

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: FAIL-SAFE

Report Number: P310686

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CA125-W2A-U-5700K**

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: P310686
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5700K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3868.0 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

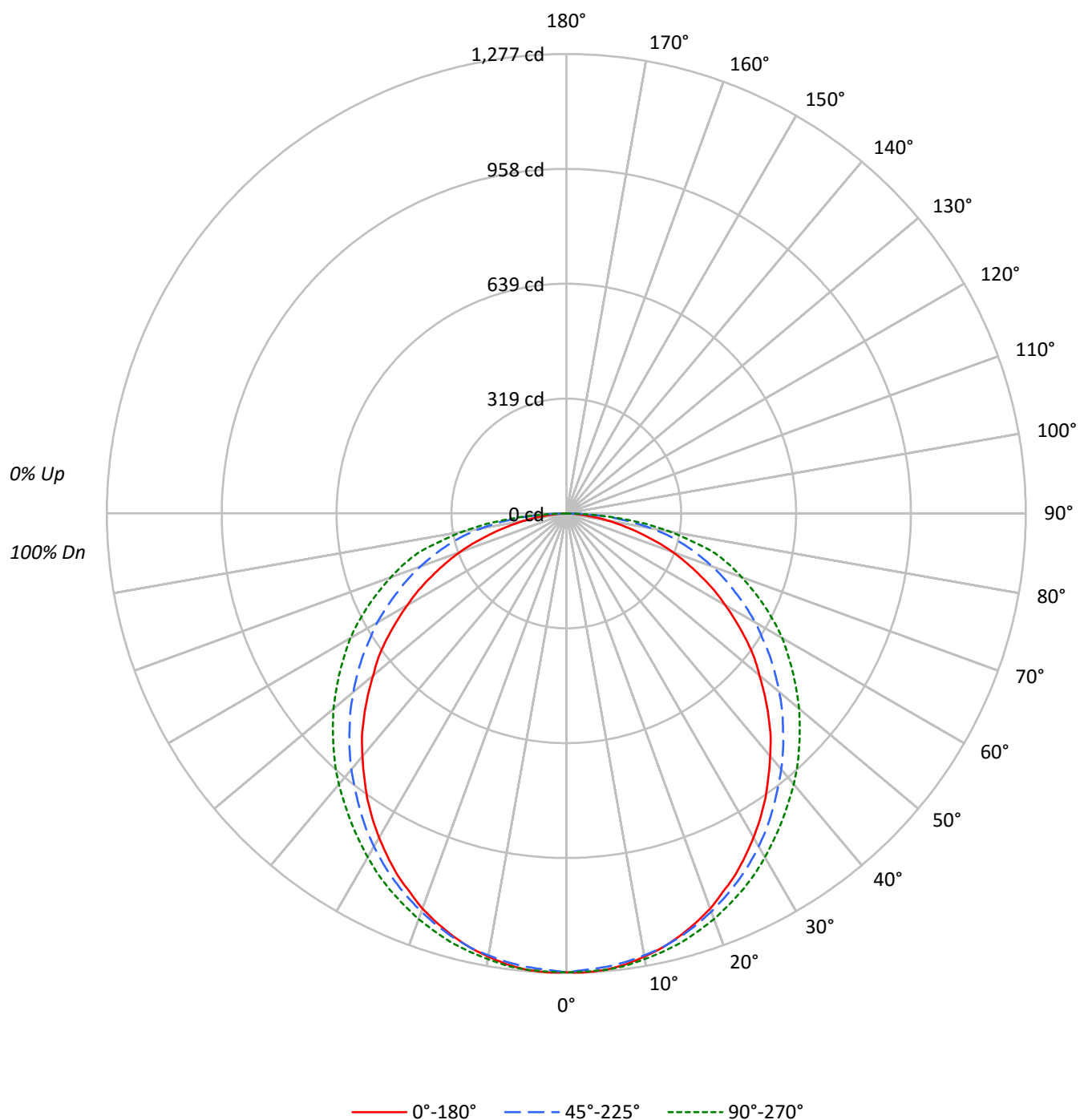
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1716	1716	1716
5°	1719	1709	1719
10°	1709	1704	1718
15°	1695	1698	1720
20°	1674	1687	1718
25°	1648	1675	1717
30°	1617	1661	1715
35°	1585	1644	1716
40°	1548	1632	1727
45°	1512	1621	1741
50°	1467	1617	1768
55°	1430	1620	1803
60°	1375	1633	1865
65°	1311	1651	1933
70°	1242	1701	2040
75°	1107	1775	2228
80°	945	1879	2277
85°	673	1862	2180



