

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: P391731

Luminaire Tested: **24CZ2-80VHE-RDP-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: P391731  
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: 24CZ2-80VHE-RDP-UNV-L940-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4556.2 lumens  
Efficiency: N/A  
Efficacy: 84.7 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

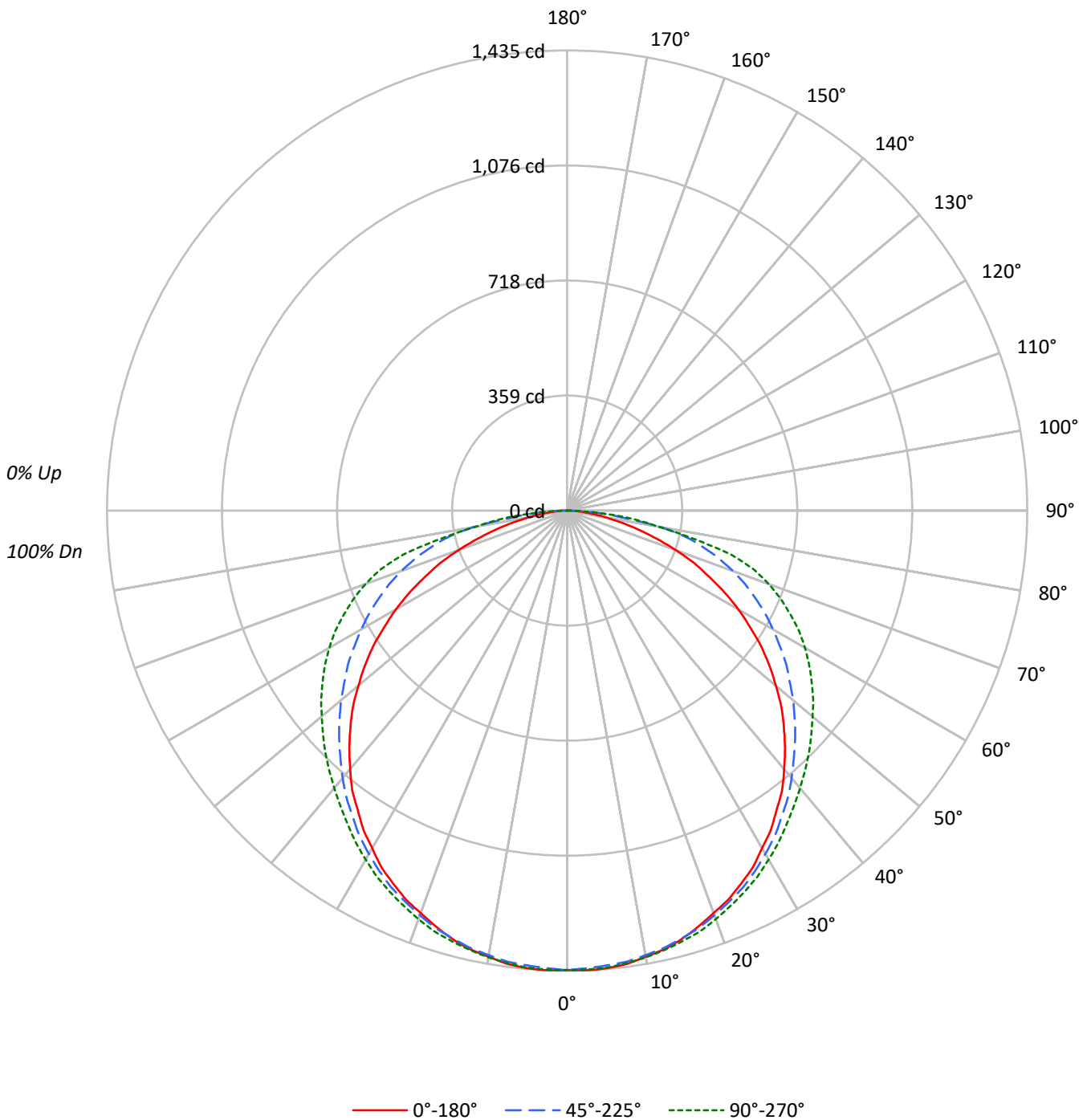
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1928	1928	1928
5°	1935	1923	1932
10°	1930	1924	1933
15°	1927	1923	1936
20°	1912	1922	1942
25°	1906	1926	1946
30°	1889	1921	1952
35°	1871	1915	1960
40°	1850	1913	1985
45°	1819	1914	2030
50°	1779	1925	2091
55°	1734	1956	2184
60°	1660	1995	2305
65°	1554	2065	2446
70°	1413	2161	2631
75°	1198	2279	2749
80°	945	2294	2224
85°	698	1744	1954



