

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: P389811

Luminaire Tested: **24CZ2-55VHE-S-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: P389811  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-55VHE-S-UNV-L940-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4877.9 lumens  
Efficiency: N/A  
Efficacy: 135.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

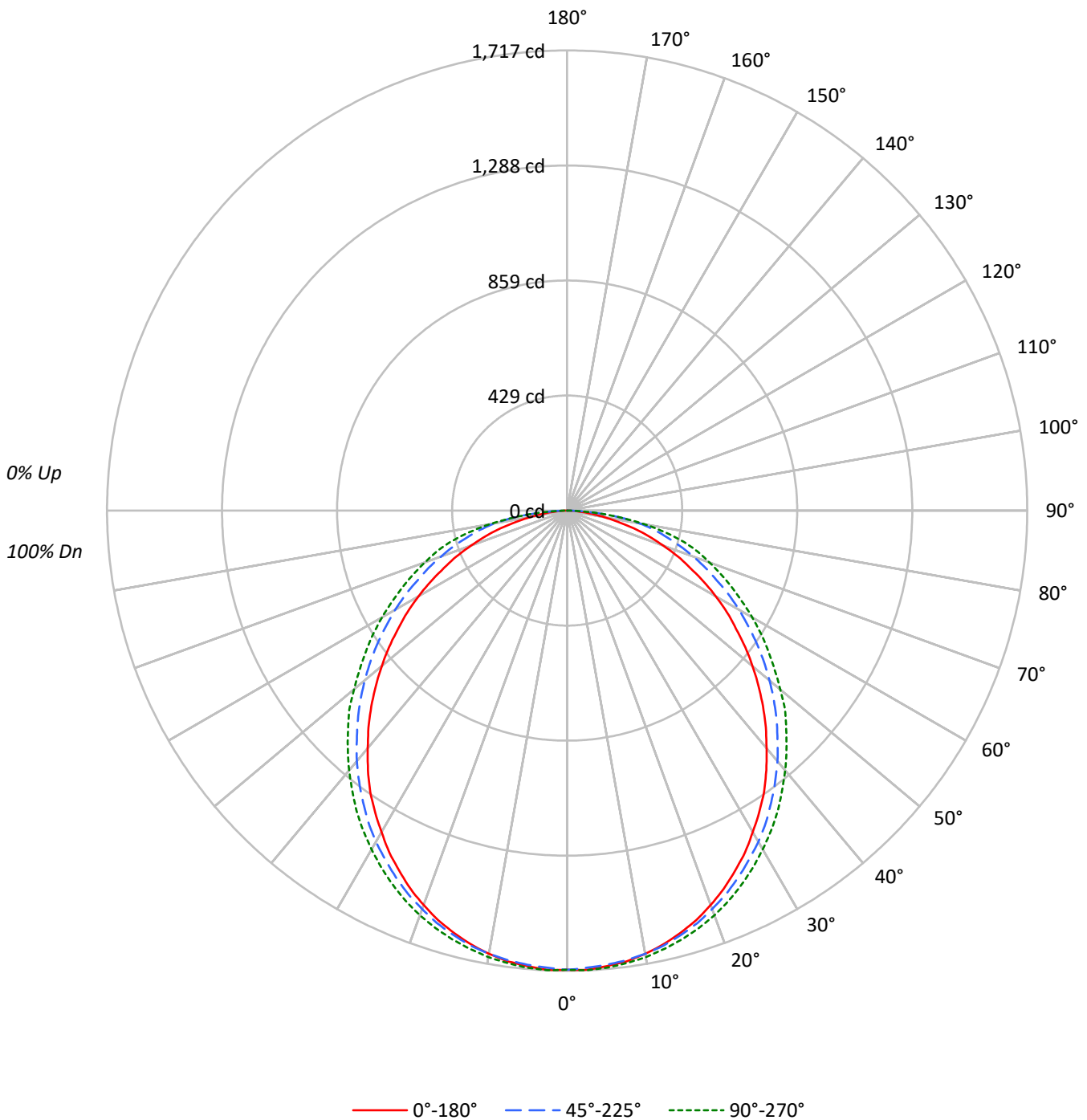
Input Watts (W): 36.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2306	2306	2306
5°	2304	2298	2312
10°	2295	2295	2312
15°	2273	2283	2307
20°	2243	2265	2301
25°	2201	2243	2286
30°	2152	2217	2268
35°	2105	2181	2250
40°	2033	2144	2223
45°	1967	2102	2199
50°	1891	2063	2173
55°	1806	2024	2152
60°	1722	1993	2147
65°	1613	1958	2160
70°	1493	1969	2219
75°	1337	2006	2344
80°	1080	2125	2293
85°	814	1866	1819



