6	46.6	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)