

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: P309629

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4000K**

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: P309629
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 4000K 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: 3566.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

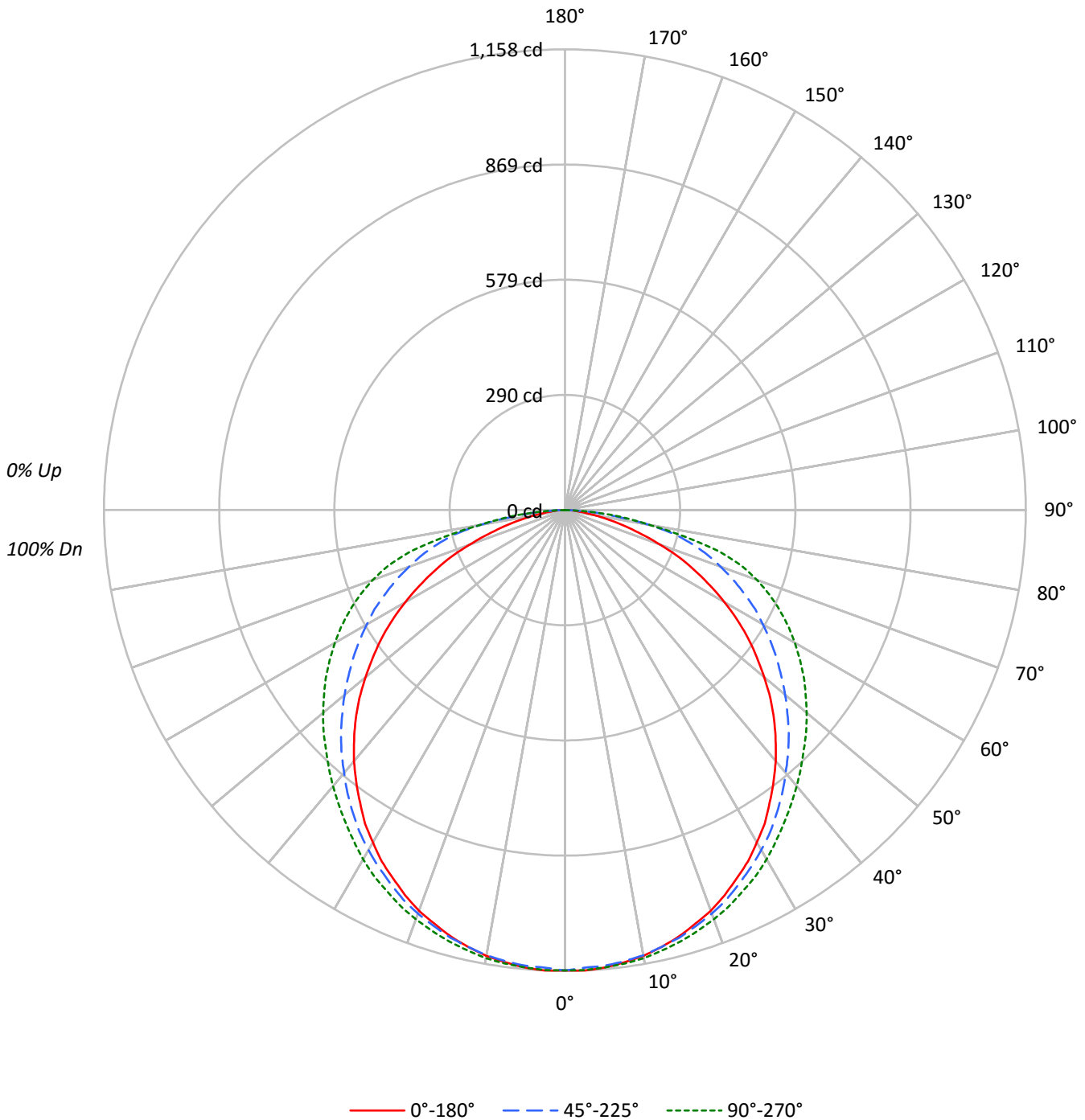
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309629

