

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: P276675

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

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: P276675
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70HE-S-UNV-L92765-W2A1-U-5500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6578.2 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

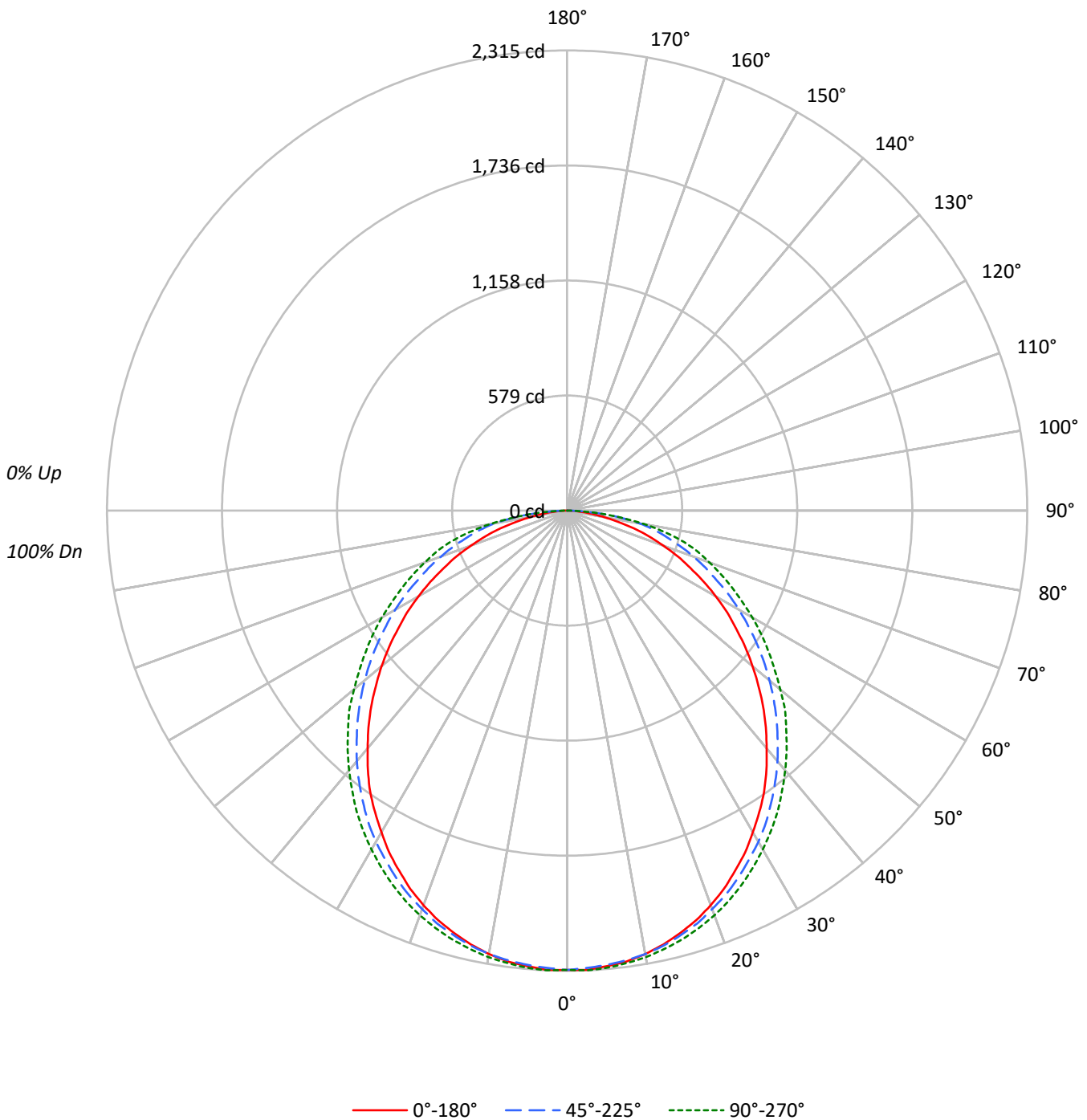
Input Watts (W): 55.149
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3109	3109	3109
5°	3107	3099	3118
10°	3095	3095	3117
15°	3065	3079	3111
20°	3025	3055	3103
25°	2969	3025	3083
30°	2902	2990	3058
35°	2838	2941	3034
40°	2742	2892	2998
45°	2652	2835	2966
50°	2550	2782	2930
55°	2436	2730	2902
60°	2322	2688	2896
65°	2175	2641	2914
70°	2014	2655	2992
75°	1803	2705	3161
80°	1457	2865	3092
85°	1096	2516	2452



