

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: P313683

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CP187-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: P313683
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-L83050-RDP-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 3385.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

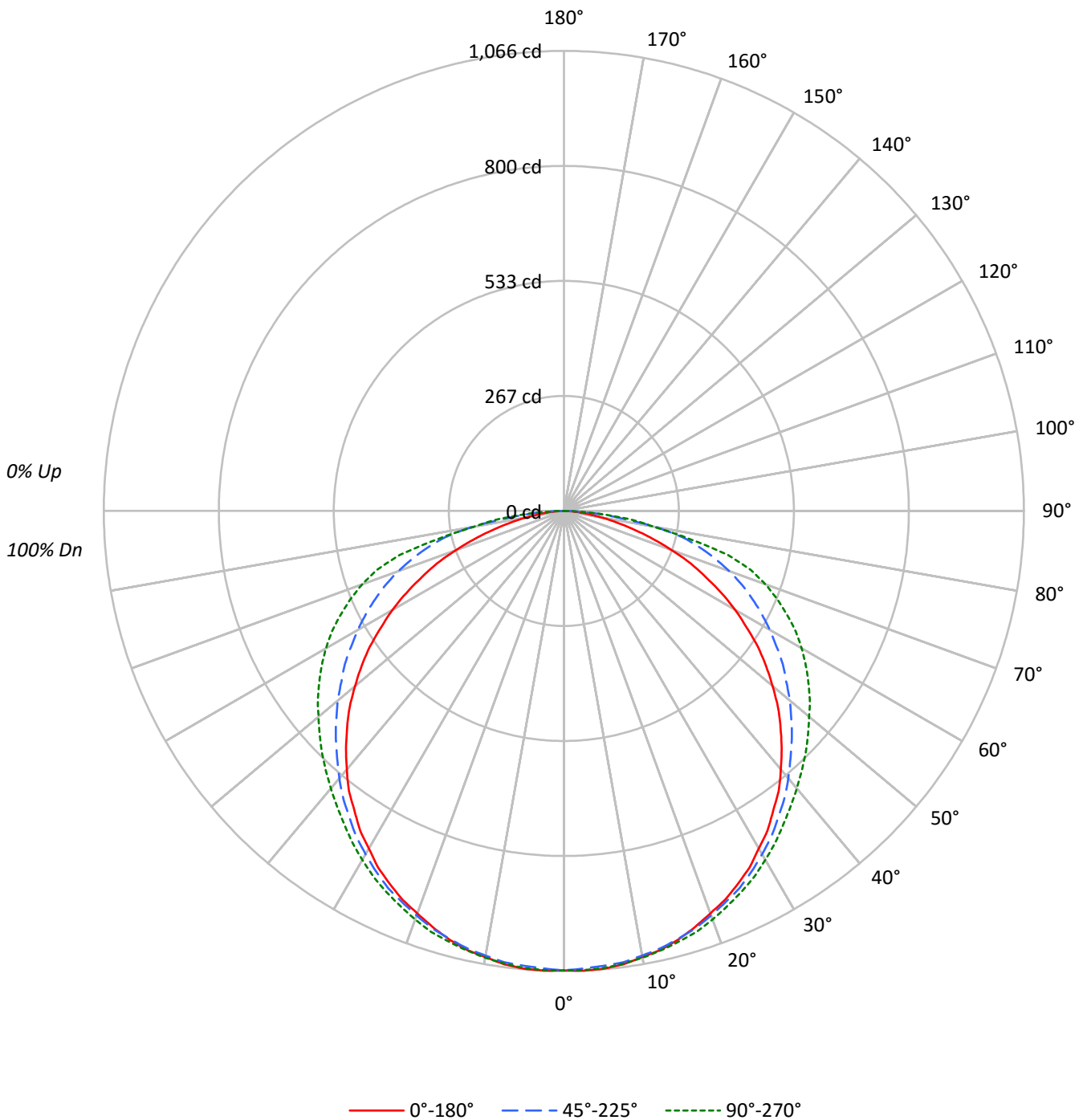
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313683

