

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: P314040

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-CA08-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: P314040
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-L83050-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 4795.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

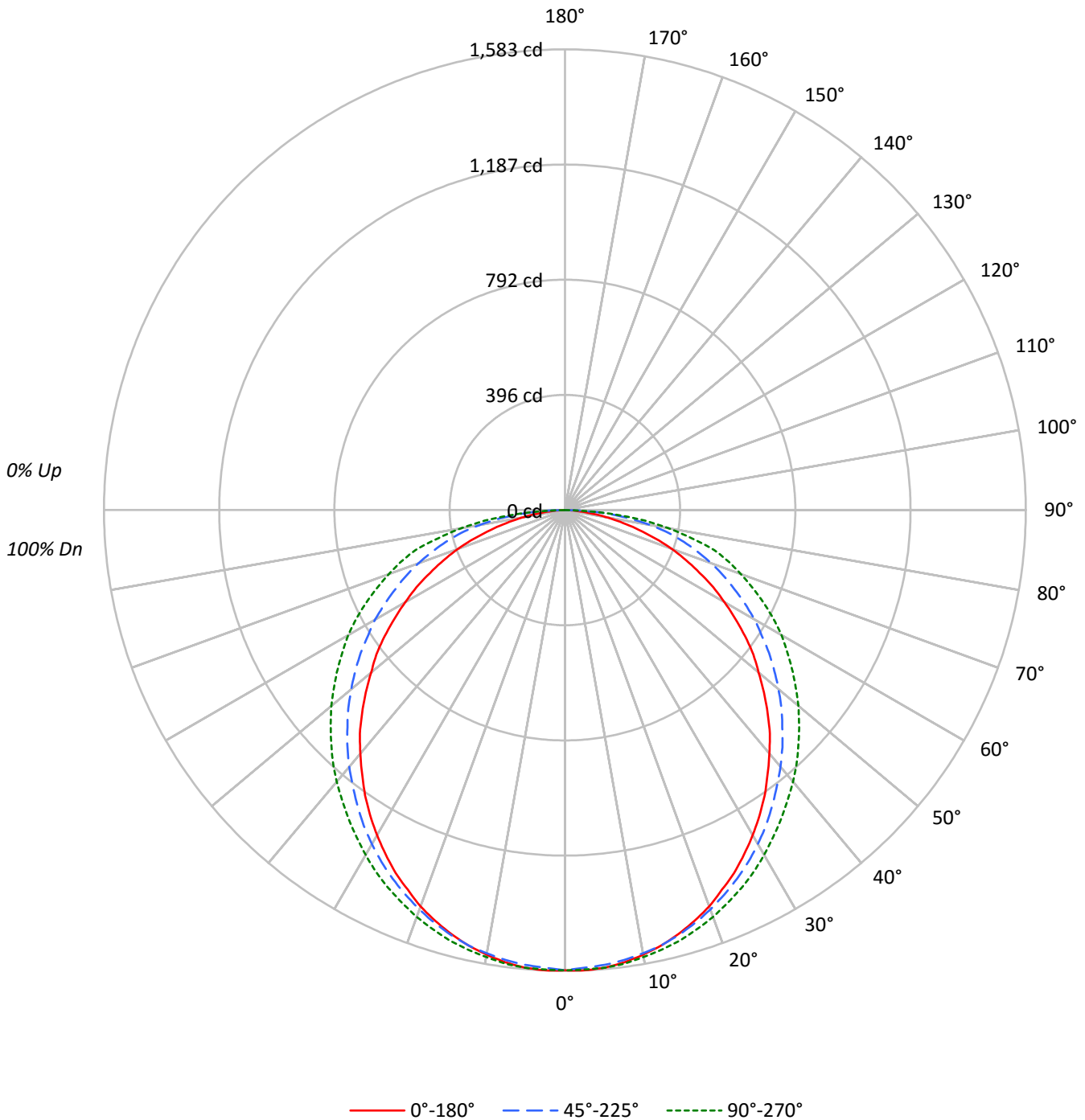
Input Watts (W): 43
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314040