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.9	3.0
10°-20°	391.2	8.6
20°-30°	598.2	13.1
30°-40°	731.2	16.0
40°-50°	779.4	17.1
50°-60°	745.2	16.4
60°-70°	631.3	13.9
70°-80°	424.2	9.3
80°-90°	119.7	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°	1125.2	24.7
0°-40°	1856.5	40.7
0°-60°	3381.0	74.2
0°-90°	4556.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4556.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1433	1433	1433	1433	1433	
5°	1433	1430	1424	1430	1430	136
15°	1383	1383	1381	1392	1390	390
25°	1284	1288	1297	1308	1311	592
35°	1139	1148	1166	1189	1193	714
45°	956	972	1006	1049	1067	737
55°	739	766	834	900	931	658
65°	488	538	649	734	768	485
75°	230	314	438	513	529	247
85°	45	93	113	122	127	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1432.8	1432.8	1432.8	1432.8	1432.8
2.5°	1435.1	1435.1	1428.3	1432.8	1432.8
5°	1432.8	1430.5	1423.8	1430.5	1430.5
7.5°	1426.0	1423.8	1419.2	1426.0	1423.8
10°	1412.5	1412.5	1407.9	1414.7	1414.7
12.5°	1401.2	1398.9	1396.6	1405.7	1403.4
15°	1383.1	1383.1	1380.8	1392.1	1389.9
17.5°	1360.5	1362.7	1365.0	1374.0	1376.3
20°	1335.6	1340.1	1342.4	1356.0	1356.0
22.5°	1313.0	1315.3	1319.8	1333.4	1333.4
25°	1283.6	1288.2	1297.2	1308.5	1310.8
27.5°	1254.3	1256.5	1267.8	1283.6	1285.9
30°	1215.8	1222.6	1236.2	1254.3	1256.5
32.5°	1181.9	1188.7	1204.5	1222.6	1227.1
35°	1139.0	1148.0	1166.1	1188.7	1193.2
37.5°	1100.6	1107.4	1130.0	1154.8	1161.6
40°	1053.1	1066.7	1089.3	1118.7	1130.0
42.5°	1005.7	1019.2	1046.3	1084.8	1098.3
45°	955.9	971.8	1005.7	1048.6	1066.7
47.5°	906.2	924.3	962.7	1012.4	1032.8
50°	849.7	872.3	919.8	976.3	998.9
52.5°	795.5	822.6	874.6	937.9	967.2
55°	739.0	766.1	833.9	899.5	931.1
57.5°	675.7	711.9	786.5	861.0	894.9
60°	617.0	650.9	741.3	822.6	856.5
62.5°	553.7	598.9	696.1	781.9	815.8
65°	488.1	537.9	648.6	734.5	768.4
67.5°	429.4	483.6	601.1	687.0	720.9
70°	359.3	427.1	549.2	635.0	668.9
72.5°	293.8	368.4	494.9	578.5	610.2
75°	230.5	314.1	438.4	513.0	528.8
77.5°	171.8	259.9	379.7	411.3	400.0
80°	122.0	207.9	296.1	280.2	287.0
82.5°	79.1	158.2	183.1	207.9	214.7
85°	45.2	92.7	113.0	122.0	126.6
87.5°	20.3	33.9	45.2	45.2	42.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)