

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: P310887

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP250-W2A-U-3000K**

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: P310887
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 3000K 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: 4026.0 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

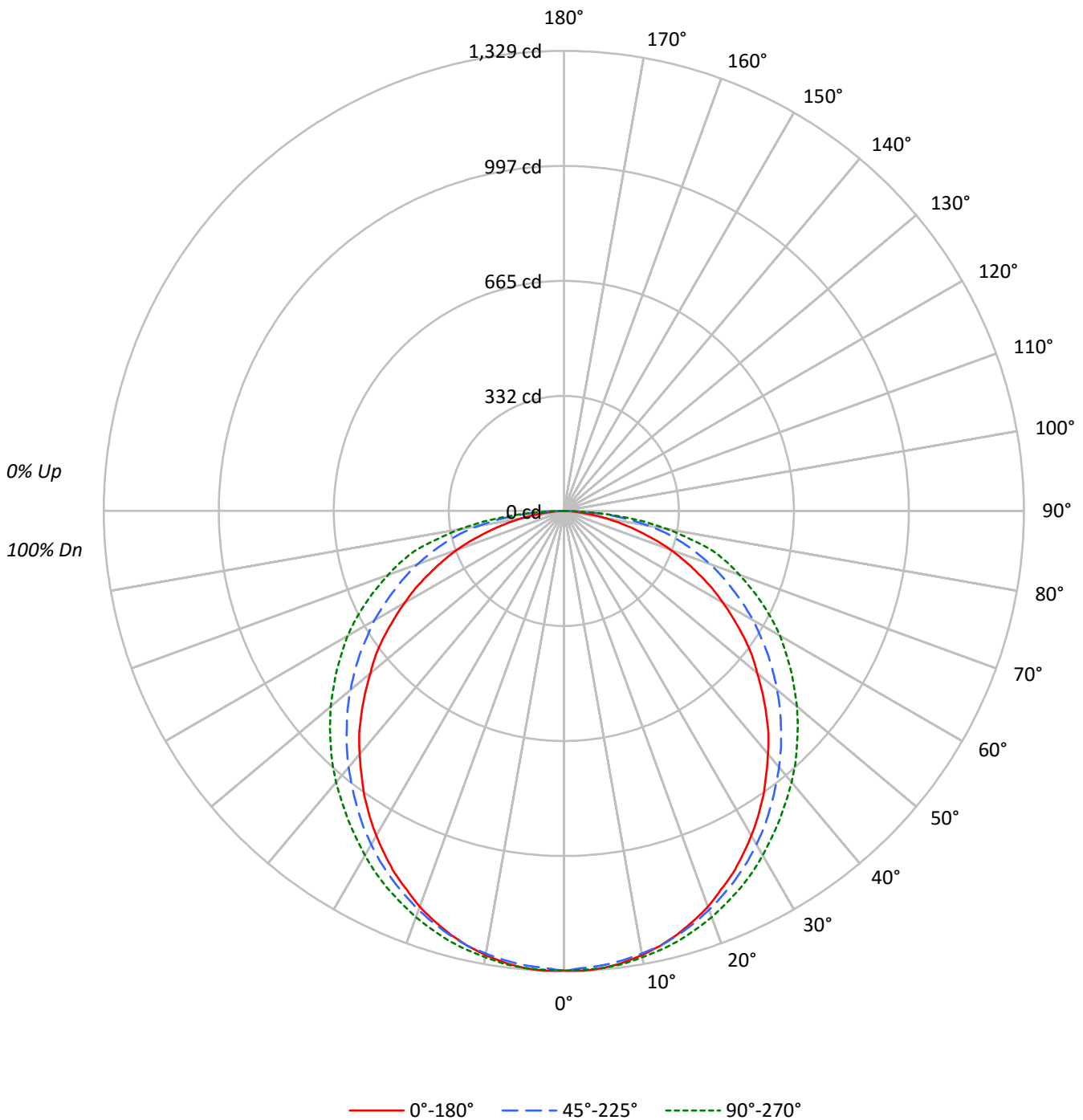
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310887

