

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: P391558

Luminaire Tested: **24CZ2-65VHE-HRP-UNV-L930-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: P391558  
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-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4540.7 lumens  
Efficiency: N/A  
Efficacy: 107.6 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

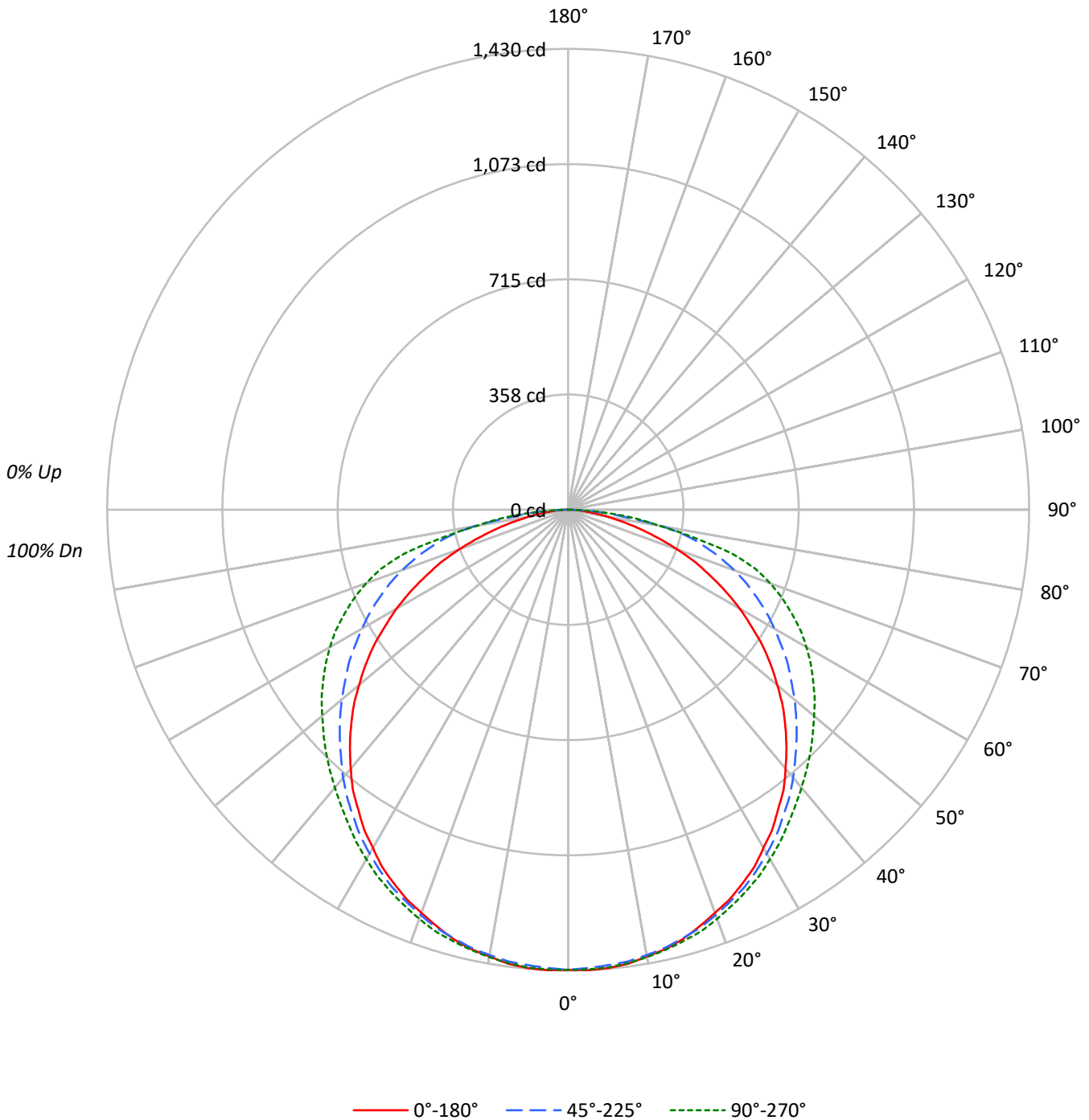
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1921	1921	1921
5°	1929	1916	1926
10°	1923	1917	1926
15°	1920	1917	1929
20°	1906	1916	1935
25°	1899	1919	1939
30°	1883	1914	1945
35°	1864	1909	1953
40°	1843	1907	1978
45°	1813	1907	2023
50°	1773	1919	2084
55°	1728	1950	2177
60°	1655	1988	2297
65°	1549	2058	2438
70°	1409	2153	2623
75°	1194	2271	2740
80°	942	2286	2216
85°	695	1738	1947



