

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: P391557

Luminaire Tested: **24CZ2-65VHE-HRP-UNV-L930-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: P391557  
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-SDWPD1-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: 4486.0 lumens  
Efficiency: N/A  
Efficacy: 106.3 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

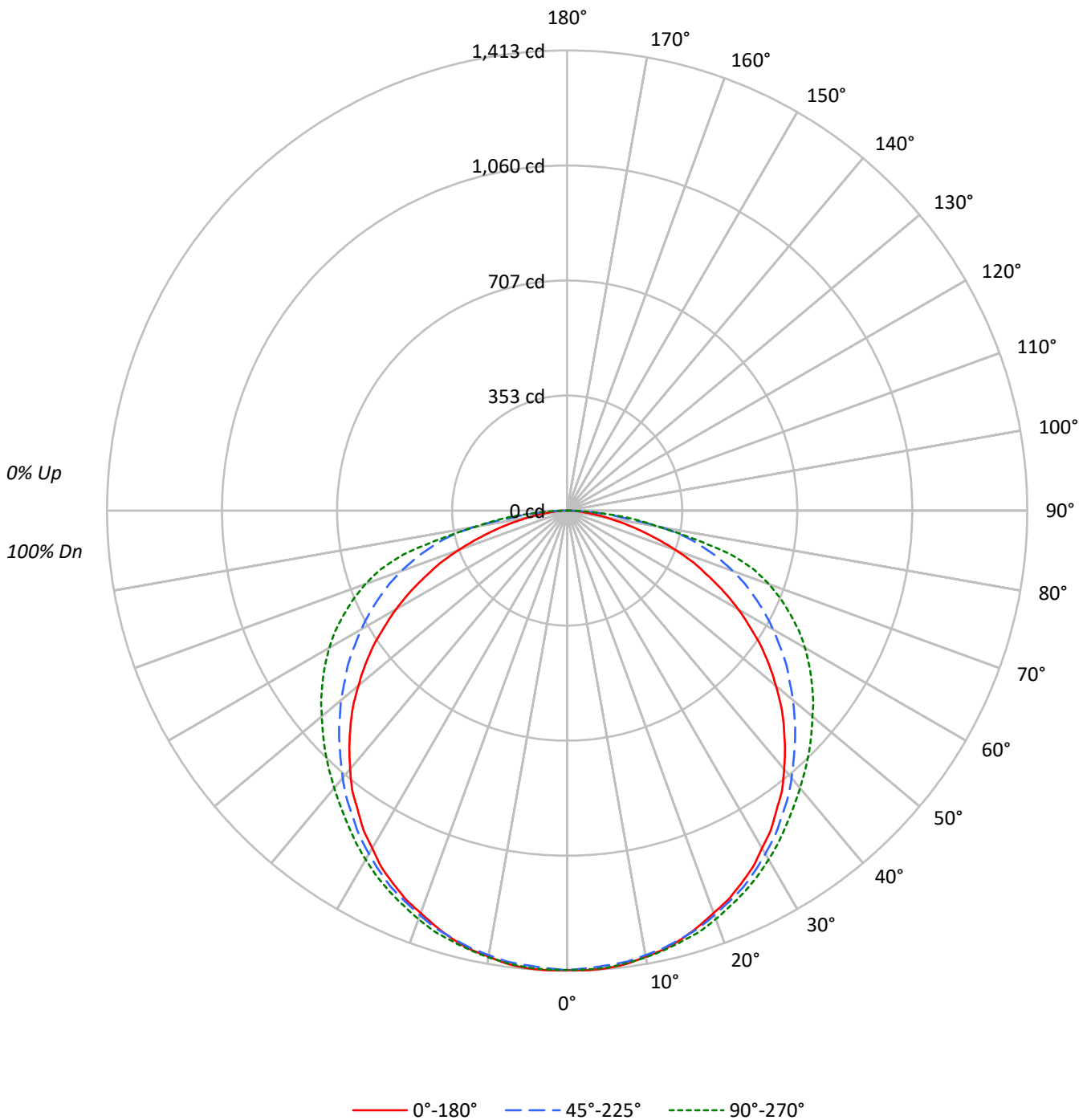
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1898	1898	1898
5°	1905	1893	1902
10°	1900	1894	1903
15°	1897	1894	1906
20°	1883	1892	1912
25°	1876	1896	1916
30°	1860	1891	1922
35°	1842	1886	1930
40°	1821	1884	1954
45°	1791	1884	1999
50°	1751	1896	2059
55°	1707	1926	2150
60°	1635	1964	2269
65°	1530	2033	2408
70°	1392	2127	2591
75°	1180	2244	2707
80°	931	2259	2190
85°	687	1718	1924



