

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: P310676

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CA08-W2A-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: P310676
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 3872.0 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

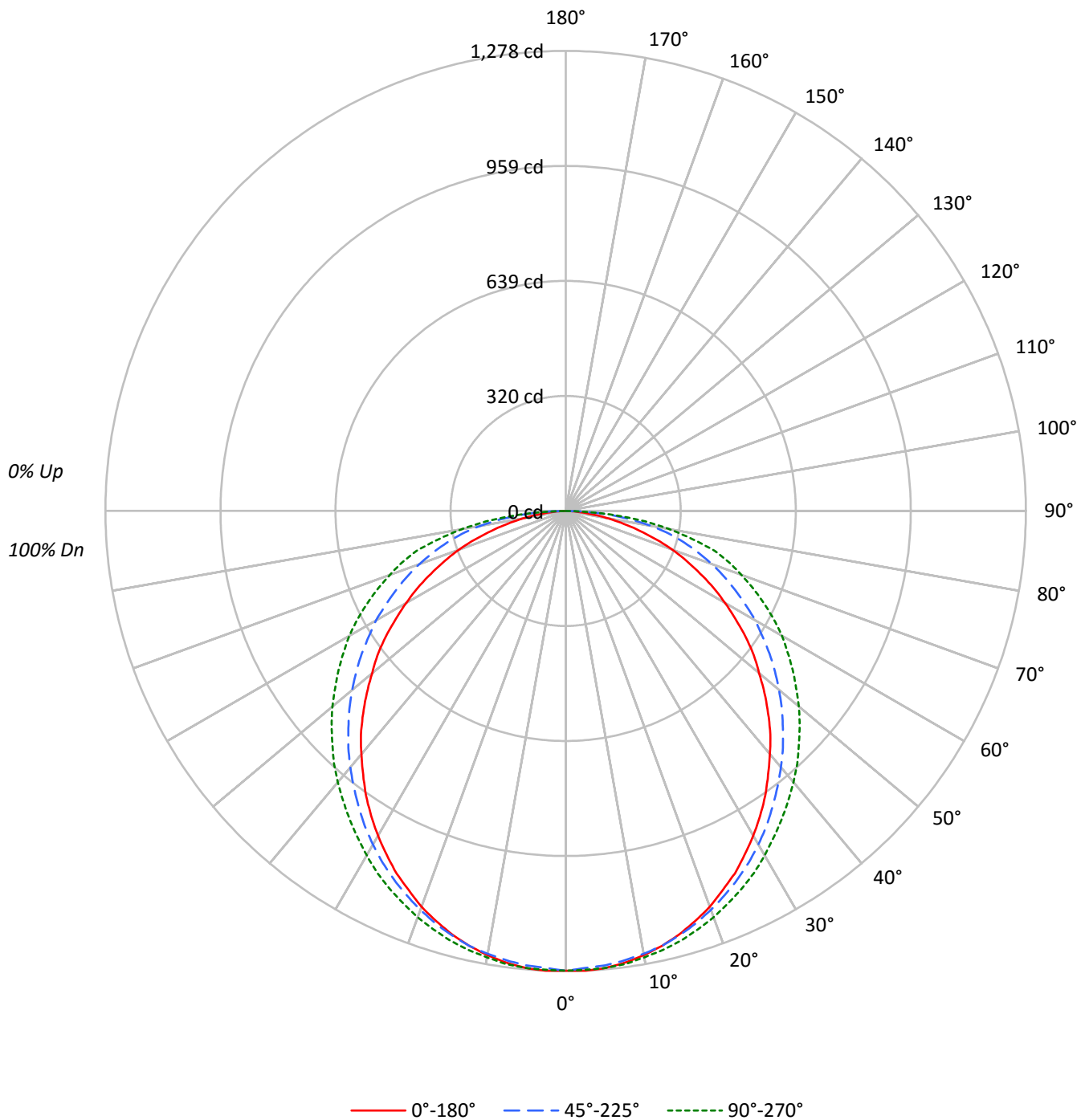
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1718	1718	1718
5°	1721	1711	1721
10°	1711	1706	1720
15°	1696	1700	1721
20°	1676	1689	1720
25°	1650	1676	1718
30°	1619	1663	1716
35°	1587	1646	1718
40°	1550	1634	1728
45°	1513	1623	1743
50°	1468	1619	1769
55°	1431	1621	1805
60°	1376	1635	1867
65°	1313	1652	1934
70°	1243	1703	2042
75°	1109	1776	2231
80°	945	1881	2280
85°	675	1865	2181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.8	3.1
10°-20°	345.6	8.9
20°-30°	521.9	13.5
30°-40°	629.0	16.2
40°-50°	660.4	17.1
50°-60°	617.8	16.0
60°-70°	510.2	13.2
70°-80°	347.7	9.0
80°-90°	118.6	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°	988.3	25.5
0°-40°	1617.4	41.8
0°-60°	2895.6	74.8
0°-90°	3872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1277	1277	1277	1277	1277	
5°	1274	1273	1267	1274	1274	121
15°	1218	1219	1220	1233	1236	343
25°	1111	1116	1129	1151	1158	511
35°	966	976	1002	1035	1046	604
45°	795	812	853	899	916	613
55°	610	635	691	748	770	545
65°	412	447	519	584	608	409
75°	213	262	342	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°	1277.0	1277.0	1277.0	1277.0	1277.0
2.5°	1278.2	1277.0	1270.5	1277.0	1275.7
5°	1274.4	1273.1	1266.7	1274.4	1274.4
7.5°	1265.4	1265.4	1259.0	1268.0	1269.2
10°	1252.5	1252.5	1248.7	1259.0	1259.0
12.5°	1237.1	1237.1	1237.1	1247.4	1248.7
15°	1217.9	1219.1	1220.4	1233.3	1235.8
17.5°	1194.7	1197.3	1201.2	1216.6	1219.1
20°	1170.3	1172.9	1179.3	1197.3	1201.2
22.5°	1139.5	1145.9	1154.9	1175.5	1179.3
25°	1111.2	1116.4	1129.2	1151.1	1157.5
27.5°	1076.5	1084.3	1101.0	1124.1	1133.1
30°	1041.9	1049.6	1070.1	1097.1	1104.8
32.5°	1004.6	1016.2	1038.0	1066.3	1075.3
35°	966.1	976.3	1002.0	1035.4	1045.7
37.5°	923.7	937.8	966.1	1002.0	1014.9
40°	882.6	898.0	930.1	968.6	984.0
42.5°	841.5	856.9	892.8	936.5	951.9
45°	795.2	811.9	853.0	899.3	916.0
47.5°	749.0	769.5	814.5	863.3	881.3
50°	701.4	724.5	773.4	824.8	845.3
52.5°	659.0	680.9	732.3	787.5	806.8
55°	610.2	634.6	691.1	747.7	769.5
57.5°	560.1	587.1	647.5	709.1	731.0
60°	511.3	540.8	607.6	669.3	693.7
62.5°	463.8	493.3	562.7	626.9	651.3
65°	412.4	447.1	519.0	584.5	607.6
67.5°	363.6	400.8	476.6	540.8	564.0
70°	316.0	352.0	432.9	495.9	519.0
72.5°	264.6	305.7	386.7	452.2	476.6
75°	213.3	262.1	341.7	406.0	429.1
77.5°	165.7	215.8	295.5	348.1	359.7
80°	122.0	173.4	242.8	280.1	294.2
82.5°	78.4	129.8	185.0	212.0	223.5
85°	43.7	86.1	120.8	136.2	141.3
87.5°	18.0	37.3	48.8	55.2	55.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)