

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: P313291

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CA08-W2A-U-3500K**

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: P313291
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L83050-HRP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 3942.0 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

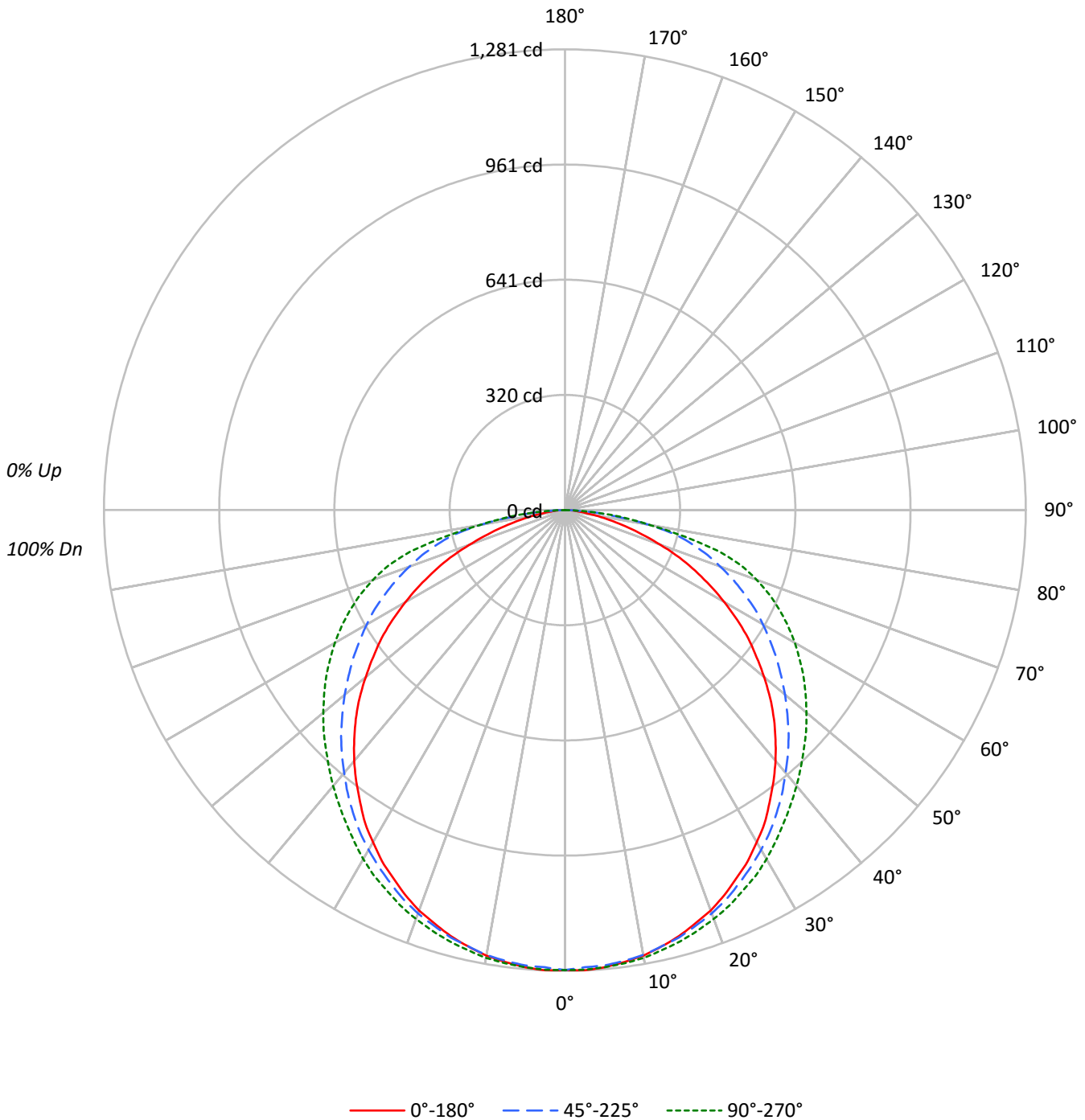
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1721	1721	1721
5°	1723	1716	1723
10°	1718	1716	1727
15°	1708	1713	1729
20°	1697	1708	1732
25°	1676	1700	1735
30°	1656	1695	1741
35°	1629	1686	1743
40°	1600	1675	1759
45°	1564	1674	1787
50°	1513	1672	1834
55°	1460	1684	1901
60°	1377	1710	1985
65°	1272	1750	2096
70°	1110	1811	2233
75°	901	1905	2308
80°	665	1867	1867
85°	509	1376	1555