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P313683

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-4500K

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°	1432	1432	1432
5°	1438	1429	1435
10°	1434	1429	1436
15°	1431	1429	1438
20°	1421	1428	1442
25°	1416	1431	1446
30°	1403	1427	1450
35°	1390	1423	1456
40°	1374	1421	1475
45°	1351	1422	1508
50°	1321	1430	1553
55°	1288	1453	1623
60°	1234	1482	1712
65°	1155	1534	1818
70°	1050	1605	1955
75°	891	1693	2043
80°	703	1704	1652
85°	519	1295	1451



TEST NUMBER: P313683

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	3.0
10°-20°	290.6	8.6
20°-30°	444.4	13.1
30°-40°	543.3	16.0
40°-50°	579.0	17.1
50°-60°	553.6	16.4
60°-70°	469.0	13.9
70°-80°	315.2	9.3
80°-90°	88.9	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°	836.0	24.7
0°-40°	1379.3	40.7
0°-60°	2511.9	74.2
0°-90°	3385.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3385.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1064	1064	1064	1064	1064	
5°	1064	1063	1058	1063	1063	101
15°	1028	1028	1026	1034	1033	290
25°	954	957	964	972	974	440
35°	846	853	866	883	886	530
45°	710	722	747	779	792	548
55°	549	569	620	668	692	489
65°	363	400	482	546	571	360
75°	171	233	326	381	393	183
85°	34	69	84	91	94	42
90°	0	0	0	0	0	



TEST NUMBER: P313683

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1064.5	1064.5	1064.5	1064.5	1064.5
2.5°	1066.2	1066.2	1061.1	1064.5	1064.5
5°	1064.5	1062.8	1057.8	1062.8	1062.8
7.5°	1059.4	1057.8	1054.4	1059.4	1057.8
10°	1049.4	1049.4	1046.0	1051.1	1051.1
12.5°	1041.0	1039.3	1037.6	1044.3	1042.7
15°	1027.5	1027.5	1025.9	1034.3	1032.6
17.5°	1010.8	1012.4	1014.1	1020.8	1022.5
20°	992.3	995.6	997.3	1007.4	1007.4
22.5°	975.5	977.2	980.5	990.6	990.6
25°	953.7	957.0	963.7	972.1	973.8
27.5°	931.8	933.5	941.9	953.7	955.4
30°	903.3	908.3	918.4	931.8	933.5
32.5°	878.1	883.2	894.9	908.3	911.7
35°	846.2	852.9	866.4	883.2	886.5
37.5°	817.7	822.7	839.5	858.0	863.0
40°	782.4	792.5	809.3	831.1	839.5
42.5°	747.2	757.2	777.4	805.9	816.0
45°	710.2	722.0	747.2	779.1	792.5
47.5°	673.3	686.7	715.3	752.2	767.3
50°	631.3	648.1	683.4	725.3	742.1
52.5°	591.0	611.2	649.8	696.8	718.6
55°	549.0	569.2	619.6	668.2	691.7
57.5°	502.0	528.9	584.3	639.7	664.9
60°	458.4	483.6	550.7	611.2	636.3
62.5°	411.4	444.9	517.1	580.9	606.1
65°	362.7	399.6	481.9	545.7	570.9
67.5°	319.0	359.3	446.6	510.4	535.6
70°	267.0	317.3	408.0	471.8	497.0
72.5°	218.3	273.7	367.7	429.8	453.3
75°	171.3	233.4	325.7	381.1	392.9
77.5°	127.6	193.1	282.1	305.6	297.2
80°	90.7	154.5	219.9	208.2	213.2
82.5°	58.8	117.5	136.0	154.5	159.5
85°	33.6	68.8	83.9	90.7	94.0
87.5°	15.1	25.2	33.6	33.6	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)