

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: P310390

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P310390
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-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 6500K 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: 3931.0 lumens
Efficiency: N/A
Efficacy: 71.6 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

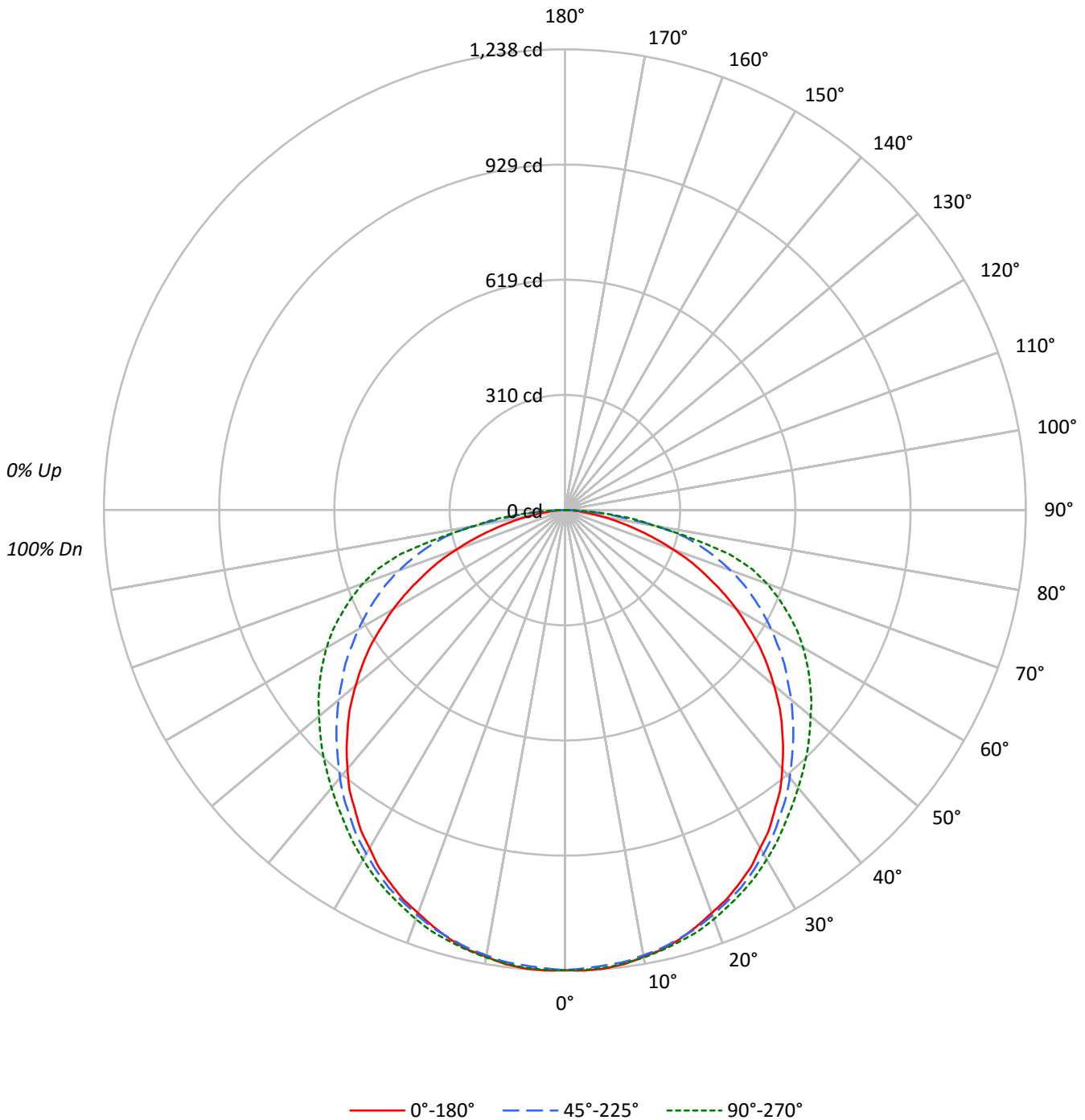
Input Watts (W): 54.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1663	1663	1663
5°	1670	1659	1667
10°	1665	1660	1668
15°	1662	1659	1670
20°	1650	1658	1675
25°	1644	1662	1679
30°	1630	1657	1684
35°	1614	1653	1691
40°	1596	1651	1712
45°	1569	1651	1751
50°	1535	1661	1804
55°	1496	1688	1884
60°	1432	1721	1989
65°	1341	1782	2110
70°	1220	1864	2270
75°	1034	1967	2372
80°	816	1979	1918
85°	602	1505	1686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.3	3.0
10°-20°	337.5	8.6
20°-30°	516.1	13.1
30°-40°	630.9	16.0
40°-50°	672.4	17.1
50°-60°	642.9	16.4
60°-70°	544.6	13.9
70°-80°	366.0	9.3
80°-90°	103.2	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°	970.8	24.7
0°-40°	1601.7	40.7
0°-60°	2917.1	74.2
0°-90°	3931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1236	1236	1236	1236	1236	
5°	1236	1234	1228	1234	1234	117
15°	1193	1193	1191	1201	1199	336
25°	1108	1111	1119	1129	1131	510
35°	983	990	1006	1026	1030	616
45°	825	838	868	905	920	636
55°	638	661	720	776	803	568
65°	421	464	560	634	663	418
