

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: P310387

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P310387
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5000K 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: 3872.0 lumens
Efficiency: N/A
Efficacy: 72.0 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

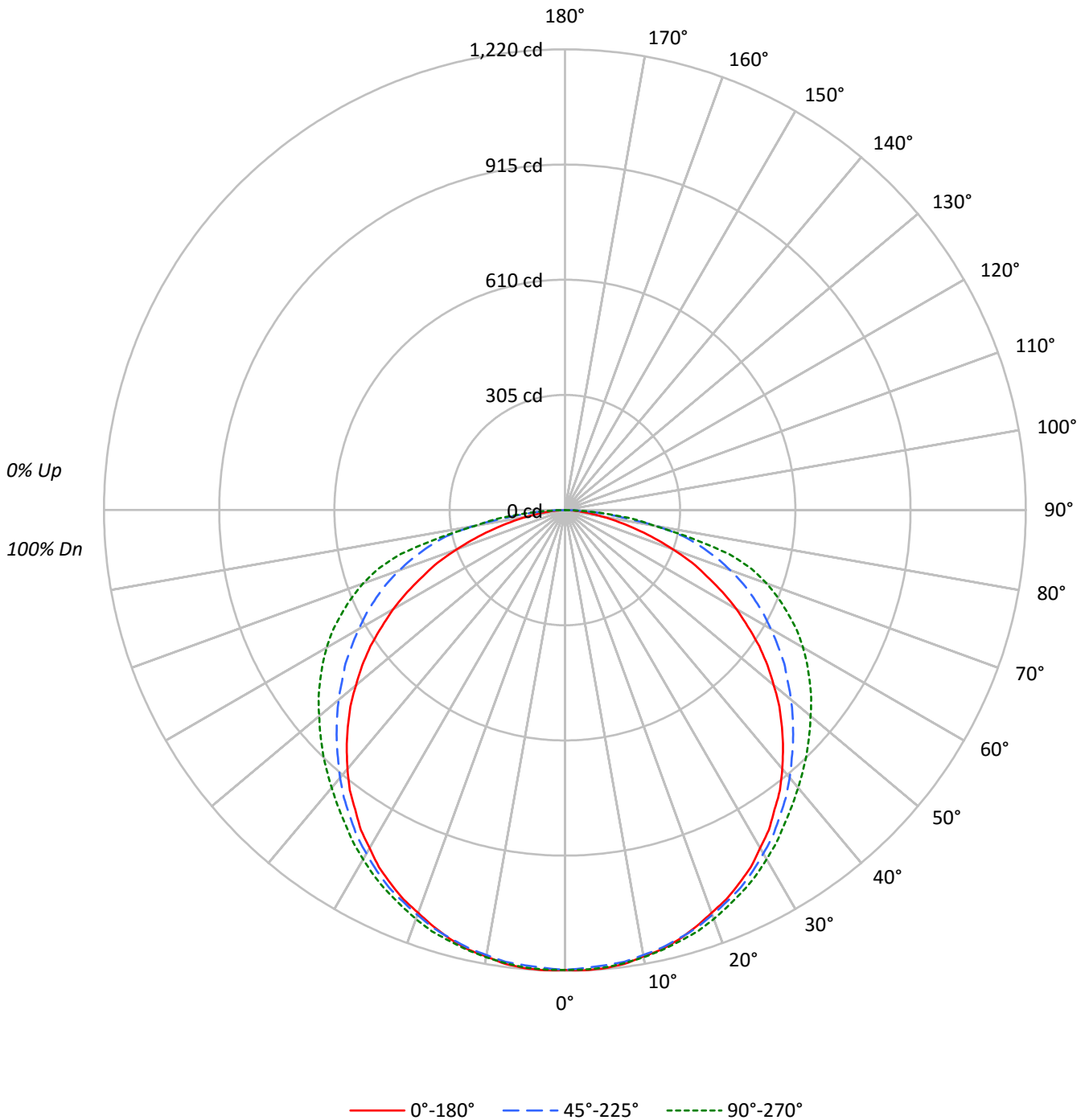
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1638	1638	1638
5°	1645	1634	1642
10°	1640	1635	1643
15°	1637	1635	1645
20°	1625	1633	1650
25°	1620	1637	1654
30°	1605	1632	1659
35°	1590	1628	1666
40°	1572	1626	1687
45°	1546	1626	1725
50°	1512	1636	1777
55°	1473	1662	1856
60°	1411	1695	1959
65°	1321	1755	2079
70°	1201	1836	2236
75°	1018	1937	2336
80°	804	1949	1890
85°	593	1482	1661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	3.0
10°-20°	332.4	8.6
20°-30°	508.3	13.1
30°-40°	621.4	16.0
40°-50°	662.3	17.1
50°-60°	633.3	16.4
60°-70°	536.5	13.9
70°-80°	360.6	9.3
80°-90°	101.7	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°	956.3	24.7
0°-40°	1577.7	40.7
0°-60°	2873.3	74.2
0°-90°	3872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1218	1216	1210	1216	1216	116
15°	1175	1175	1174	1183	1181	331
25°	1091	1095	1102	1112	1114	503
35°	968	976	991	1010	1014	606
45°	812	826	855	891	906	627
55°	628	651	709	764	791	559
65°	415	457	551	624	653	412
75°	196	267	373	436	449	210
85°	38	79	96	104	108	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1217.6	1217.6	1217.6	1217.6	1217.6
2.5°	1219.6	1219.6	1213.8	1217.6	1217.6
5°	1217.6	1215.7	1210.0	1215.7	1215.7
7.5°	1211.9	1210.0	1206.1	1211.9	1210.0
10°	1200.3	1200.3	1196.5	1202.3	1202.3
12.5°	1190.7	1188.8	1186.9	1194.6	1192.7
15°	1175.4	1175.4	1173.5	1183.1	1181.1
17.5°	1156.2	1158.1	1160.0	1167.7	1169.6
20°	1135.0	1138.9	1140.8	1152.3	1152.3
22.5°	1115.8	1117.8	1121.6	1133.1	1133.1
25°	1090.9	1094.7	1102.4	1112.0	1113.9
27.5°	1065.9	1067.8	1077.4	1090.9	1092.8
30°	1033.3	1039.0	1050.5	1065.9	1067.8
32.5°	1004.5	1010.2	1023.7	1039.0	1042.9
35°	968.0	975.6	991.0	1010.2	1014.1
37.5°	935.3	941.1	960.3	981.4	987.2
40°	895.0	906.5	925.7	950.7	960.3
42.5°	854.6	866.2	889.2	921.9	933.4
45°	812.4	825.8	854.6	891.1	906.5
47.5°	770.1	785.5	818.2	860.4	877.7
50°	722.1	741.3	781.7	829.7	848.9
52.5°	676.0	699.1	743.3	797.0	822.0
55°	628.0	651.1	708.7	764.4	791.3
57.5°	574.2	605.0	668.4	731.7	760.5
60°	524.3	553.1	629.9	699.1	727.9
62.5°	470.5	508.9	591.5	664.5	693.3
65°	414.8	457.1	551.2	624.2	653.0
67.5°	364.9	411.0	510.9	583.8	612.7
70°	305.4	363.0	466.7	539.7	568.5
72.5°	249.7	313.1	420.6	491.7	518.6
75°	195.9	267.0	372.6	436.0	449.4
77.5°	146.0	220.9	322.7	349.5	339.9
80°	103.7	176.7	251.6	238.1	243.9
82.5°	67.2	134.4	155.6	176.7	182.5
85°	38.4	78.7	96.0	103.7	107.6
87.5°	17.3	28.8	38.4	38.4	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)