

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: P310396

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5000K**

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: P310396
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-L82765-RDP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 3841.0 lumens
Efficiency: N/A
Efficacy: 71.4 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

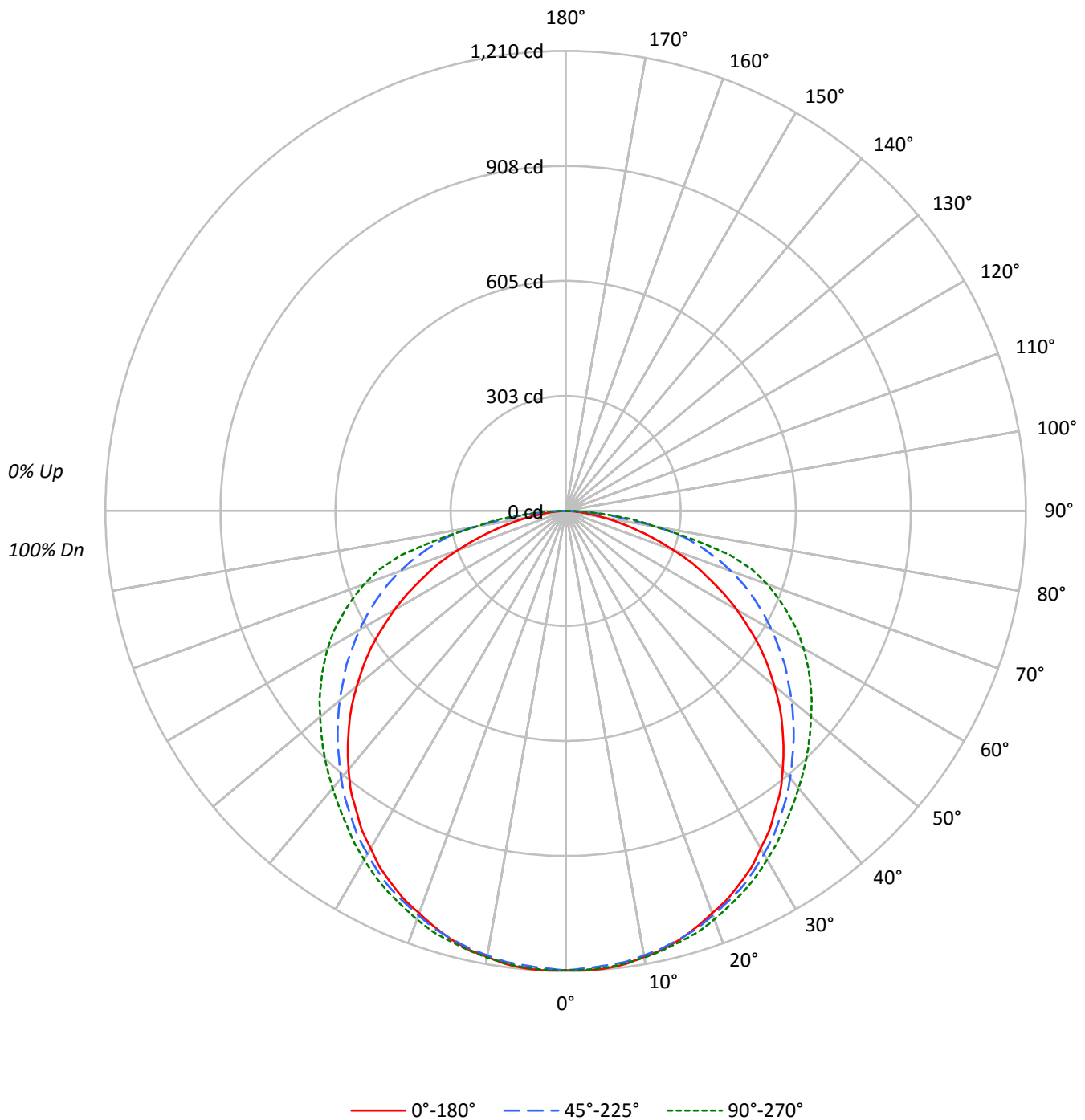
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310396