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P309629

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4000K

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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1557	1557	1557
5°	1559	1553	1559
10°	1554	1552	1562
15°	1545	1549	1564
20°	1535	1546	1567
25°	1516	1538	1569
30°	1498	1533	1575
35°	1474	1525	1577
40°	1447	1516	1592
45°	1415	1514	1616
50°	1369	1513	1659
55°	1320	1523	1719
60°	1245	1547	1796
65°	1150	1583	1897
70°	1004	1638	2020
75°	815	1723	2088
80°	601	1689	1689
85°	462	1244	1406



TEST NUMBER: P309629

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.1
10°-20°	314.7	8.8
20°-30°	479.2	13.4
30°-40°	581.8	16.3
40°-50°	614.7	17.2
50°-60°	580.0	16.3
60°-70°	482.3	13.5
70°-80°	317.3	8.9
80°-90°	86.5	2.4
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°	903.5	25.3
0°-40°	1485.3	41.7
0°-60°	2680.0	75.2
0°-90°	3566.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3566.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1157	1157	1157	1157	1157	
5°	1154	1154	1150	1154	1154	110
15°	1109	1111	1112	1123	1123	313
25°	1021	1027	1036	1054	1057	471
35°	897	908	929	952	960	562
45°	744	758	796	834	850	573
55°	563	587	649	711	733	501
65°	361	403	497	570	596	357
75°	157	228	331	393	402	169
85°	30	66	81	90	91	37
90°	0	0	0	0	0	



TEST NUMBER: P309629

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1157.0	1157.0	1157.0	1157.0	1157.0
2.5°	1158.5	1157.0	1151.0	1157.0	1157.0
5°	1154.0	1154.0	1149.5	1154.0	1154.0
7.5°	1146.5	1146.5	1143.6	1149.5	1149.5
10°	1137.6	1137.6	1136.1	1143.6	1143.6
12.5°	1124.1	1125.6	1124.1	1133.1	1133.1
15°	1109.2	1110.7	1112.2	1122.7	1122.7
17.5°	1089.8	1092.8	1095.8	1107.7	1109.2
20°	1071.9	1073.4	1079.4	1092.8	1094.3
22.5°	1048.0	1052.5	1060.0	1073.4	1077.9
25°	1021.1	1027.1	1036.1	1054.0	1057.0
27.5°	995.8	1000.2	1012.2	1031.6	1037.6
30°	964.4	971.9	986.8	1006.2	1013.7
32.5°	934.6	942.0	959.9	980.8	986.8
35°	897.2	907.7	928.6	952.5	959.9
37.5°	861.4	871.8	897.2	924.1	933.1
40°	824.1	836.0	862.9	894.2	906.2
42.5°	783.8	800.2	830.0	864.4	877.8
45°	743.5	758.4	795.7	834.5	849.5
47.5°	700.2	718.1	758.4	804.7	822.6
50°	653.9	676.3	722.6	773.3	792.7
52.5°	607.6	633.0	685.2	742.0	762.9
55°	562.8	586.7	649.4	710.6	733.0
57.5°	513.6	543.4	612.1	677.8	700.2
60°	462.8	495.6	574.8	643.4	667.3
62.5°	412.0	449.4	538.9	607.6	633.0
65°	361.3	403.1	497.1	570.3	595.7
67.5°	312.0	358.3	458.3	531.5	556.8
70°	255.3	313.5	416.5	488.2	513.6
72.5°	203.0	270.2	376.2	443.4	465.8
75°	156.8	228.4	331.4	392.6	401.6
77.5°	115.0	186.6	285.1	306.0	307.5
80°	77.6	149.3	218.0	215.0	218.0
82.5°	50.8	112.0	137.3	153.8	155.3
85°	29.9	65.7	80.6	89.6	91.1
87.5°	14.9	22.4	28.4	29.9	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)