

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: P311738

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP187-W2A-U-5500K**

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: P311738
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5500K 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: 6109.0 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

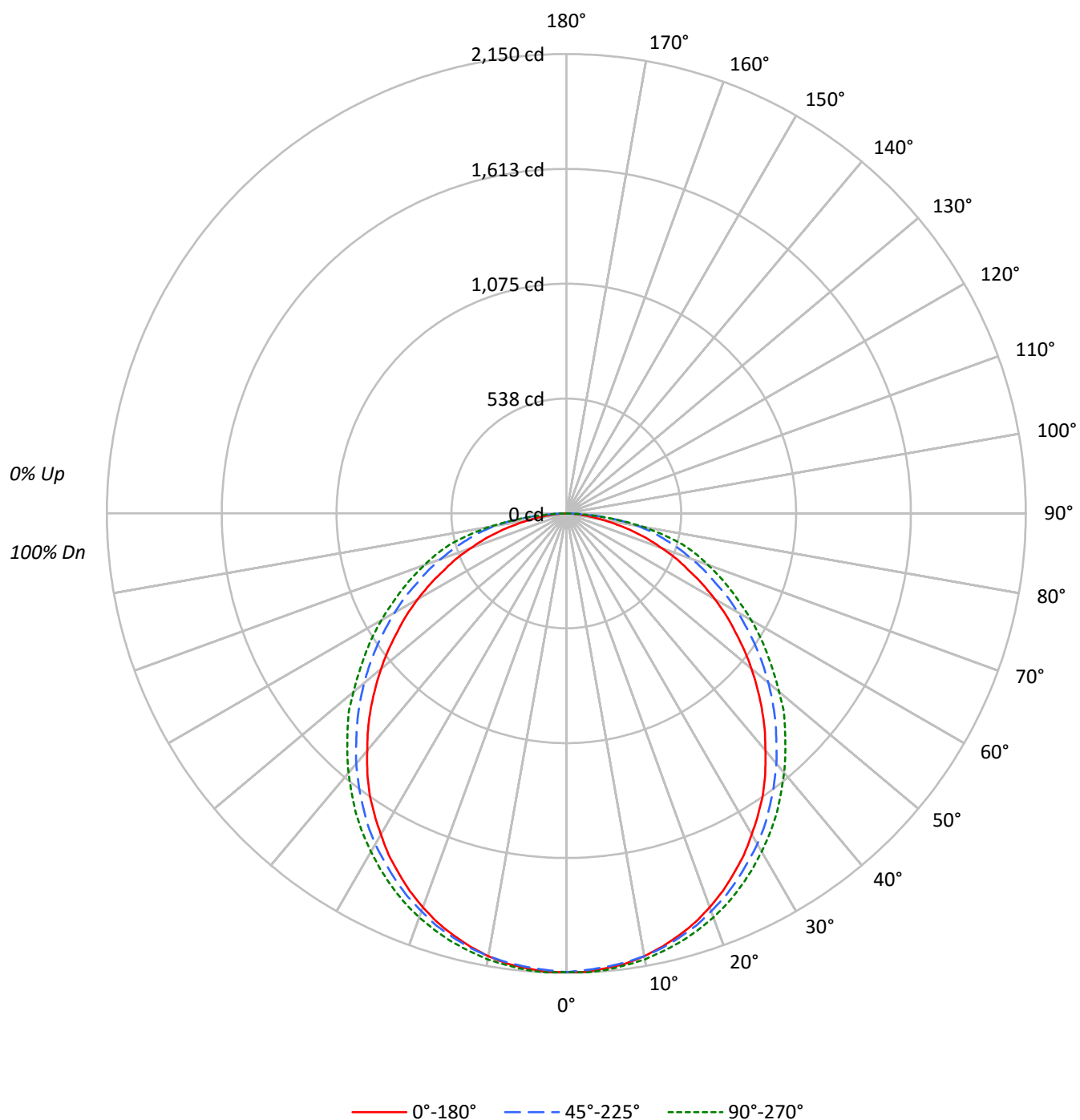
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2888	2888	2888
5°	2885	2878	2896
10°	2874	2874	2895
15°	2846	2860	2889
20°	2809	2837	2881
25°	2757	2809	2863
30°	2695	2777	2840
35°	2636	2732	2818
40°	2546	2686	2784
45°	2463	2633	2755
50°	2368	2583	2721
55°	2262	2535	2695
60°	2157	2496	2689
65°	2020	2453	2706
70°	1870	2466	2779
75°	1674	2512	2936
80°	1353	2662	2872
85°	1019	2337	2277