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P310396

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5000K

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1625	1625	1625
5°	1631	1621	1629
10°	1627	1622	1629
15°	1624	1622	1632
20°	1612	1620	1637
25°	1606	1624	1640
30°	1592	1619	1646
35°	1577	1615	1652
40°	1559	1613	1673
45°	1533	1613	1711
50°	1499	1623	1763
55°	1461	1649	1841
60°	1400	1682	1943
65°	1310	1741	2062
70°	1192	1821	2218
75°	1010	1921	2318
80°	797	1934	1875
85°	588	1471	1647



TEST NUMBER: P310396

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.6	3.0
10°-20°	329.8	8.6
20°-30°	504.3	13.1
30°-40°	616.5	16.0
40°-50°	657.0	17.1
50°-60°	628.2	16.4
60°-70°	532.2	13.9
70°-80°	357.7	9.3
80°-90°	100.9	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°	948.6	24.7
0°-40°	1565.1	40.7
0°-60°	2850.3	74.2
0°-90°	3841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3841.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1208	1208	1208	1208	1208	
5°	1208	1206	1200	1206	1206	115
15°	1166	1166	1164	1174	1172	329
25°	1082	1086	1094	1103	1105	499
35°	960	968	983	1002	1006	602
45°	806	819	848	884	899	622
55°	623	646	703	758	785	555
65°	412	453	547	619	648	409
75°	194	265	370	432	446	208
85°	38	78	95	103	107	47
90°	0	0	0	0	0	



TEST NUMBER: P310396

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1207.9	1207.9	1207.9	1207.9	1207.9
2.5°	1209.8	1209.8	1204.1	1207.9	1207.9
5°	1207.9	1206.0	1200.3	1206.0	1206.0
7.5°	1202.2	1200.3	1196.5	1202.2	1200.3
10°	1190.7	1190.7	1186.9	1192.6	1192.6
12.5°	1181.2	1179.3	1177.4	1185.0	1183.1
15°	1166.0	1166.0	1164.1	1173.6	1171.7
17.5°	1146.9	1148.8	1150.7	1158.4	1160.3
20°	1126.0	1129.8	1131.7	1143.1	1143.1
22.5°	1106.9	1108.8	1112.6	1124.1	1124.1
25°	1082.1	1086.0	1093.6	1103.1	1105.0
27.5°	1057.4	1059.3	1068.8	1082.1	1084.0
30°	1025.0	1030.7	1042.1	1057.4	1059.3
32.5°	996.4	1002.1	1015.5	1030.7	1034.5
35°	960.2	967.8	983.1	1002.1	1005.9
37.5°	927.8	933.5	952.6	973.5	979.3
40°	887.8	899.2	918.3	943.1	952.6
42.5°	847.8	859.2	882.1	914.5	925.9
45°	805.9	819.2	847.8	884.0	899.2
47.5°	764.0	779.2	811.6	853.5	870.7
50°	716.3	735.4	775.4	823.0	842.1
52.5°	670.6	693.5	737.3	790.7	815.4
55°	623.0	645.9	703.0	758.3	784.9
57.5°	569.6	600.1	663.0	725.9	754.5
60°	520.1	548.7	624.9	693.5	722.1
62.5°	466.8	504.9	586.8	659.2	687.8
65°	411.5	453.4	546.8	619.2	647.8
67.5°	362.0	407.7	506.8	579.2	607.8
70°	302.9	360.1	463.0	535.4	563.9
72.5°	247.7	310.5	417.2	487.7	514.4
75°	194.3	264.8	369.6	432.5	445.8
77.5°	144.8	219.1	320.1	346.7	337.2
80°	102.9	175.3	249.6	236.2	242.0
82.5°	66.7	133.4	154.3	175.3	181.0
85°	38.1	78.1	95.3	102.9	106.7
87.5°	17.1	28.6	38.1	38.1	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)