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P310887

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-3000K

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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1786	1786	1786
5°	1790	1779	1790
10°	1779	1774	1788
15°	1764	1768	1790
20°	1742	1756	1788
25°	1715	1743	1787
30°	1683	1729	1785
35°	1650	1711	1786
40°	1612	1699	1797
45°	1573	1688	1812
50°	1527	1683	1840
55°	1488	1686	1877
60°	1431	1700	1941
65°	1365	1718	2011
70°	1293	1771	2123
75°	1153	1847	2319
80°	983	1956	2370
85°	701	1939	2268



TEST NUMBER: P310887

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.7	3.1
10°-20°	359.3	8.9
20°-30°	542.7	13.5
30°-40°	654.1	16.2
40°-50°	686.6	17.1
50°-60°	642.4	16.0
60°-70°	530.5	13.2
70°-80°	361.5	9.0
80°-90°	123.3	3.1
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°	1027.6	25.5
0°-40°	1681.7	41.8
0°-60°	3010.7	74.8
0°-90°	4026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1325	1324	1317	1325	1325	126
15°	1266	1268	1269	1282	1285	357
25°	1155	1161	1174	1197	1204	532
35°	1004	1015	1042	1077	1087	628
45°	827	844	887	935	952	638
55°	634	660	719	777	800	566
65°	429	465	540	608	632	425
75°	222	272	355	422	446	236
85°	45	90	126	142	147	57
90°	0	0	0	0	0	



TEST NUMBER: P310887

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1327.7	1327.7	1327.7	1327.7	1327.7
2.5°	1329.1	1327.7	1321.1	1327.7	1326.4
5°	1325.1	1323.7	1317.1	1325.1	1325.1
7.5°	1315.7	1315.7	1309.0	1318.4	1319.7
10°	1302.4	1302.4	1298.4	1309.0	1309.0
12.5°	1286.3	1286.3	1286.3	1297.0	1298.4
15°	1266.3	1267.6	1269.0	1282.3	1285.0
17.5°	1242.3	1244.9	1248.9	1265.0	1267.6
20°	1216.9	1219.5	1226.2	1244.9	1248.9
22.5°	1184.8	1191.5	1200.8	1222.2	1226.2
25°	1155.4	1160.8	1174.1	1196.8	1203.5
27.5°	1119.4	1127.4	1144.7	1168.8	1178.1
30°	1083.3	1091.3	1112.7	1140.7	1148.7
32.5°	1044.6	1056.6	1079.3	1108.7	1118.0
35°	1004.5	1015.2	1041.9	1076.6	1087.3
37.5°	960.4	975.1	1004.5	1041.9	1055.2
40°	917.7	933.7	967.1	1007.2	1023.2
42.5°	874.9	890.9	928.3	973.8	989.8
45°	826.8	844.2	886.9	935.0	952.4
47.5°	778.7	800.1	846.9	897.6	916.3
50°	729.3	753.4	804.1	857.6	878.9
52.5°	685.2	707.9	761.4	818.8	838.9
55°	634.5	659.9	718.6	777.4	800.1
57.5°	582.4	610.4	673.2	737.3	760.0
60°	531.6	562.4	631.8	695.9	721.3
62.5°	482.2	512.9	585.1	651.8	677.2
65°	428.8	464.8	539.6	607.8	631.8
67.5°	378.0	416.8	495.6	562.4	586.4
70°	328.6	366.0	450.1	515.6	539.6
72.5°	275.2	317.9	402.1	470.2	495.6
75°	221.7	272.5	355.3	422.1	446.1
77.5°	172.3	224.4	307.2	362.0	374.0
80°	126.9	180.3	252.5	291.2	305.9
82.5°	81.5	134.9	192.3	220.4	232.4
85°	45.4	89.5	125.6	141.6	146.9
87.5°	18.7	38.7	50.8	57.4	57.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)