

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: P391563

Luminaire Tested: **24CZ2-65VHE-HRP-UNV-L940-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: P391563
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-SDWPD1-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: 4644.5 lumens
Efficiency: N/A
Efficacy: 110.1 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

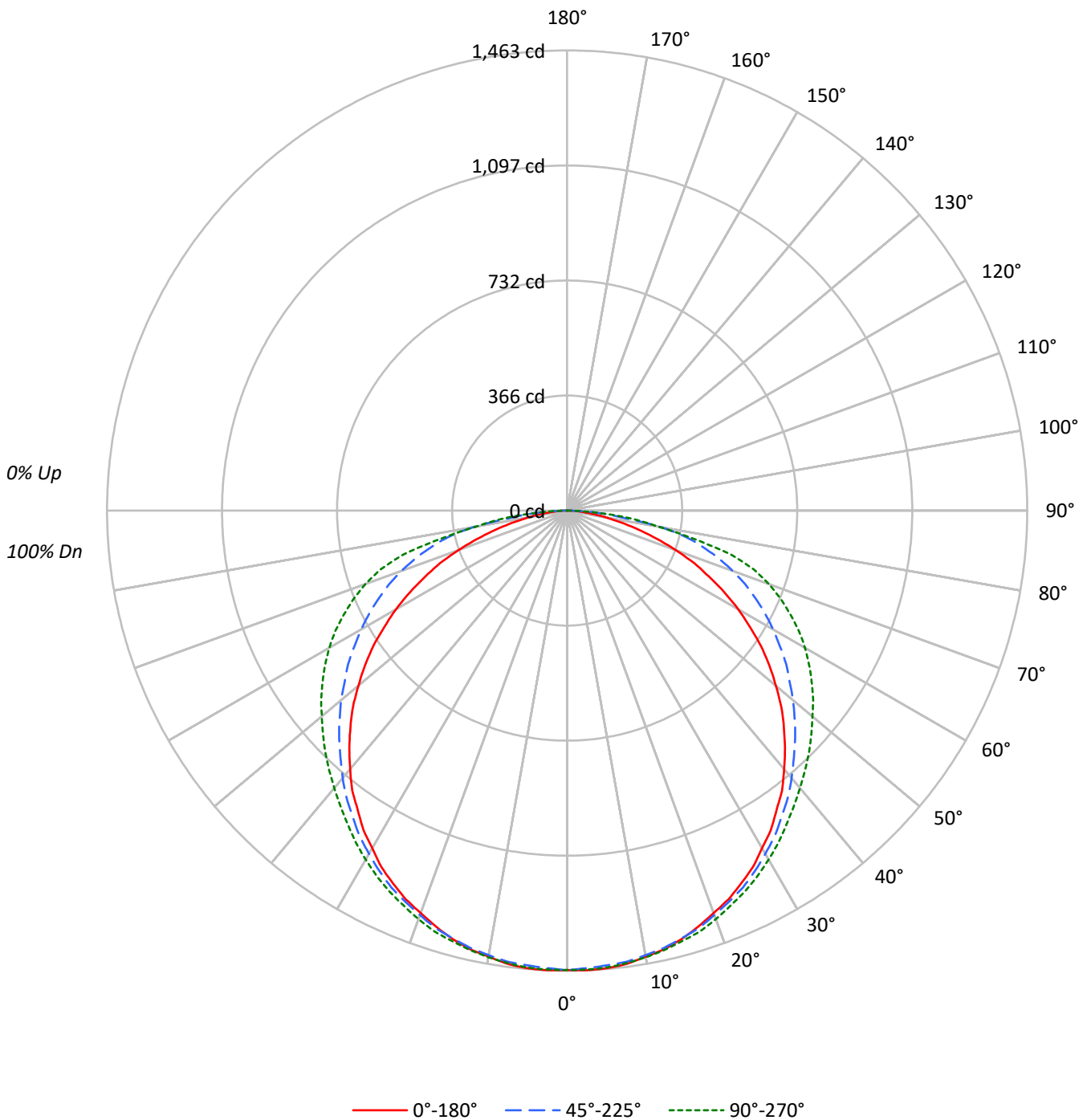
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1965	1965	1965
5°	1973	1960	1970
10°	1967	1961	1970
15°	1964	1961	1974
20°	1949	1959	1979
25°	1943	1963	1984
30°	1926	1958	1990
35°	1907	1952	1998
40°	1886	1950	2023
45°	1854	1951	2069
50°	1813	1963	2131
55°	1767	1994	2226
60°	1692	2033	2349
65°	1584	2105	2494
70°	1441	2202	2683
75°	1222	2323	2803
80°	964	2338	2267
85°	712	1778	1991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.5	3.0
10°-20°	398.7	8.6
20°-30°	609.8	13.1
30°-40°	745.4	16.0
40°-50°	794.5	17.1
50°-60°	759.6	16.4
60°-70°	643.5	13.9
70°-80°	432.5	9.3
80°-90°	122.0	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°	1147.0	24.7
0°-40°	1892.5	40.7
0°-60°	3446.5	74.2
0°-90°	4644.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4644.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1461	1461	1461	1461	1461	
5°	1461	1458	1451	1458	1458	139
15°	1410	1410	1408	1419	1417	398
25°	1308	1313	1322	1334	1336	603
35°	1161	1170	1189	1212	1216	727
45°	974	991	1025	1069	1087	752
55°	753	781	850	917	949	671
65°	498	548	661	749	783	494
