

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: P310382

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-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: P310382
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: 24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3451.0 lumens
Efficiency: N/A
Efficacy: 65.6 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

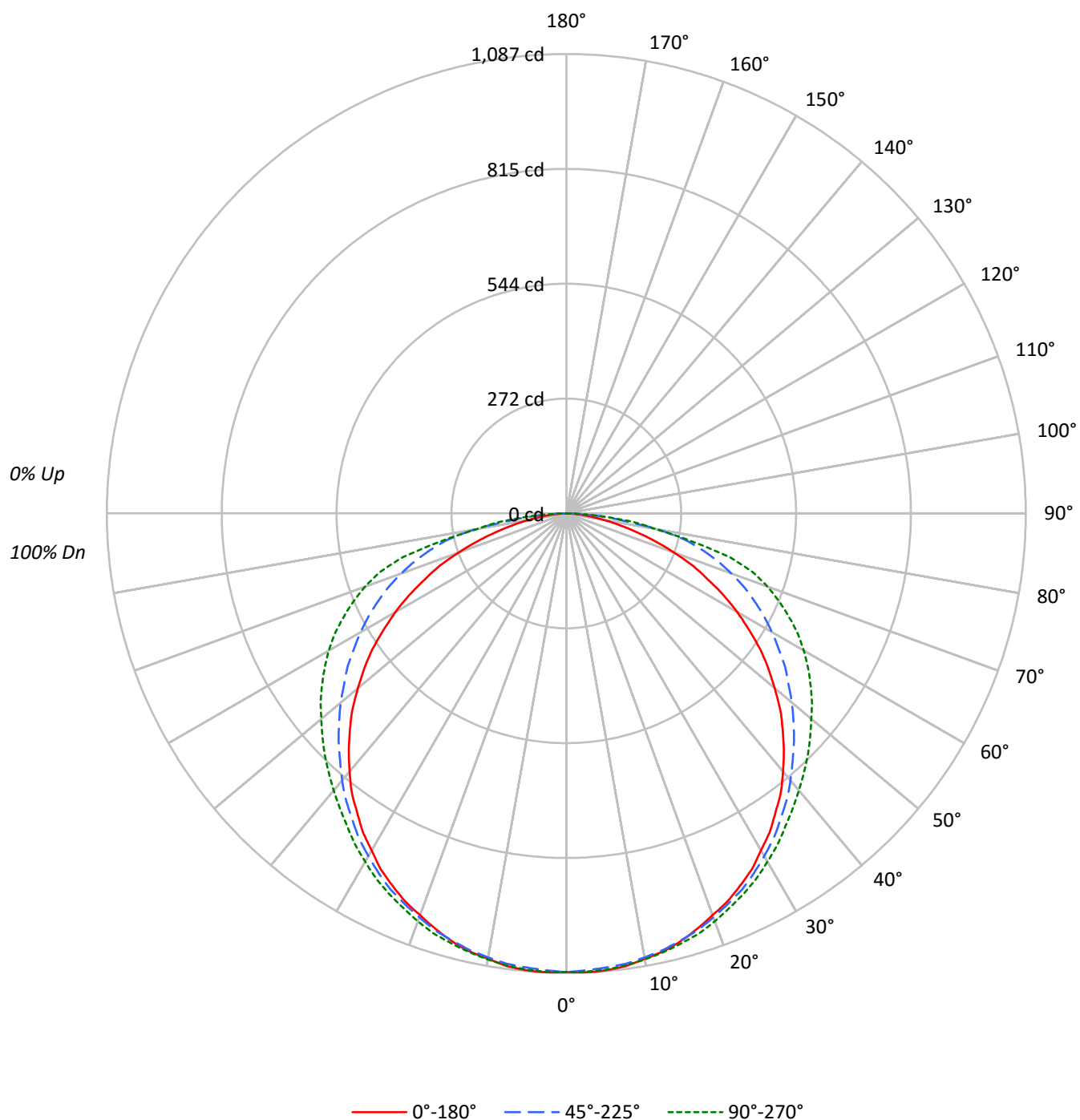
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1460	1460	1460
5°	1466	1457	1463
10°	1462	1457	1464
15°	1459	1457	1466
20°	1448	1456	1470
25°	1443	1459	1474
30°	1431	1455	1479
35°	1417	1451	1485
40°	1401	1449	1503
45°	1378	1449	1537
50°	1347	1458	1584
55°	1313	1482	1654
60°	1257	1511	1746
65°	1177	1564	1853
70°	1071	1637	1993
75°	908	1726	2082
80°	716	1737	1684
85°	528	1321	1480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	3.0
10°-20°	296.3	8.6
20°-30°	453.1	13.1
30°-40°	553.9	16.0
40°-50°	590.3	17.1
50°-60°	564.4	16.4
60°-70°	478.1	13.9
70°-80°	321.3	9.3
80°-90°	90.6	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°	852.3	24.7
0°-40°	1406.2	40.7
0°-60°	2560.9	74.2
0°-90°	3451.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3451.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1085	1085	1085	1085	1085	
5°	1085	1084	1078	1084	1084	103
15°	1048	1048	1046	1054	1053	295
25°	972	976	982	991	993	448
35°	863	870	883	900	904	540
45°	724	736	762	794	808	558
55°	560	580	632	681	705	499
65°	370	407	491	556	582	367
75°	175	238	332	389	400	187
85°	34	70	86	92	96	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.2	1085.2	1085.2	1085.2	1085.2
2.5°	1087.0	1087.0	1081.8	1085.2	1085.2
5°	1085.2	1083.5	1078.4	1083.5	1083.5
7.5°	1080.1	1078.4	1075.0	1080.1	1078.4
10°	1069.8	1069.8	1066.4	1071.5	1071.5
12.5°	1061.3	1059.6	1057.9	1064.7	1063.0
15°	1047.6	1047.6	1045.9	1054.4	1052.7
17.5°	1030.5	1032.2	1033.9	1040.7	1042.4
20°	1011.6	1015.1	1016.8	1027.0	1027.0
22.5°	994.5	996.2	999.7	1009.9	1009.9
25°	972.3	975.7	982.5	991.1	992.8
27.5°	950.0	951.7	960.3	972.3	974.0
30°	920.9	926.0	936.3	950.0	951.7
32.5°	895.2	900.4	912.4	926.0	929.5
35°	862.7	869.6	883.3	900.4	903.8
37.5°	833.6	838.8	855.9	874.7	879.8
40°	797.7	807.9	825.1	847.3	855.9
42.5°	761.7	772.0	792.5	821.6	831.9
45°	724.1	736.0	761.7	794.2	807.9
47.5°	686.4	700.1	729.2	766.9	782.3
50°	643.6	660.7	696.7	739.5	756.6
52.5°	602.5	623.1	662.4	710.4	732.6
55°	559.7	580.3	631.6	681.3	705.2
57.5°	511.8	539.2	595.7	652.2	677.8
60°	467.3	493.0	561.4	623.1	648.7
62.5°	419.4	453.6	527.2	592.3	617.9
65°	369.7	407.4	491.3	556.3	582.0
67.5°	325.2	366.3	455.3	520.4	546.0
70°	272.2	323.5	416.0	481.0	506.7
72.5°	222.5	279.0	374.9	438.2	462.2
75°	174.6	237.9	332.1	388.6	400.5
77.5°	130.1	196.8	287.6	311.5	303.0
80°	92.4	157.5	224.2	212.3	217.4
82.5°	59.9	119.8	138.7	157.5	162.6
85°	34.2	70.2	85.6	92.4	95.9
87.5°	15.4	25.7	34.2	34.2	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)