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P314040

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-CA08-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°	2128	2128	2128
5°	2132	2119	2132
10°	2119	2113	2130
15°	2101	2105	2132
20°	2075	2091	2130
25°	2043	2076	2128
30°	2005	2059	2126
35°	1965	2038	2127
40°	1920	2023	2140
45°	1874	2010	2158
50°	1818	2005	2191
55°	1773	2008	2235
60°	1704	2025	2312
65°	1626	2046	2396
70°	1540	2109	2528
75°	1373	2200	2763
80°	1171	2330	2823
85°	835	2308	2702



TEST NUMBER: P314040

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.7	3.1
10°-20°	427.9	8.9
20°-30°	646.3	13.5
30°-40°	779.0	16.2
40°-50°	817.8	17.1
50°-60°	765.1	16.0
60°-70°	631.8	13.2
70°-80°	430.5	9.0
80°-90°	146.8	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°	1223.9	25.5
0°-40°	2002.9	41.8
0°-60°	3585.8	74.8
0°-90°	4795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1581	1581	1581	1581	1581	
5°	1578	1577	1569	1578	1578	150
15°	1508	1510	1511	1527	1530	425
25°	1376	1382	1398	1425	1433	633
35°	1196	1209	1241	1282	1295	748
45°	985	1005	1056	1114	1134	759
55°	756	786	856	926	953	674
65°	511	554	643	724	752	507
75°	264	324	423	503	531	282
85°	54	107	150	169	175	68
90°	0	0	0	0	0	



TEST NUMBER: P314040

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1581.3	1581.3	1581.3	1581.3	1581.3
2.5°	1582.9	1581.3	1573.4	1581.3	1579.8
5°	1578.2	1576.6	1568.6	1578.2	1578.2
7.5°	1567.0	1567.0	1559.1	1570.2	1571.8
10°	1551.1	1551.1	1546.3	1559.1	1559.1
12.5°	1532.0	1532.0	1532.0	1544.8	1546.3
15°	1508.2	1509.8	1511.3	1527.3	1530.4
17.5°	1479.5	1482.7	1487.5	1506.6	1509.8
20°	1449.3	1452.5	1460.4	1482.7	1487.5
22.5°	1411.1	1419.1	1430.2	1455.7	1460.4
25°	1376.1	1382.5	1398.4	1425.4	1433.4
27.5°	1333.2	1342.7	1363.4	1392.0	1403.2
30°	1290.2	1299.8	1325.2	1358.6	1368.2
32.5°	1244.1	1258.4	1285.4	1320.4	1331.6
35°	1196.4	1209.1	1240.9	1282.3	1295.0
37.5°	1143.9	1161.4	1196.4	1240.9	1256.8
40°	1092.9	1112.0	1151.8	1199.5	1218.6
42.5°	1042.0	1061.1	1105.7	1159.8	1178.9
45°	984.8	1005.4	1056.4	1113.6	1134.3
47.5°	927.5	952.9	1008.6	1069.1	1091.4
50°	868.6	897.3	957.7	1021.4	1046.8
52.5°	816.1	843.2	906.8	975.2	999.1
55°	755.7	785.9	855.9	925.9	952.9
57.5°	693.6	727.0	801.8	878.2	905.2
60°	633.2	669.8	752.5	828.9	859.1
62.5°	574.3	610.9	696.8	776.4	806.6
65°	510.7	553.6	642.7	723.9	752.5
67.5°	450.2	496.4	590.2	669.8	698.4
70°	391.4	435.9	536.1	614.1	642.7
72.5°	327.7	378.6	478.9	560.0	590.2
75°	264.1	324.5	423.2	502.7	531.4
77.5°	205.2	267.3	365.9	431.1	445.5
80°	151.1	214.8	300.7	346.8	364.3
82.5°	97.0	160.7	229.1	262.5	276.8
85°	54.1	106.6	149.5	168.6	175.0
87.5°	22.3	46.1	60.5	68.4	68.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)