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.8	3.3
10°-20°	625.1	9.5
20°-30°	939.7	14.3
30°-40°	1119.4	17.0
40°-50°	1145.6	17.4
50°-60°	1031.4	15.7
60°-70°	810.0	12.3
70°-80°	525.7	8.0
80°-90°	162.6	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°	1783.6	27.1
0°-40°	2903.0	44.1
0°-60°	5080.0	77.2
0°-90°	6578.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6578.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2311	2311	2311	2311	2311	
5°	2300	2305	2294	2307	2309	219
15°	2200	2206	2211	2230	2234	620
25°	2000	2016	2037	2071	2077	921
35°	1728	1749	1791	1835	1847	1078
45°	1394	1427	1490	1546	1559	1074
55°	1038	1084	1164	1224	1237	931
65°	683	736	830	898	915	680
75°	347	414	520	591	608	367
85°	71	132	163	159	159	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2311.0	2311.0	2311.0	2311.0	<i>2311.0</i>
2.5°	<i>2313.1</i>	<i>2313.1</i>	<i>2302.6</i>	<i>2313.1</i>	<i>2315.2</i>
5°	2300.5	2304.7	2294.3	2306.8	<i>2308.9</i>
7.5°	2288.0	2288.0	2281.7	2294.3	<i>2296.4</i>
10°	2265.0	2267.1	2265.0	2279.6	<i>2281.7</i>
12.5°	2235.8	2239.9	2242.0	2256.7	<i>2258.7</i>
15°	2200.2	2206.5	2210.7	2229.5	<i>2233.7</i>
17.5°	2160.5	2166.8	2177.3	2198.2	<i>2202.3</i>
20°	2112.5	2120.8	2133.4	2160.5	<i>2166.8</i>
22.5°	2060.2	2068.6	2089.5	2114.6	<i>2125.0</i>
25°	1999.6	2016.4	2037.3	2070.7	<i>2077.0</i>
27.5°	1939.1	1953.7	1980.8	2016.4	<i>2024.7</i>
30°	1868.0	1891.0	1924.4	1959.9	<i>1968.3</i>
32.5°	1799.1	1822.0	1861.7	1899.4	<i>1909.8</i>
35°	1728.0	1748.9	1790.7	1834.6	<i>1847.1</i>
37.5°	1646.5	1673.7	1719.7	1763.5	<i>1776.1</i>
40°	1560.9	1594.3	1646.5	1692.5	<i>1707.1</i>
42.5°	1479.4	1514.9	1567.1	1617.3	<i>1634.0</i>
45°	1393.7	1427.1	1489.8	1546.2	<i>1558.8</i>
47.5°	1305.9	1343.5	1410.4	1466.8	<i>1487.7</i>
50°	1218.2	1257.9	1328.9	1387.4	<i>1400.0</i>
52.5°	1130.4	1172.2	1247.4	1310.1	<i>1316.4</i>
55°	1038.5	1084.4	1163.8	1224.4	<i>1237.0</i>
57.5°	954.9	994.6	1080.3	1143.0	<i>1157.6</i>
60°	863.0	906.8	998.8	1057.3	<i>1076.1</i>
62.5°	775.2	821.2	917.3	975.8	<i>992.5</i>
65°	683.3	735.5	829.5	898.5	<i>915.2</i>
67.5°	603.9	654.0	754.3	821.2	<i>837.9</i>
70°	511.9	568.3	674.9	743.9	<i>760.6</i>
72.5°	432.5	491.0	597.6	664.5	<i>689.5</i>
75°	346.9	413.7	520.3	591.3	<i>608.0</i>
77.5°	263.3	340.6	449.2	503.6	<i>503.6</i>
80°	188.1	269.5	369.8	394.9	<i>399.1</i>
82.5°	123.3	202.7	273.7	271.6	<i>271.6</i>
85°	71.0	131.6	163.0	158.8	<i>158.8</i>
87.5°	27.2	54.3	58.5	58.5	<i>56.4</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)