

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: P276323

Luminaire Tested: **24CZ2-40HE-S-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276323  
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: 24CZ2-40HE-S-UNV-L83050-W2A1-U-3500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4049.0 lumens  
Efficiency: N/A  
Efficacy: 143.2 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

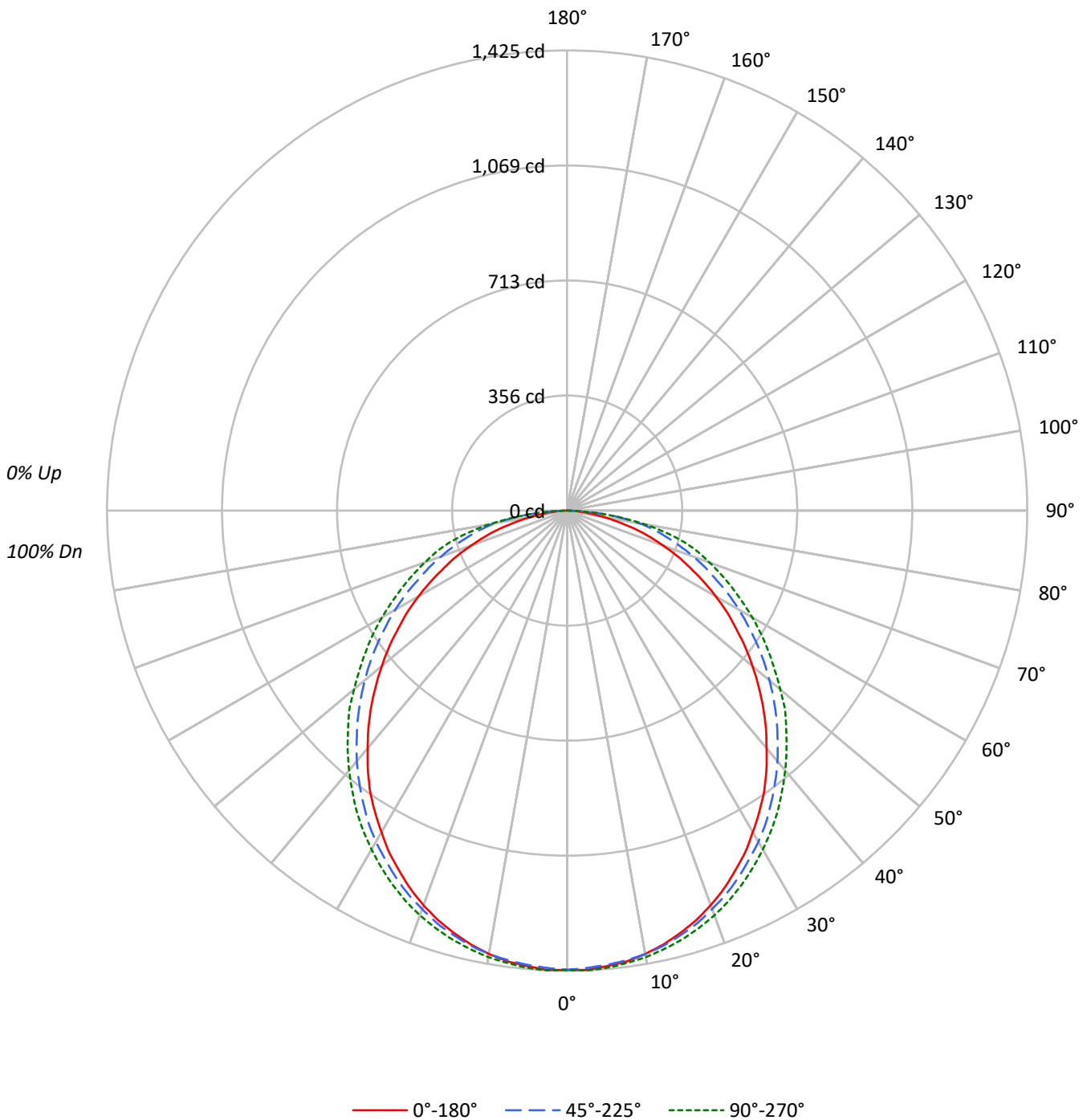
Input Watts (W): 28.272  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	1914	1914	1914
5°	1912	1907	1920
10°	1905	1905	1919
15°	1886	1895	1915
20°	1862	1880	1910
25°	1827	1862	1898
30°	1786	1840	1882
35°	1747	1810	1867
40°	1687	1780	1846
45°	1632	1745	1826
50°	1569	1712	1804
55°	1499	1681	1786
60°	1429	1654	1782
65°	1339	1626	1793
70°	1240	1634	1841
75°	1110	1665	1946
80°	897	1764	1903
85°	675	1548	1508



