

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: P389092

Luminaire Tested: **24CZ2-75HE-SQR-UNV-L935-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: P389092  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-75HE-SQR-UNV-L935-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6072.1 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

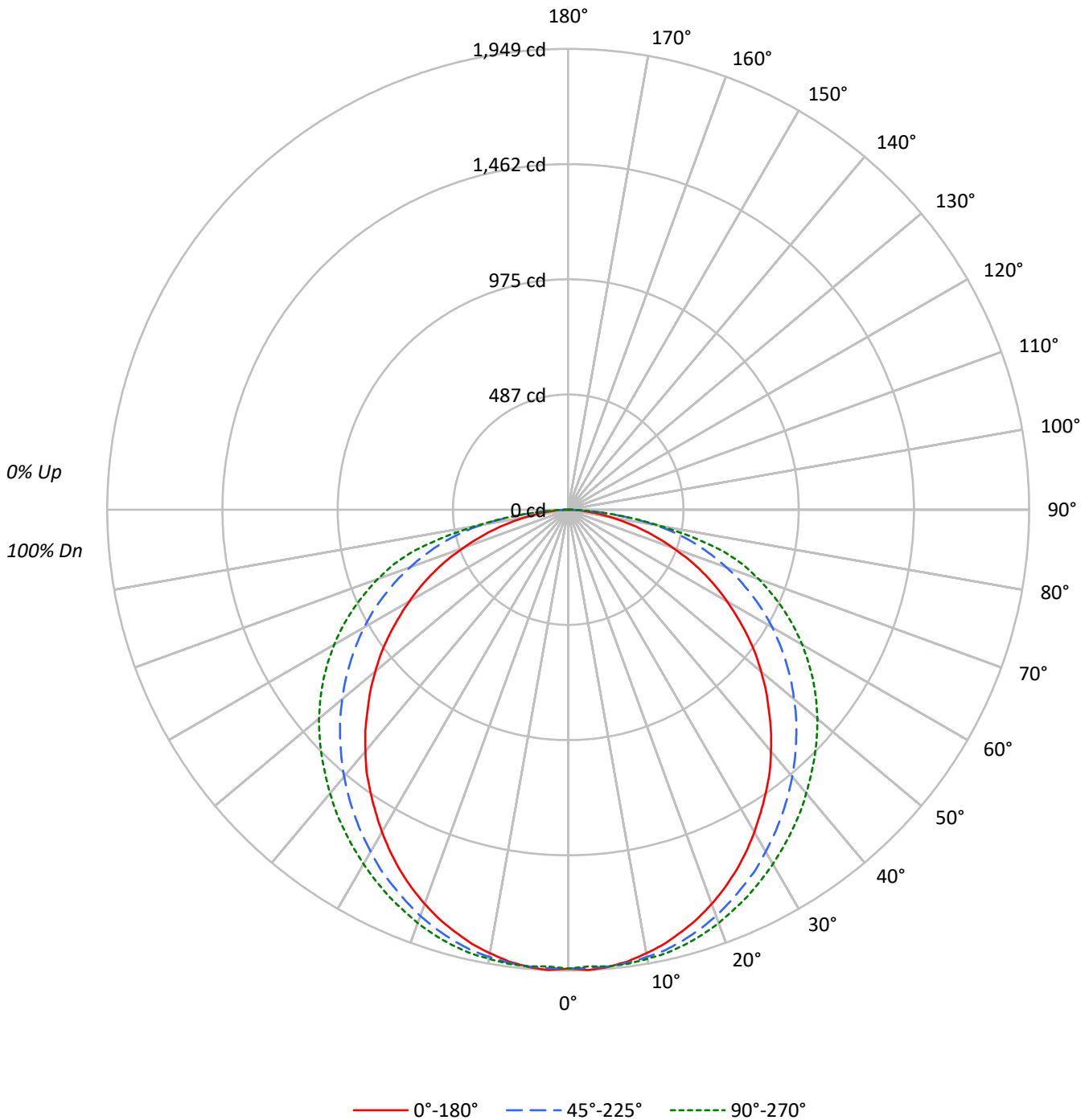
Input Watts (W): 55.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20			20				20			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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82	82	
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67	67	
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56	56	
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47	47	
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41	41	
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35	35	
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31	31	
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28	28	
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25	25	
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22	22	