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	3.1
10°-20°	345.2	8.9
20°-30°	521.4	13.5
30°-40°	628.4	16.2
40°-50°	659.7	17.1
50°-60°	617.2	16.0
60°-70°	509.7	13.2
70°-80°	347.3	9.0
80°-90°	118.4	3.1
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°	987.3	25.5
0°-40°	1615.7	41.8
0°-60°	2892.5	74.8
0°-90°	3868.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3868.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1276	1276	1276	1276	1276	
5°	1273	1272	1265	1273	1273	121
15°	1217	1218	1219	1232	1235	343
25°	1110	1115	1128	1150	1156	511
35°	965	975	1001	1034	1045	603
45°	794	811	852	898	915	613
55°	610	634	690	747	769	544
65°	412	447	518	584	607	409
75°	213	262	341	406	429	227
85°	44	86	121	136	141	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1275.6	1275.6	1275.6	1275.6	1275.6
2.5°	1276.9	1275.6	1269.2	1275.6	1274.3
5°	1273.1	1271.8	1265.4	1273.1	1273.1
7.5°	1264.1	1264.1	1257.7	1266.6	1267.9
10°	1251.2	1251.2	1247.4	1257.7	1257.7
12.5°	1235.8	1235.8	1235.8	1246.1	1247.4
15°	1216.6	1217.9	1219.2	1232.0	1234.6
17.5°	1193.5	1196.1	1199.9	1215.3	1217.9
20°	1169.1	1171.7	1178.1	1196.1	1199.9
22.5°	1138.3	1144.7	1153.7	1174.2	1178.1
25°	1110.1	1115.2	1128.0	1149.9	1156.3
27.5°	1075.4	1083.1	1099.8	1122.9	1131.9
30°	1040.8	1048.5	1069.0	1096.0	1103.7
32.5°	1003.6	1015.1	1036.9	1065.2	1074.1
35°	965.1	975.3	1001.0	1034.4	1044.6
37.5°	922.7	936.8	965.1	1001.0	1013.8
40°	881.6	897.0	929.1	967.6	983.0
42.5°	840.6	856.0	891.9	935.5	950.9
45°	794.4	811.1	852.1	898.3	915.0
47.5°	748.2	768.7	813.6	862.4	880.4
50°	700.7	723.8	772.6	823.9	844.4
52.5°	658.3	680.2	731.5	786.7	805.9
55°	609.6	634.0	690.4	746.9	768.7
57.5°	559.5	586.5	646.8	708.4	730.2
60°	510.8	540.3	607.0	668.6	693.0
62.5°	463.3	492.8	562.1	626.3	650.6
65°	411.9	446.6	518.5	583.9	607.0
67.5°	363.2	400.4	476.1	540.3	563.4
70°	315.7	351.6	432.5	495.4	518.5
72.5°	264.4	305.4	386.3	451.7	476.1
75°	213.0	261.8	341.4	405.5	428.6
77.5°	165.5	215.6	295.2	347.8	359.3
80°	121.9	173.2	242.5	279.8	293.9
82.5°	78.3	129.6	184.8	211.7	223.3
85°	43.6	86.0	120.6	136.0	141.2
87.5°	18.0	37.2	48.8	55.2	55.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)