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.5	3.0
10°-20°	389.8	8.6
20°-30°	596.1	13.1
30°-40°	728.8	16.0
40°-50°	776.7	17.1
50°-60°	742.6	16.4
60°-70°	629.1	13.9
70°-80°	422.8	9.3
80°-90°	119.3	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°	1121.4	24.7
0°-40°	1850.2	40.7
0°-60°	3369.5	74.2
0°-90°	4540.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4540.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1428	1426	1419	1426	1426	136
15°	1378	1378	1376	1387	1385	389
25°	1279	1284	1293	1304	1306	590
35°	1135	1144	1162	1185	1189	711
45°	953	968	1002	1045	1063	735
55°	736	764	831	896	928	656
65°	486	536	646	732	766	483
75°	230	313	437	511	527	246
85°	45	92	113	122	126	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1427.9	1427.9	1427.9	1427.9	1427.9
2.5°	1430.2	1430.2	1423.4	1427.9	1427.9
5°	1427.9	1425.7	1418.9	1425.7	1425.7
7.5°	1421.2	1418.9	1414.4	1421.2	1418.9
10°	1407.7	1407.7	1403.1	1409.9	1409.9
12.5°	1396.4	1394.1	1391.9	1400.9	1398.6
15°	1378.4	1378.4	1376.1	1387.4	1385.1
17.5°	1355.8	1358.1	1360.4	1369.4	1371.6
20°	1331.1	1335.6	1337.8	1351.3	1351.3
22.5°	1308.6	1310.8	1315.3	1328.8	1328.8
25°	1279.3	1283.8	1292.8	1304.0	1306.3
27.5°	1250.0	1252.2	1263.5	1279.3	1281.5
30°	1211.7	1218.5	1232.0	1250.0	1252.2
32.5°	1177.9	1184.7	1200.4	1218.5	1223.0
35°	1135.1	1144.1	1162.2	1184.7	1189.2
37.5°	1096.8	1103.6	1126.1	1150.9	1157.7
40°	1049.5	1063.1	1085.6	1114.9	1126.1
42.5°	1002.2	1015.8	1042.8	1081.1	1094.6
45°	952.7	968.5	1002.2	1045.0	1063.1
47.5°	903.1	921.2	959.5	1009.0	1029.3
50°	846.8	869.4	916.7	973.0	995.5
52.5°	792.8	819.8	871.6	934.7	964.0
55°	736.5	763.5	831.1	896.4	927.9
57.5°	673.4	709.5	783.8	858.1	891.9
60°	614.9	648.6	738.7	819.8	853.6
62.5°	551.8	596.8	693.7	779.3	813.1
65°	486.5	536.0	646.4	732.0	765.8
67.5°	427.9	482.0	599.1	684.7	718.5
70°	358.1	425.7	547.3	632.9	666.7
72.5°	292.8	367.1	493.2	576.6	608.1
75°	229.7	313.1	436.9	511.3	527.0
77.5°	171.2	259.0	378.4	409.9	398.6
80°	121.6	207.2	295.0	279.3	286.0
82.5°	78.8	157.7	182.4	207.2	214.0
85°	45.0	92.3	112.6	121.6	126.1
87.5°	20.3	33.8	45.0	45.0	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)