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

	0°	45°	90°
0°	2611	2611	2611
5°	2621	2619	2619
10°	2602	2624	2635
15°	2575	2625	2653
20°	2541	2618	2664
25°	2498	2605	2673
30°	2445	2595	2688
35°	2394	2589	2714
40°	2342	2588	2751
45°	2282	2594	2804
50°	2229	2611	2879
55°	2164	2639	2968
60°	2088	2682	3076
65°	1998	2732	3205
70°	1854	2800	3368
75°	1678	2898	3523
80°	1414	2906	3030
85°	1084	2198	2198



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.2	3.0
10°-20°	530.1	8.7
20°-30°	805.2	13.3
30°-40°	979.4	16.1
40°-50°	1042.7	17.2
50°-60°	993.1	16.4
60°-70°	830.5	13.7
70°-80°	553.7	9.1
80°-90°	153.2	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°	1519.5	25.0
0°-40°	2498.8	41.2
0°-60°	4534.6	74.7
0°-90°	6072.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6072.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1941	1941	1941	1941	1941	
5°	1941	1929	1939	1939	1939	184
15°	1849	1853	1885	1899	1905	521
25°	1682	1704	1754	1784	1801	775
35°	1458	1500	1576	1628	1652	912
45°	1199	1263	1364	1440	1474	927
55°	922	1003	1125	1223	1265	825
65°	628	720	858	964	1007	620
75°	323	425	557	652	678	342
85°	70	130	142	140	142	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1940.9	1940.9	1940.9	1940.9	1940.9
2.5°	1949.0	1934.9	1940.9	1940.9	1932.9
5°	1940.9	1928.9	1938.9	1938.9	1938.9
7.5°	1926.9	1916.9	1932.9	1936.9	1936.9
10°	1904.8	1900.8	1920.9	1926.9	1928.9
12.5°	1880.8	1878.8	1906.9	1914.9	1920.9
15°	1848.7	1852.7	1884.8	1898.8	1904.8
17.5°	1814.6	1822.6	1858.7	1878.8	1884.8
20°	1774.5	1786.5	1828.7	1848.7	1860.7
22.5°	1730.4	1748.4	1792.6	1816.6	1830.7
25°	1682.3	1704.3	1754.5	1784.5	1800.6
27.5°	1630.1	1658.2	1716.4	1750.5	1766.5
30°	1574.0	1606.1	1670.2	1710.4	1730.4
32.5°	1515.9	1554.0	1624.1	1668.2	1692.3
35°	1457.7	1499.8	1576.0	1628.1	1652.2
37.5°	1399.6	1441.7	1525.9	1582.0	1612.1
40°	1333.4	1383.5	1473.7	1535.9	1566.0
42.5°	1269.2	1323.4	1419.6	1487.8	1519.9
45°	1199.1	1263.2	1363.5	1439.7	1473.7
47.5°	1134.9	1199.1	1307.3	1387.5	1425.6
50°	1064.7	1132.9	1247.2	1335.4	1375.5
52.5°	996.5	1066.7	1187.0	1281.3	1321.4
55°	922.3	1002.6	1124.9	1223.1	1265.2
57.5°	848.2	934.4	1060.7	1163.0	1205.1
60°	776.0	864.2	996.5	1098.8	1142.9
62.5°	703.8	792.0	930.4	1034.6	1076.7
65°	627.6	719.8	858.2	964.5	1006.6
67.5°	551.4	647.6	786.0	892.3	932.4
70°	471.2	573.5	711.8	816.1	856.2
72.5°	397.0	499.3	635.6	737.9	776.0
75°	322.8	425.1	557.4	651.7	677.7
77.5°	250.6	352.9	471.2	533.4	539.4
80°	182.5	278.7	375.0	393.0	391.0
82.5°	122.3	208.5	258.7	260.7	266.7
85°	70.2	130.3	142.4	140.4	142.4
87.5°	28.1	46.1	40.1	30.1	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)