75°	199	271	378	443	456	213
85°	39	80	98	105	109	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1236.2	1236.2	1236.2	1236.2	1236.2
2.5°	1238.1	1238.1	1232.3	1236.2	1236.2
5°	1236.2	1234.2	1228.4	1234.2	1234.2
7.5°	1230.3	1228.4	1224.5	1230.3	1228.4
10°	1218.6	1218.6	1214.7	1220.6	1220.6
12.5°	1208.9	1206.9	1205.0	1212.8	1210.8
15°	1193.3	1193.3	1191.3	1201.1	1199.1
17.5°	1173.8	1175.7	1177.7	1185.5	1187.4
20°	1152.3	1156.2	1158.2	1169.9	1169.9
22.5°	1132.8	1134.8	1138.7	1150.4	1150.4
25°	1107.5	1111.4	1119.2	1128.9	1130.9
27.5°	1082.2	1084.1	1093.9	1107.5	1109.4
30°	1049.0	1054.9	1066.6	1082.2	1084.1
32.5°	1019.8	1025.6	1039.3	1054.9	1058.8
35°	982.7	990.5	1006.1	1025.6	1029.5
37.5°	949.6	955.4	974.9	996.4	1002.2
40°	908.6	920.3	939.8	965.2	974.9
42.5°	867.7	879.4	902.8	935.9	947.6
45°	824.8	838.4	867.7	904.7	920.3
47.5°	781.9	797.5	830.6	873.5	891.1
50°	733.1	752.6	793.6	842.3	861.8
52.5°	686.3	709.7	754.6	809.2	834.5
55°	637.6	661.0	719.5	776.0	803.3
57.5°	583.0	614.2	678.5	742.9	772.1
60°	532.3	561.5	639.5	709.7	739.0
62.5°	477.7	516.7	600.5	674.6	703.9
65°	421.2	464.1	559.6	633.7	662.9
67.5°	370.5	417.3	518.7	592.7	622.0
70°	310.0	368.5	473.8	547.9	577.1
72.5°	253.5	317.8	427.0	499.2	526.5
75°	198.9	271.0	378.3	442.6	456.3
77.5°	148.2	224.2	327.6	354.9	345.1
80°	105.3	179.4	255.4	241.8	247.6
82.5°	68.2	136.5	157.9	179.4	185.2
85°	39.0	79.9	97.5	105.3	109.2
87.5°	17.5	29.2	39.0	39.0	37.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)