

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: P310269

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CA08-W2A-U-4500K**

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: P310269
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-L82765-RDP-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3467.0 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

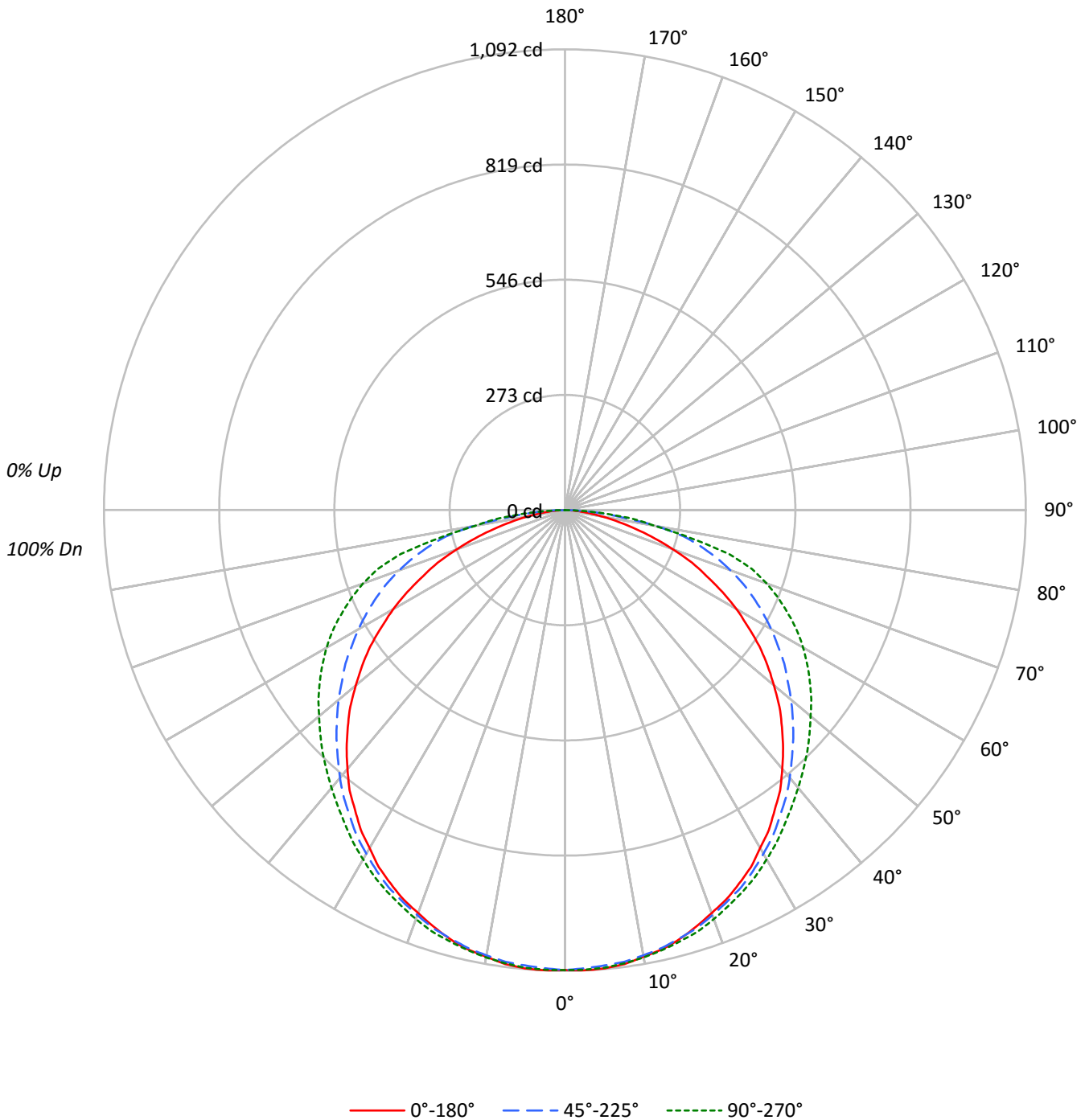
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1467	1467	1467
5°	1473	1463	1470
10°	1468	1464	1471
15°	1466	1464	1473
20°	1455	1463	1477
25°	1450	1465	1481
30°	1437	1462	1485
35°	1424	1458	1491
40°	1408	1456	1510
45°	1384	1456	1545
50°	1353	1465	1591
55°	1319	1489	1662
60°	1263	1518	1754
65°	1182	1571	1862
70°	1076	1644	2002
75°	912	1734	2092
80°	720	1746	1692
85°	531	1328	1487



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	3.0
10°-20°	297.7	8.6
20°-30°	455.2	13.1
30°-40°	556.4	16.0
40°-50°	593.0	17.1
50°-60°	567.0	16.4
60°-70°	480.3	13.9
70°-80°	322.8	9.3
80°-90°	91.1	2.6
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°	856.2	24.7
0°-40°	1412.7	40.7
0°-60°	2572.8	74.2
0°-90°	3467.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3467.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1090	1090	1090	1090	1090	
5°	1090	1089	1083	1089	1089	104
15°	1052	1052	1051	1059	1058	297
25°	977	980	987	996	997	450
35°	867	874	887	904	908	543
45°	727	740	765	798	812	561
55°	562	583	635	684	708	501
65°	371	409	494	559	585	369
75°	175	239	334	390	402	188
85°	34	70	86	93	96	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1090.3	1090.3	1090.3	1090.3	1090.3
2.5°	1092.0	1092.0	1086.8	1090.3	1090.3
5°	1090.3	1088.6	1083.4	1088.6	1088.6
7.5°	1085.1	1083.4	1080.0	1085.1	1083.4
10°	1074.8	1074.8	1071.4	1076.5	1076.5
12.5°	1066.2	1064.5	1062.8	1069.6	1067.9
15°	1052.4	1052.4	1050.7	1059.3	1057.6
17.5°	1035.2	1037.0	1038.7	1045.6	1047.3
20°	1016.3	1019.8	1021.5	1031.8	1031.8
22.5°	999.1	1000.8	1004.3	1014.6	1014.6
25°	976.8	980.2	987.1	995.7	997.4
27.5°	954.4	956.1	964.7	976.8	978.5
30°	925.2	930.3	940.7	954.4	956.1
32.5°	899.4	904.5	916.6	930.3	933.8
35°	866.7	873.6	887.4	904.5	908.0
37.5°	837.5	842.6	859.8	878.8	883.9
40°	801.4	811.7	828.9	851.2	859.8
42.5°	765.3	775.6	796.2	825.4	835.8
45°	727.4	739.5	765.3	797.9	811.7
47.5°	689.6	703.3	732.6	770.4	785.9
50°	646.6	663.8	699.9	742.9	760.1
52.5°	605.3	626.0	665.5	713.7	736.0
55°	562.3	583.0	634.6	684.4	708.5
57.5°	514.2	541.7	598.4	655.2	681.0
60°	469.5	495.3	564.1	626.0	651.8
62.5°	421.3	455.7	529.7	595.0	620.8
65°	371.4	409.3	493.5	558.9	584.7
67.5°	326.7	368.0	457.4	522.8	548.6
70°	273.4	325.0	417.9	483.2	509.0
72.5°	223.6	280.3	376.6	440.2	464.3
75°	175.4	239.0	333.6	390.4	402.4
77.5°	130.7	197.8	288.9	313.0	304.4
80°	92.9	158.2	225.3	213.2	218.4
82.5°	60.2	120.4	139.3	158.2	163.4
85°	34.4	70.5	86.0	92.9	96.3
87.5°	15.5	25.8	34.4	34.4	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)