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.2	3.3
10°-20°	463.6	9.5
20°-30°	696.8	14.3
30°-40°	830.0	17.0
40°-50°	849.5	17.4
50°-60°	764.8	15.7
60°-70°	600.6	12.3
70°-80°	389.8	8.0
80°-90°	120.6	2.5
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°	1322.6	27.1
0°-40°	2152.6	44.1
0°-60°	3766.9	77.2
0°-90°	4877.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4877.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1714	1714	1714	1714	1714	
5°	1706	1709	1701	1710	1712	162
15°	1632	1636	1639	1653	1656	460
25°	1483	1495	1511	1536	1540	683
35°	1281	1297	1328	1360	1370	799
45°	1034	1058	1105	1147	1156	797
55°	770	804	863	908	917	690
65°	507	545	615	666	679	504
75°	257	307	386	438	451	272
85°	53	98	121	118	118	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1713.6	1713.6	1713.6	1713.6	1713.6
2.5°	1715.2	1715.2	1707.4	1715.2	1716.7
5°	1705.9	1709.0	1701.2	1710.5	1712.1
7.5°	1696.6	1696.6	1691.9	1701.2	1702.8
10°	1679.6	1681.1	1679.6	1690.4	1691.9
12.5°	1657.9	1661.0	1662.5	1673.4	1674.9
15°	1631.5	1636.2	1639.3	1653.2	1656.3
17.5°	1602.1	1606.7	1614.5	1630.0	1633.1
20°	1566.4	1572.6	1581.9	1602.1	1606.7
22.5°	1527.7	1533.9	1549.4	1568.0	1575.7
25°	1482.8	1495.2	1510.7	1535.5	1540.1
27.5°	1437.8	1448.7	1468.8	1495.2	1501.4
30°	1385.2	1402.2	1427.0	1453.3	1459.5
32.5°	1334.0	1351.1	1380.5	1408.4	1416.2
35°	1281.4	1296.8	1327.8	1360.4	1369.7
37.5°	1220.9	1241.1	1275.2	1307.7	1317.0
40°	1157.4	1182.2	1220.9	1255.0	1265.9
42.5°	1097.0	1123.3	1162.1	1199.2	1211.6
45°	1033.5	1058.2	1104.7	1146.6	1155.9
47.5°	968.4	996.3	1045.8	1087.7	1103.2
50°	903.3	932.7	985.4	1028.8	1038.1
52.5°	838.2	869.2	925.0	971.5	976.1
55°	770.1	804.1	863.0	907.9	917.2
57.5°	708.1	737.5	801.0	847.5	858.4
60°	639.9	672.4	740.6	784.0	797.9
62.5°	574.8	608.9	680.2	723.6	736.0
65°	506.7	545.4	615.1	666.2	678.6
67.5°	447.8	485.0	559.3	608.9	621.3
70°	379.6	421.4	500.5	551.6	564.0
72.5°	320.7	364.1	443.1	492.7	511.3
75°	257.2	306.8	385.8	438.5	450.9
77.5°	195.2	252.6	333.1	373.4	373.4
80°	139.4	199.9	274.2	292.8	295.9
82.5°	91.4	150.3	203.0	201.4	201.4
85°	52.7	97.6	120.9	117.8	117.8
87.5°	20.1	40.3	43.4	43.4	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)