

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: P310981

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-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: P310981
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: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 4849.0 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

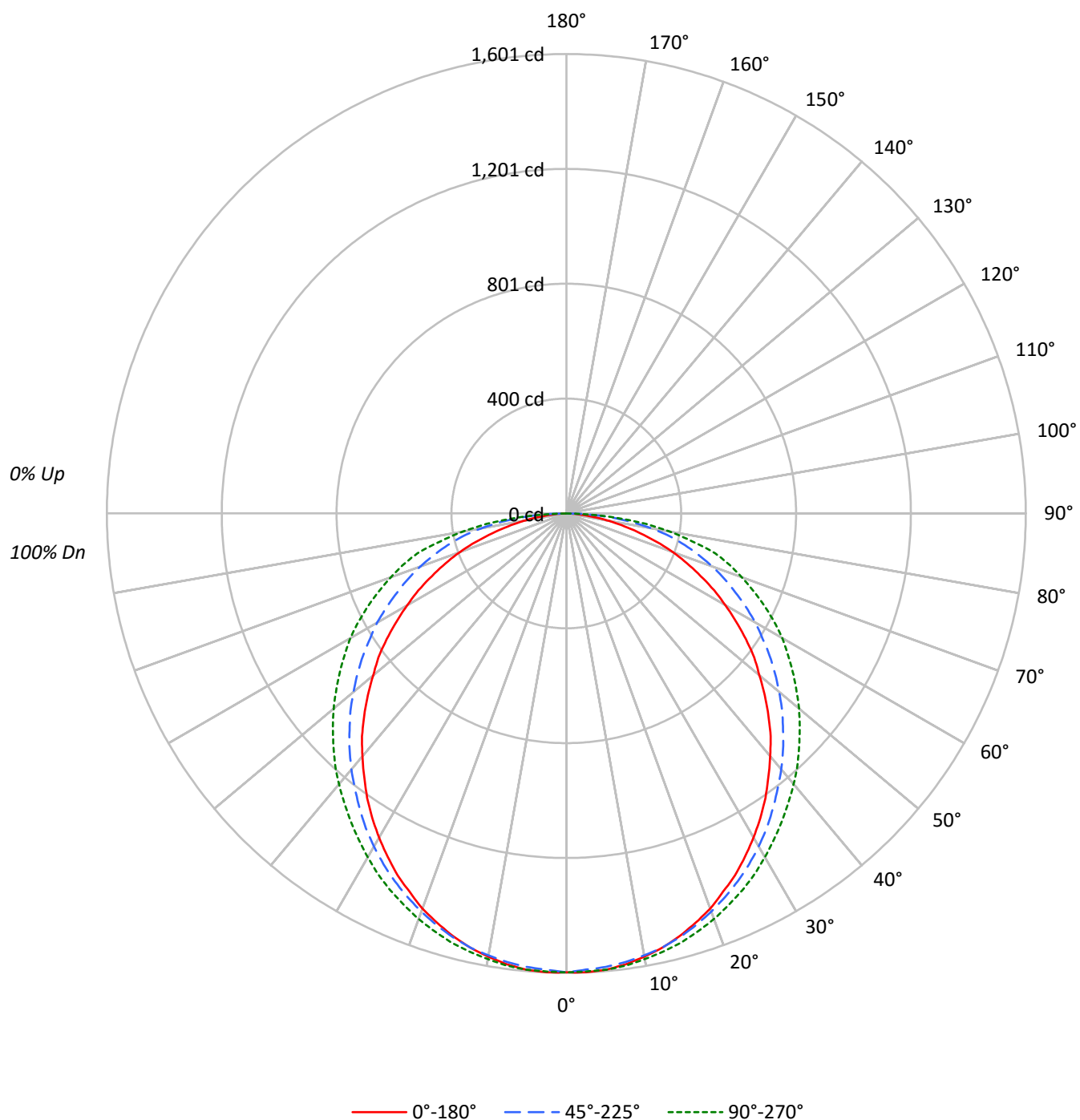
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310981