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.7	3.3
10°-20°	384.8	9.5
20°-30°	578.4	14.3
30°-40°	689.0	17.0
40°-50°	705.1	17.4
50°-60°	634.8	15.7
60°-70°	498.5	12.3
70°-80°	323.6	8.0
80°-90°	100.1	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°	1097.9	27.1
0°-40°	1786.8	44.1
0°-60°	3126.8	77.2
0°-90°	4049.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4049.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1422	1422	1422	1422	1422	
5°	1416	1419	1412	1420	1421	135
15°	1354	1358	1361	1372	1375	382
25°	1231	1241	1254	1274	1278	567
35°	1064	1076	1102	1129	1137	664
45°	858	878	917	952	959	661
55°	639	668	716	754	761	573
65°	421	453	511	553	563	419
75°	214	255	320	364	374	226
85°	44	81	100	98	98	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1422.4	1422.4	1422.4	1422.4	1422.4
2.5°	1423.7	1423.7	1417.3	1423.7	1425.0
5°	1416.0	1418.6	1412.2	1419.9	1421.2
7.5°	1408.3	1408.3	1404.4	1412.2	1413.4
10°	1394.1	1395.4	1394.1	1403.1	1404.4
12.5°	1376.1	1378.7	1380.0	1389.0	1390.3
15°	1354.3	1358.1	1360.7	1372.3	1374.9
17.5°	1329.8	1333.7	1340.1	1353.0	1355.6
20°	1300.3	1305.4	1313.1	1329.8	1333.7
22.5°	1268.1	1273.3	1286.1	1301.5	1308.0
25°	1230.8	1241.1	1254.0	1274.5	1278.4
27.5°	1193.5	1202.5	1219.2	1241.1	1246.2
30°	1149.8	1163.9	1184.5	1206.4	1211.5
32.5°	1107.3	1121.5	1145.9	1169.1	1175.5
35°	1063.6	1076.5	1102.2	1129.2	1136.9
37.5°	1013.5	1030.2	1058.5	1085.5	1093.2
40°	960.7	981.3	1013.5	1041.8	1050.8
42.5°	910.6	932.4	964.6	995.5	1005.7
45°	857.8	878.4	917.0	951.7	959.4
47.5°	803.8	827.0	868.1	902.9	915.7
50°	749.8	774.2	818.0	854.0	861.7
52.5°	695.8	721.5	767.8	806.4	810.3
55°	639.2	667.5	716.4	753.7	761.4
57.5°	587.8	612.2	664.9	703.5	712.5
60°	531.2	558.2	614.8	650.8	662.3
62.5°	477.1	505.4	564.6	600.6	610.9
65°	420.6	452.7	510.6	553.0	563.3
67.5°	371.7	402.6	464.3	505.4	515.7
70°	315.1	349.8	415.4	457.9	468.1
72.5°	266.2	302.2	367.8	409.0	424.4
75°	213.5	254.7	320.2	364.0	374.3
77.5°	162.1	209.6	276.5	310.0	310.0
80°	115.8	165.9	227.6	243.1	245.6
82.5°	75.9	124.8	168.5	167.2	167.2
85°	43.7	81.0	100.3	97.7	97.7
87.5°	16.7	33.4	36.0	36.0	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)