

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: P309617

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309617
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-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 2700K 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: 3305.0 lumens
Efficiency: N/A
Efficacy: 76.7 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

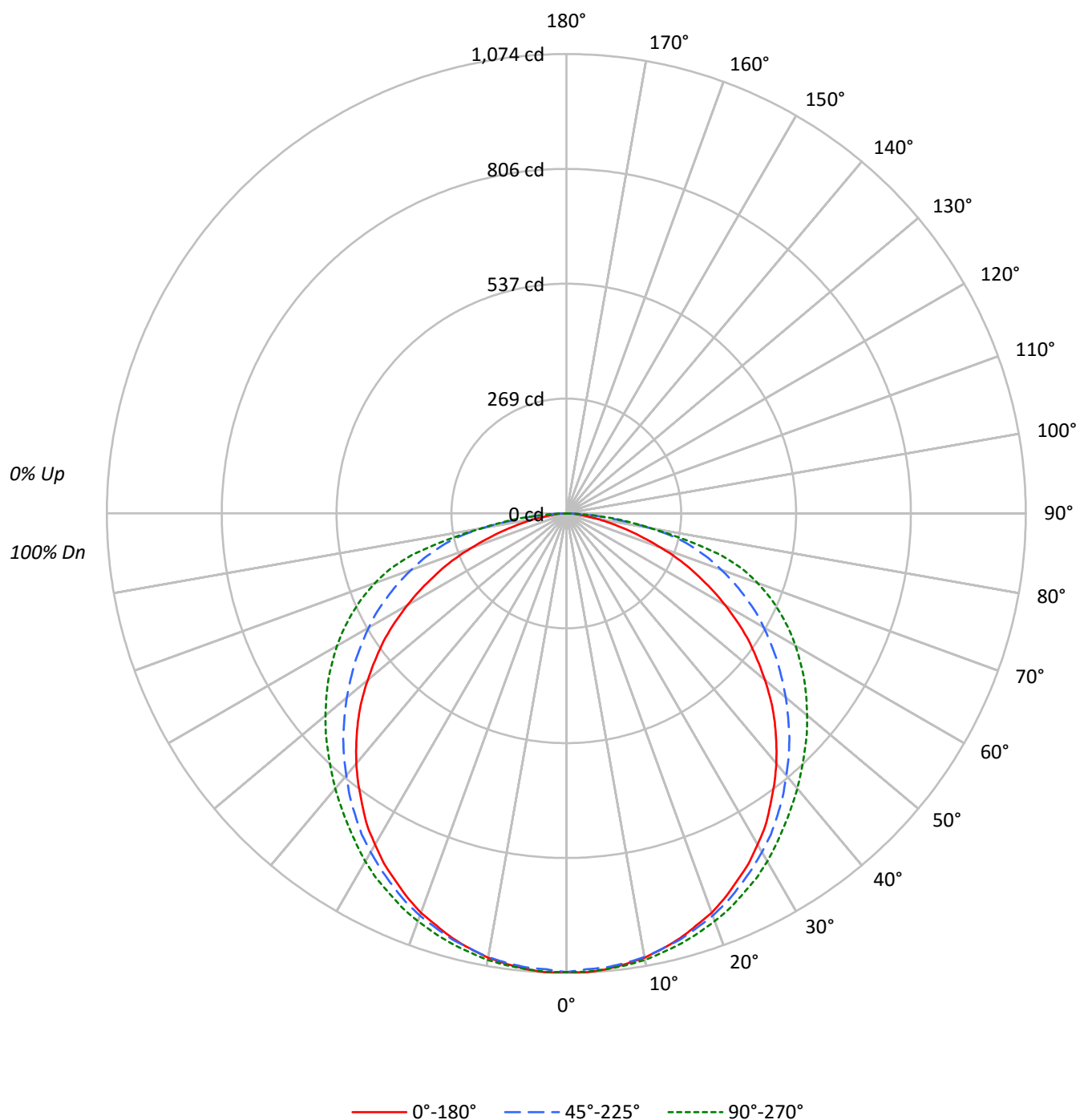
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1443	1443	1443
5°	1444	1439	1444
10°	1440	1439	1448
15°	1432	1436	1449
20°	1422	1432	1452
25°	1405	1425	1454
30°	1389	1421	1460
35°	1366	1414	1461
40°	1342	1405	1475
45°	1311	1403	1498
50°	1268	1402	1538
55°	1224	1412	1594
60°	1154	1433	1664
65°	1066	1467	1758
70°	931	1519	1873
75°	755	1597	1935
80°	557	1565	1565
85°	428	1153	1303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	3.1
10°-20°	291.7	8.8
20°-30°	444.1	13.4
30°-40°	539.2	16.3
40°-50°	569.7	17.2
50°-60°	537.6	16.3
60°-70°	447.0	13.5
70°-80°	294.1	8.9
80°-90°	80.2	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°	837.4	25.3
0°-40°	1376.6	41.7
0°-60°	2483.8	75.2
0°-90°	3305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1072	1072	1072	1072	1072	
5°	1070	1070	1065	1070	1070	102
15°	1028	1029	1031	1040	1040	290
25°	946	952	960	977	980	437
35°	832	841	861	883	890	521
45°	689	703	738	773	787	531
55°	522	544	602	659	679	465
65°	335	374	461	528	552	331
75°	145	212	307	364	372	157
85°	28	61	75	83	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1072.3	1072.3	1072.3	1072.3	1072.3
2.5°	1073.7	1072.3	1066.8	1072.3	1072.3
5°	1069.5	1069.5	1065.4	1069.5	1069.5
7.5°	1062.6	1062.6	1059.9	1065.4	1065.4
10°	1054.3	1054.3	1052.9	1059.9	1059.9
12.5°	1041.9	1043.3	1041.9	1050.2	1050.2
15°	1028.0	1029.4	1030.8	1040.5	1040.5
17.5°	1010.0	1012.8	1015.6	1026.7	1028.0
20°	993.4	994.8	1000.4	1012.8	1014.2
22.5°	971.3	975.5	982.4	994.8	999.0
25°	946.4	951.9	960.2	976.8	979.6
27.5°	922.9	927.0	938.1	956.1	961.6
30°	893.8	900.7	914.6	932.6	939.5
32.5°	866.1	873.1	889.7	909.0	914.6
35°	831.6	841.2	860.6	882.8	889.7
37.5°	798.4	808.0	831.6	856.5	864.8
40°	763.8	774.8	799.7	828.8	839.9
42.5°	726.4	741.6	769.3	801.1	813.6
45°	689.0	702.9	737.5	773.4	787.3
47.5°	648.9	665.5	702.9	745.8	762.4
50°	606.0	626.8	669.7	716.7	734.7
52.5°	563.1	586.7	635.1	687.7	707.0
55°	521.6	543.8	601.9	658.6	679.4
57.5°	476.0	503.6	567.3	628.2	648.9
60°	428.9	459.4	532.7	596.3	618.5
62.5°	381.9	416.5	499.5	563.1	586.7
65°	334.8	373.6	460.7	528.5	552.1
67.5°	289.2	332.1	424.8	492.6	516.1
70°	236.6	290.6	386.0	452.4	476.0
72.5°	188.2	250.4	348.7	410.9	431.7
75°	145.3	211.7	307.2	363.9	372.2
77.5°	106.5	173.0	264.3	283.6	285.0
80°	71.9	138.4	202.0	199.2	202.0
82.5°	47.0	103.8	127.3	142.5	143.9
85°	27.7	60.9	74.7	83.0	84.4
87.5°	13.8	20.8	26.3	27.7	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)