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.2	3.3
10°-20°	580.5	9.5
20°-30°	872.7	14.3
30°-40°	1039.5	17.0
40°-50°	1063.9	17.4
50°-60°	957.8	15.7
60°-70°	752.2	12.3
70°-80°	488.2	8.0
80°-90°	151.0	2.5
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°	1656.4	27.1
0°-40°	2695.9	44.1
0°-60°	4717.6	77.2
0°-90°	6109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2146	2146	2146	2146	2146	
5°	2136	2140	2131	2142	2144	203
15°	2043	2049	2053	2070	2074	576
25°	1857	1872	1892	1923	1929	855
35°	1605	1624	1663	1704	1715	1001
45°	1294	1325	1384	1436	1448	998
55°	964	1007	1081	1137	1149	865
65°	634	683	770	834	850	632
75°	322	384	483	549	565	341
85°	66	122	151	148	148	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2146.1	2146.1	2146.1	2146.1	2146.1
2.5°	2148.1	2148.1	2138.4	2148.1	2150.0
5°	2136.4	2140.3	2130.6	2142.3	2144.2
7.5°	2124.8	2124.8	2119.0	2130.6	2132.5
10°	2103.4	2105.4	2103.4	2117.0	2119.0
12.5°	2076.3	2080.2	2082.1	2095.7	2097.6
15°	2043.3	2049.1	2053.0	2070.5	2074.3
17.5°	2006.4	2012.2	2021.9	2041.3	2045.2
20°	1961.8	1969.6	1981.2	2006.4	2012.2
22.5°	1913.3	1921.0	1940.4	1963.7	1973.4
25°	1857.0	1872.5	1891.9	1923.0	1928.8
27.5°	1800.7	1814.3	1839.5	1872.5	1880.3
30°	1734.8	1756.1	1787.1	1820.1	1827.9
32.5°	1670.7	1692.1	1728.9	1763.9	1773.6
35°	1604.7	1624.2	1663.0	1703.7	1715.4
37.5°	1529.1	1554.3	1597.0	1637.7	1649.4
40°	1449.5	1480.6	1529.1	1571.8	1585.3
42.5°	1373.8	1406.8	1455.3	1501.9	1517.4
45°	1294.3	1325.3	1383.5	1435.9	1447.6
47.5°	1212.8	1247.7	1309.8	1362.2	1381.6
50°	1131.3	1168.1	1234.1	1288.5	1300.1
52.5°	1049.8	1088.6	1158.4	1216.7	1222.5
55°	964.4	1007.1	1080.8	1137.1	1148.7
57.5°	886.8	923.7	1003.2	1061.4	1075.0
60°	801.4	842.2	927.5	981.9	999.3
62.5°	719.9	762.6	851.9	906.2	921.7
65°	634.5	683.0	770.4	834.4	849.9
67.5°	560.8	607.4	700.5	762.6	778.1
70°	475.4	527.8	626.8	690.8	706.3
72.5°	401.7	456.0	555.0	617.1	640.3
75°	322.1	384.2	483.2	549.1	564.7
77.5°	244.5	316.3	417.2	467.6	467.6
80°	174.6	250.3	343.5	366.7	370.6
82.5°	114.5	188.2	254.2	252.3	252.3
85°	66.0	122.2	151.4	147.5	147.5
87.5°	25.2	50.5	54.3	54.3	52.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)