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.8	3.0
10°-20°	385.1	8.6
20°-30°	589.0	13.1
30°-40°	720.0	16.0
40°-50°	767.4	17.1
50°-60°	733.7	16.4
60°-70°	621.5	13.9
70°-80°	417.7	9.3
80°-90°	117.8	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°	1107.9	24.7
0°-40°	1827.9	40.7
0°-60°	3328.9	74.2
0°-90°	4486.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4486.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1411	1411	1411	1411	1411	
5°	1411	1408	1402	1408	1408	134
15°	1362	1362	1360	1371	1368	384
25°	1264	1268	1277	1288	1291	583
35°	1122	1130	1148	1170	1175	703
45°	941	957	990	1032	1050	726
55°	728	754	821	886	917	648
65°	481	530	639	723	756	477
75°	227	309	432	505	521	243
85°	44	91	111	120	125	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1410.7	1410.7	1410.7	1410.7	1410.7
2.5°	1412.9	1412.9	1406.3	1410.7	1410.7
5°	1410.7	1408.5	1401.8	1408.5	1408.5
7.5°	1404.0	1401.8	1397.4	1404.0	1401.8
10°	1390.7	1390.7	1386.2	1392.9	1392.9
12.5°	1379.6	1377.3	1375.1	1384.0	1381.8
15°	1361.8	1361.8	1359.5	1370.7	1368.4
17.5°	1339.5	1341.7	1344.0	1352.9	1355.1
20°	1315.0	1319.5	1321.7	1335.1	1335.1
22.5°	1292.8	1295.0	1299.5	1312.8	1312.8
25°	1263.9	1268.3	1277.2	1288.3	1290.6
27.5°	1234.9	1237.2	1248.3	1263.9	1266.1
30°	1197.1	1203.8	1217.1	1234.9	1237.2
32.5°	1163.7	1170.4	1186.0	1203.8	1208.2
35°	1121.5	1130.4	1148.2	1170.4	1174.9
37.5°	1083.6	1090.3	1112.6	1137.0	1143.7
40°	1036.9	1050.3	1072.5	1101.4	1112.6
42.5°	990.2	1003.5	1030.2	1068.1	1081.4
45°	941.2	956.8	990.2	1032.5	1050.3
47.5°	892.3	910.1	947.9	996.8	1016.9
50°	836.6	858.9	905.6	961.2	983.5
52.5°	783.2	809.9	861.1	923.4	952.3
55°	727.6	754.3	821.1	885.6	916.7
57.5°	665.3	700.9	774.3	847.8	881.1
60°	607.5	640.8	729.8	809.9	843.3
62.5°	545.2	589.7	685.3	769.9	803.3
65°	480.6	529.6	638.6	723.2	756.5
67.5°	422.8	476.2	591.9	676.4	709.8
70°	353.8	420.5	540.7	625.3	658.6
72.5°	289.3	362.7	487.3	569.6	600.8
75°	227.0	309.3	431.7	505.1	520.7
77.5°	169.1	255.9	373.8	405.0	393.8
80°	120.2	204.7	291.5	275.9	282.6
82.5°	77.9	155.8	180.2	204.7	211.4
85°	44.5	91.2	111.3	120.2	124.6
87.5°	20.0	33.4	44.5	44.5	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)