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	3.1
10°-20°	347.9	8.8
20°-30°	529.7	13.4
30°-40°	643.1	16.3
40°-50°	679.5	17.2
50°-60°	641.2	16.3
60°-70°	533.1	13.5
70°-80°	350.7	8.9
80°-90°	95.6	2.4
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°	998.8	25.3
0°-40°	1641.9	41.7
0°-60°	2962.6	75.2
0°-90°	3942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3942.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1279	1279	1279	1279	1279	
5°	1276	1276	1271	1276	1276	121
15°	1226	1228	1230	1241	1241	346
25°	1129	1135	1145	1165	1168	521
35°	992	1003	1026	1053	1061	621
45°	822	838	880	922	939	633
55°	622	649	718	786	810	554
65°	399	446	550	630	658	395
75°	173	252	366	434	444	187
85°	33	73	89	99	101	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1279.0	1279.0	1279.0	1279.0	1279.0
2.5°	1280.6	1279.0	1272.4	1279.0	1279.0
5°	1275.7	1275.7	1270.7	1275.7	1275.7
7.5°	1267.4	1267.4	1264.1	1270.7	1270.7
10°	1257.5	1257.5	1255.9	1264.1	1264.1
12.5°	1242.7	1244.3	1242.7	1252.6	1252.6
15°	1226.2	1227.8	1229.5	1241.0	1241.0
17.5°	1204.7	1208.0	1211.3	1224.5	1226.2
20°	1184.9	1186.6	1193.2	1208.0	1209.7
22.5°	1158.5	1163.5	1171.7	1186.6	1191.5
25°	1128.8	1135.4	1145.3	1165.1	1168.4
27.5°	1100.8	1105.7	1118.9	1140.4	1147.0
30°	1066.1	1074.3	1090.9	1112.3	1120.6
32.5°	1033.1	1041.3	1061.1	1084.2	1090.9
35°	991.8	1003.4	1026.5	1052.9	1061.1
37.5°	952.2	963.8	991.8	1021.5	1031.4
40°	911.0	924.2	953.9	988.5	1001.7
42.5°	866.4	884.6	917.6	955.5	970.4
45°	821.9	838.4	879.6	922.5	939.0
47.5°	774.0	793.8	838.4	889.5	909.3
50°	722.8	747.6	798.7	854.9	876.3
52.5°	671.7	699.7	757.5	820.2	843.3
55°	622.2	648.6	717.9	785.5	810.3
57.5°	567.7	600.7	676.6	749.2	774.0
60°	511.6	547.9	635.4	711.3	737.7
62.5°	455.5	496.7	595.8	671.7	699.7
65°	399.4	445.6	549.6	630.4	658.5
67.5°	344.9	396.1	506.6	587.5	615.6
70°	282.2	346.6	460.4	539.6	567.7
72.5°	224.4	298.7	415.9	490.1	514.9
75°	173.3	252.5	366.4	434.0	443.9
77.5°	127.1	206.3	315.2	338.3	340.0
80°	85.8	165.0	240.9	237.6	240.9
82.5°	56.1	123.8	151.8	170.0	171.6
85°	33.0	72.6	89.1	99.0	100.7
87.5°	16.5	24.8	31.4	33.0	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)