75°	235	320	447	523	539	252
85°	46	94	115	124	129	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1460.6	1460.6	1460.6	1460.6	1460.6
2.5°	1462.9	1462.9	1456.0	1460.6	1460.6
5°	1460.6	1458.3	1451.3	1458.3	1458.3
7.5°	1453.7	1451.3	1446.7	1453.7	1451.3
10°	1439.8	1439.8	1435.2	1442.1	1442.1
12.5°	1428.3	1426.0	1423.7	1432.9	1430.6
15°	1409.9	1409.9	1407.6	1419.1	1416.8
17.5°	1386.8	1389.1	1391.5	1400.7	1403.0
20°	1361.5	1366.1	1368.4	1382.2	1382.2
22.5°	1338.5	1340.8	1345.4	1359.2	1359.2
25°	1308.5	1313.1	1322.3	1333.9	1336.2
27.5°	1278.6	1280.9	1292.4	1308.5	1310.8
30°	1239.4	1246.3	1260.1	1278.6	1280.9
32.5°	1204.8	1211.8	1227.9	1246.3	1250.9
35°	1161.1	1170.3	1188.7	1211.8	1216.4
37.5°	1121.9	1128.8	1151.9	1177.2	1184.1
40°	1073.5	1087.4	1110.4	1140.3	1151.9
42.5°	1025.2	1039.0	1066.6	1105.8	1119.6
45°	974.5	990.6	1025.2	1068.9	1087.4
47.5°	923.8	942.2	981.4	1032.1	1052.8
50°	866.2	889.2	937.6	995.2	1018.2
52.5°	810.9	838.6	891.5	956.0	986.0
55°	753.3	781.0	850.1	916.9	949.1
57.5°	688.8	725.7	801.7	877.7	912.3
60°	628.9	663.5	755.6	838.6	873.1
62.5°	564.4	610.5	709.5	797.1	831.6
65°	497.6	548.3	661.2	748.7	783.3
67.5°	437.7	493.0	612.8	700.3	734.9
70°	366.3	435.4	559.8	647.3	681.9
72.5°	299.5	375.5	504.5	589.8	622.0
75°	235.0	320.2	446.9	522.9	539.1
77.5°	175.1	264.9	387.0	419.3	407.8
80°	124.4	211.9	301.8	285.7	292.6
82.5°	80.6	161.3	186.6	211.9	218.9
85°	46.1	94.5	115.2	124.4	129.0
87.5°	20.7	34.6	46.1	46.1	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)