

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: P313716

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-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: P313716
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: 24FCZ2-65HE-UNV-L83050-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4019.0 lumens
Efficiency: N/A
Efficacy: 76.4 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

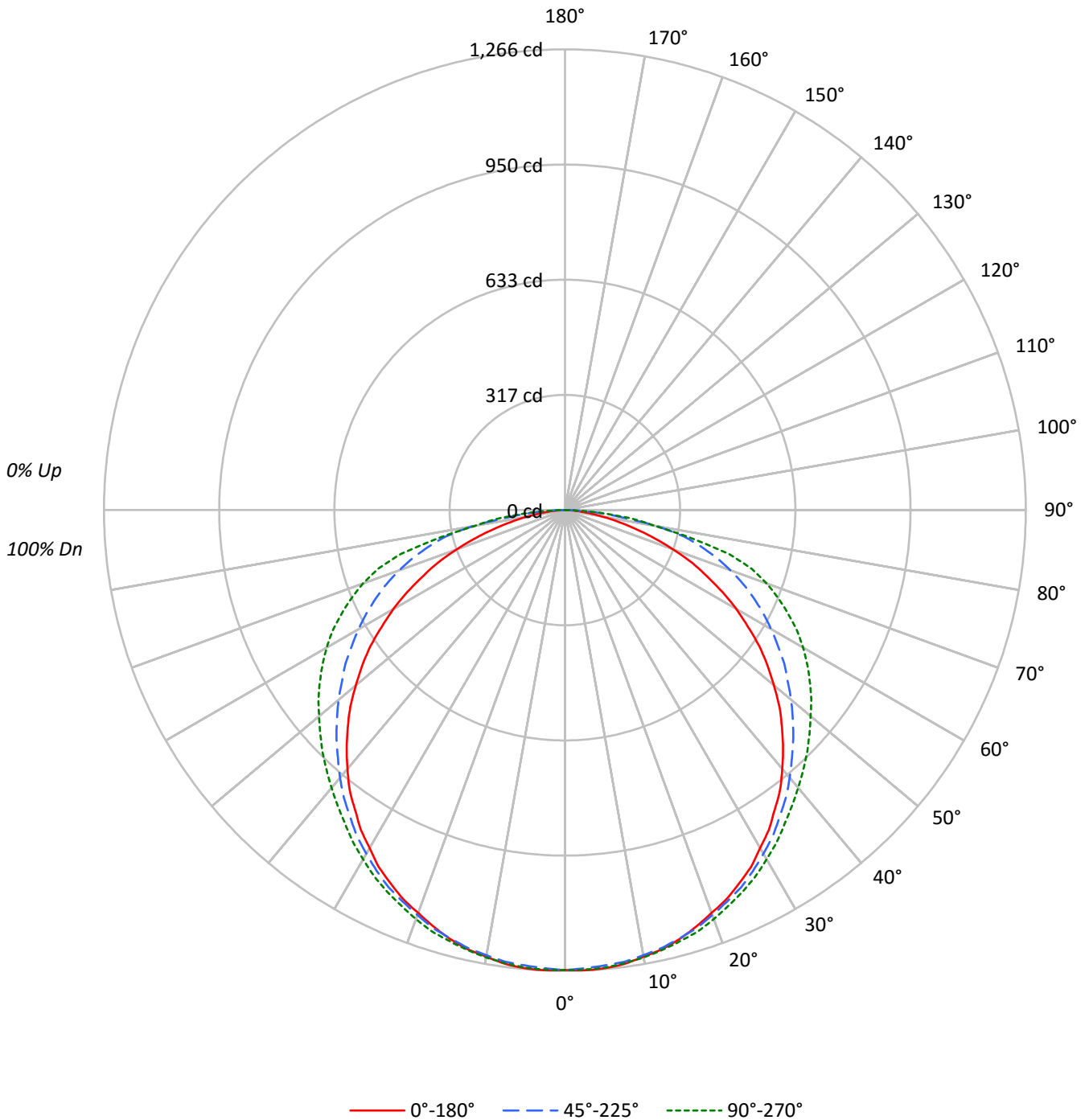
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313716