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P310981

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2152	2152	2152
5°	2155	2143	2155
10°	2143	2137	2154
15°	2125	2129	2156
20°	2099	2115	2154
25°	2066	2099	2152
30°	2027	2082	2150
35°	1987	2061	2151
40°	1941	2046	2164
45°	1895	2033	2183
50°	1839	2027	2216
55°	1793	2030	2261
60°	1723	2048	2338
65°	1644	2069	2423
70°	1557	2133	2557
75°	1389	2224	2793
80°	1184	2356	2854
85°	844	2334	2732



TEST NUMBER: P310981

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.3	3.1
10°-20°	432.7	8.9
20°-30°	653.6	13.5
30°-40°	787.8	16.2
40°-50°	827.0	17.1
50°-60°	773.7	16.0
60°-70°	639.0	13.2
70°-80°	435.4	9.0
80°-90°	148.5	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°	1237.7	25.5
0°-40°	2025.5	41.8
0°-60°	3626.2	74.8
0°-90°	4849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1599	1599	1599	1599	1599	
5°	1596	1594	1586	1596	1596	151
15°	1525	1527	1528	1544	1548	430
25°	1392	1398	1414	1442	1450	640
35°	1210	1223	1255	1297	1310	756
45°	996	1017	1068	1126	1147	768
55°	764	795	866	936	964	682
65°	516	560	650	732	761	512
75°	267	328	428	508	537	285
85°	55	108	151	170	177	68
90°	0	0	0	0	0	



TEST NUMBER: P310981

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-CP250-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1599.2	1599.2	1599.2	1599.2	1599.2
2.5°	1600.8	1599.2	1591.1	1599.2	1597.5
5°	1595.9	1594.3	1586.3	1595.9	1595.9
7.5°	1584.7	1584.7	1576.6	1587.9	1589.5
10°	1568.6	1568.6	1563.8	1576.6	1576.6
12.5°	1549.3	1549.3	1549.3	1562.2	1563.8
15°	1525.2	1526.8	1528.4	1544.5	1547.7
17.5°	1496.2	1499.4	1504.2	1523.5	1526.8
20°	1465.6	1468.8	1476.9	1499.4	1504.2
22.5°	1427.0	1435.1	1446.3	1472.1	1476.9
25°	1391.6	1398.1	1414.1	1441.5	1449.5
27.5°	1348.2	1357.8	1378.8	1407.7	1419.0
30°	1304.7	1314.4	1340.1	1373.9	1383.6
32.5°	1258.1	1272.6	1299.9	1335.3	1346.6
35°	1209.8	1222.7	1254.9	1296.7	1309.6
37.5°	1156.7	1174.4	1209.8	1254.9	1271.0
40°	1105.3	1124.6	1164.8	1213.0	1232.3
42.5°	1053.8	1073.1	1118.1	1172.8	1192.1
45°	995.9	1016.8	1068.3	1126.2	1147.1
47.5°	937.9	963.7	1020.0	1081.1	1103.6
50°	878.4	907.4	968.5	1032.9	1058.6
52.5°	825.3	852.7	917.0	986.2	1010.3
55°	764.2	794.8	865.5	936.3	963.7
57.5°	701.4	735.2	810.8	888.1	915.4
60°	640.3	677.3	761.0	838.2	868.8
62.5°	580.8	617.8	704.7	785.1	815.7
65°	516.4	559.9	650.0	732.0	761.0
67.5°	455.3	501.9	596.9	677.3	706.3
70°	395.8	440.8	542.2	621.0	650.0
72.5°	331.4	382.9	484.3	566.3	596.9
75°	267.1	328.2	427.9	508.4	537.3
77.5°	207.5	270.3	370.0	436.0	450.5
80°	152.8	217.2	304.1	350.7	368.4
82.5°	98.1	162.5	231.7	265.5	279.9
85°	54.7	107.8	151.2	170.5	177.0
87.5°	22.5	46.7	61.1	69.2	69.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)