

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: P310304

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-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: P310304
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: 24FCZ2-55HE-UNV-L82765-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3162.0 lumens
Efficiency: N/A
Efficacy: 72.5 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

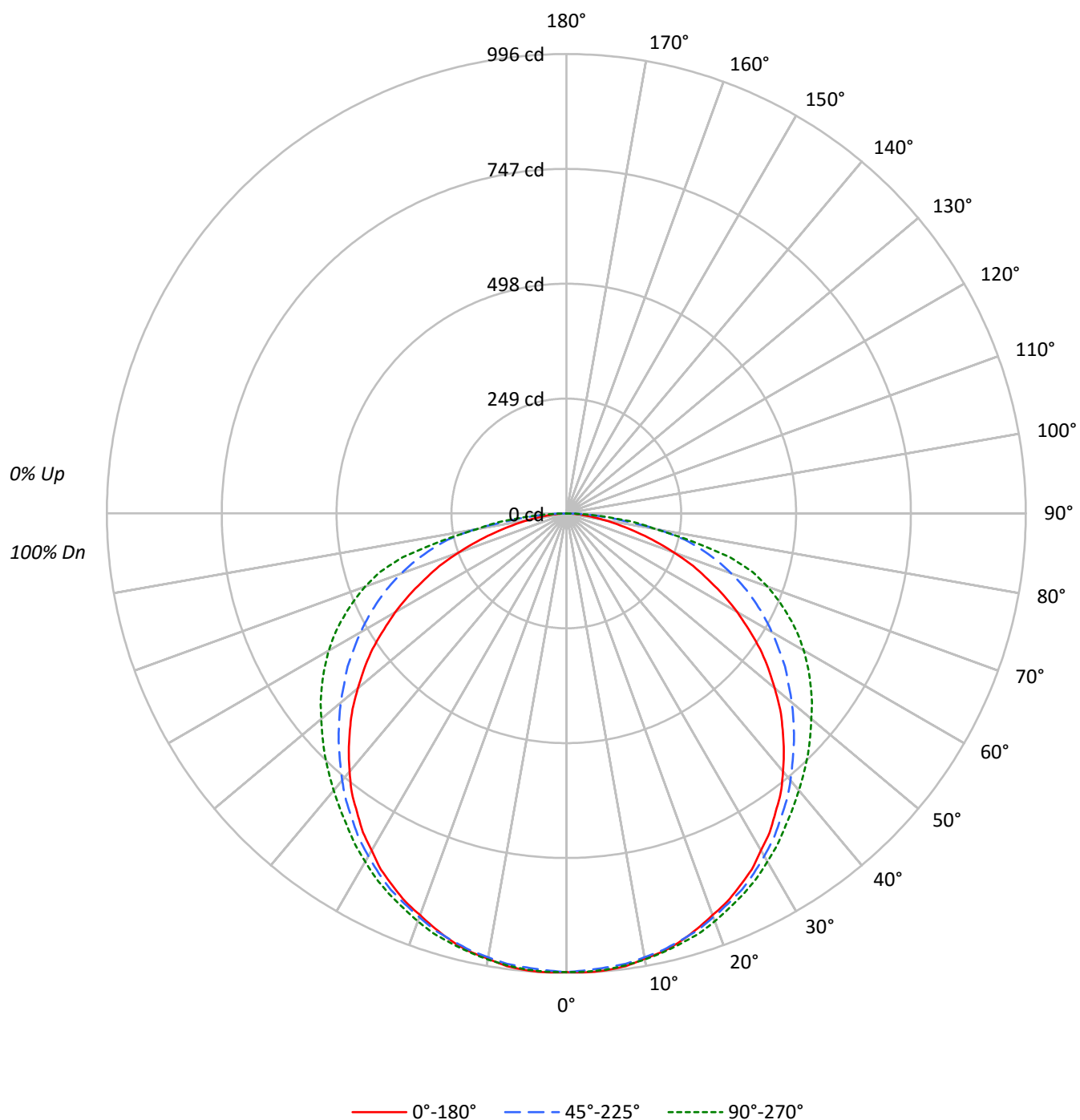
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1338	1338	1338
5°	1343	1335	1341
10°	1339	1335	1341
15°	1337	1335	1344
20°	1327	1334	1347
25°	1322	1337	1351
30°	1311	1333	1355
35°	1298	1329	1360
40°	1284	1328	1377
45°	1262	1328	1409
50°	1234	1336	1451
55°	1203	1358	1516
60°	1152	1384	1600
65°	1079	1433	1698
70°	981	1499	1826
75°	832	1582	1908
80°	656	1592	1543
85°	485	1210	1355



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.3	3.0
10°-20°	271.5	8.6
20°-30°	415.1	13.1
30°-40°	507.5	16.0
40°-50°	540.9	17.1
50°-60°	517.1	16.4
60°-70°	438.1	13.9
70°-80°	294.4	9.3
80°-90°	83.1	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°	780.9	24.7
0°-40°	1288.4	40.7
0°-60°	2346.4	74.2
0°-90°	3162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3162.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	994	994	994	994	994	
5°	994	993	988	993	993	94
15°	960	960	958	966	965	271
25°	891	894	900	908	910	411
35°	790	797	809	825	828	495
45°	663	674	698	728	740	512
55°	513	532	579	624	646	457
65°	339	373	450	510	533	336
75°	160	218	304	356	367	171
85°	31	64	78	85	88	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	994.4	994.4	994.4	994.4	994.4
2.5°	995.9	995.9	991.2	994.4	994.4
5°	994.4	992.8	988.1	992.8	992.8
7.5°	989.7	988.1	984.9	989.7	988.1
10°	980.2	980.2	977.1	981.8	981.8
12.5°	972.4	970.8	969.3	975.5	974.0
15°	959.9	959.9	958.3	966.1	964.6
17.5°	944.2	945.7	947.3	953.6	955.1
20°	926.9	930.1	931.6	941.0	941.0
22.5°	911.2	912.8	915.9	925.3	925.3
25°	890.8	894.0	900.3	908.1	909.7
27.5°	870.5	872.0	879.9	890.8	892.4
30°	843.8	848.5	857.9	870.5	872.0
32.5°	820.3	825.0	836.0	848.5	851.6
35°	790.5	796.7	809.3	825.0	828.1
37.5°	763.8	768.5	784.2	801.4	806.2
40°	730.9	740.3	756.0	776.4	784.2
42.5°	697.9	707.3	726.2	752.8	762.2
45°	663.4	674.4	697.9	727.7	740.3
47.5°	628.9	641.5	668.1	702.6	716.8
50°	589.7	605.4	638.3	677.5	693.2
52.5°	552.1	570.9	607.0	650.9	671.3
55°	512.9	531.7	578.7	624.2	646.2
57.5°	468.9	494.0	545.8	597.6	621.1
60°	428.2	451.7	514.4	570.9	594.4
62.5°	384.3	415.6	483.1	542.7	566.2
65°	338.8	373.3	450.1	509.7	533.3
67.5°	298.0	335.6	417.2	476.8	500.3
70°	249.4	296.4	381.1	440.7	464.2
72.5°	203.9	255.6	343.5	401.5	423.5
75°	160.0	218.0	304.3	356.0	367.0
77.5°	119.2	180.4	263.5	285.4	277.6
80°	84.7	144.3	205.5	194.5	199.2
82.5°	54.9	109.8	127.0	144.3	149.0
85°	31.4	64.3	78.4	84.7	87.8
87.5°	14.1	23.5	31.4	31.4	29.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)