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313716

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CA08-W2A-U-3500K

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°	1701	1701	1701
5°	1707	1696	1704
10°	1702	1697	1705
15°	1699	1697	1708
20°	1687	1695	1713
25°	1681	1699	1716
30°	1666	1694	1722
35°	1650	1690	1729
40°	1632	1688	1751
45°	1604	1688	1790
50°	1569	1698	1844
55°	1529	1726	1927
60°	1464	1760	2033
65°	1371	1821	2158
70°	1247	1906	2321
75°	1057	2010	2425
80°	834	2023	1962
85°	616	1539	1723



TEST NUMBER: P313716

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.9	3.0
10°-20°	345.0	8.6
20°-30°	527.6	13.1
30°-40°	645.0	16.0
40°-50°	687.5	17.1
50°-60°	657.3	16.4
60°-70°	556.8	13.9
70°-80°	374.2	9.3
80°-90°	105.6	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°	992.6	24.7
0°-40°	1637.6	40.7
0°-60°	2982.4	74.2
0°-90°	4019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1264	1264	1264	1264	1264	
5°	1264	1262	1256	1262	1262	120
15°	1220	1220	1218	1228	1226	344
25°	1132	1136	1144	1154	1156	522
35°	1005	1013	1029	1049	1053	629
45°	843	857	887	925	941	650
55°	652	676	736	793	821	581
65°	431	474	572	648	678	427
75°	203	277	387	452	466	218
85°	40	82	100	108	112	49
90°	0	0	0	0	0	



TEST NUMBER: P313716

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1263.9	1263.9	1263.9	1263.9	1263.9
2.5°	1265.9	1265.9	1259.9	1263.9	1263.9
5°	1263.9	1261.9	1255.9	1261.9	1261.9
7.5°	1257.9	1255.9	1251.9	1257.9	1255.9
10°	1245.9	1245.9	1241.9	1247.9	1247.9
12.5°	1236.0	1234.0	1232.0	1239.9	1237.9
15°	1220.0	1220.0	1218.0	1228.0	1226.0
17.5°	1200.1	1202.1	1204.1	1212.0	1214.0
20°	1178.1	1182.1	1184.1	1196.1	1196.1
22.5°	1158.2	1160.2	1164.2	1176.1	1176.1
25°	1132.3	1136.3	1144.3	1154.2	1156.2
27.5°	1106.4	1108.4	1118.3	1132.3	1134.3
30°	1072.5	1078.5	1090.4	1106.4	1108.4
32.5°	1042.6	1048.6	1062.5	1078.5	1082.5
35°	1004.7	1012.7	1028.6	1048.6	1052.6
37.5°	970.8	976.8	996.7	1018.7	1024.6
40°	929.0	940.9	960.9	986.8	996.7
42.5°	887.1	899.1	923.0	956.9	968.8
45°	843.2	857.2	887.1	925.0	940.9
47.5°	799.4	815.3	849.2	893.1	911.0
50°	749.5	769.5	811.3	861.2	881.1
52.5°	701.7	725.6	771.5	827.3	853.2
55°	651.9	675.8	735.6	793.4	821.3
57.5°	596.0	627.9	693.7	759.5	789.4
60°	544.2	574.1	653.9	725.6	755.5
62.5°	488.4	528.3	614.0	689.7	719.6
65°	430.6	474.4	572.1	647.9	677.8
67.5°	378.8	426.6	530.3	606.0	635.9
70°	317.0	376.8	484.4	560.2	590.1
72.5°	259.2	324.9	436.6	510.3	538.2
75°	203.3	277.1	386.7	452.5	466.5
77.5°	151.5	229.2	334.9	362.8	352.8
80°	107.6	183.4	261.1	247.2	253.2
82.5°	69.8	139.5	161.5	183.4	189.4
85°	39.9	81.7	99.7	107.6	111.6
87.5°	17.9	29.9	39.9	39.9	37.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)