

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: P314478

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-4500K**

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: P314478
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-L83050-S-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 6503.0 lumens
Efficiency: N/A
Efficacy: 117.8 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

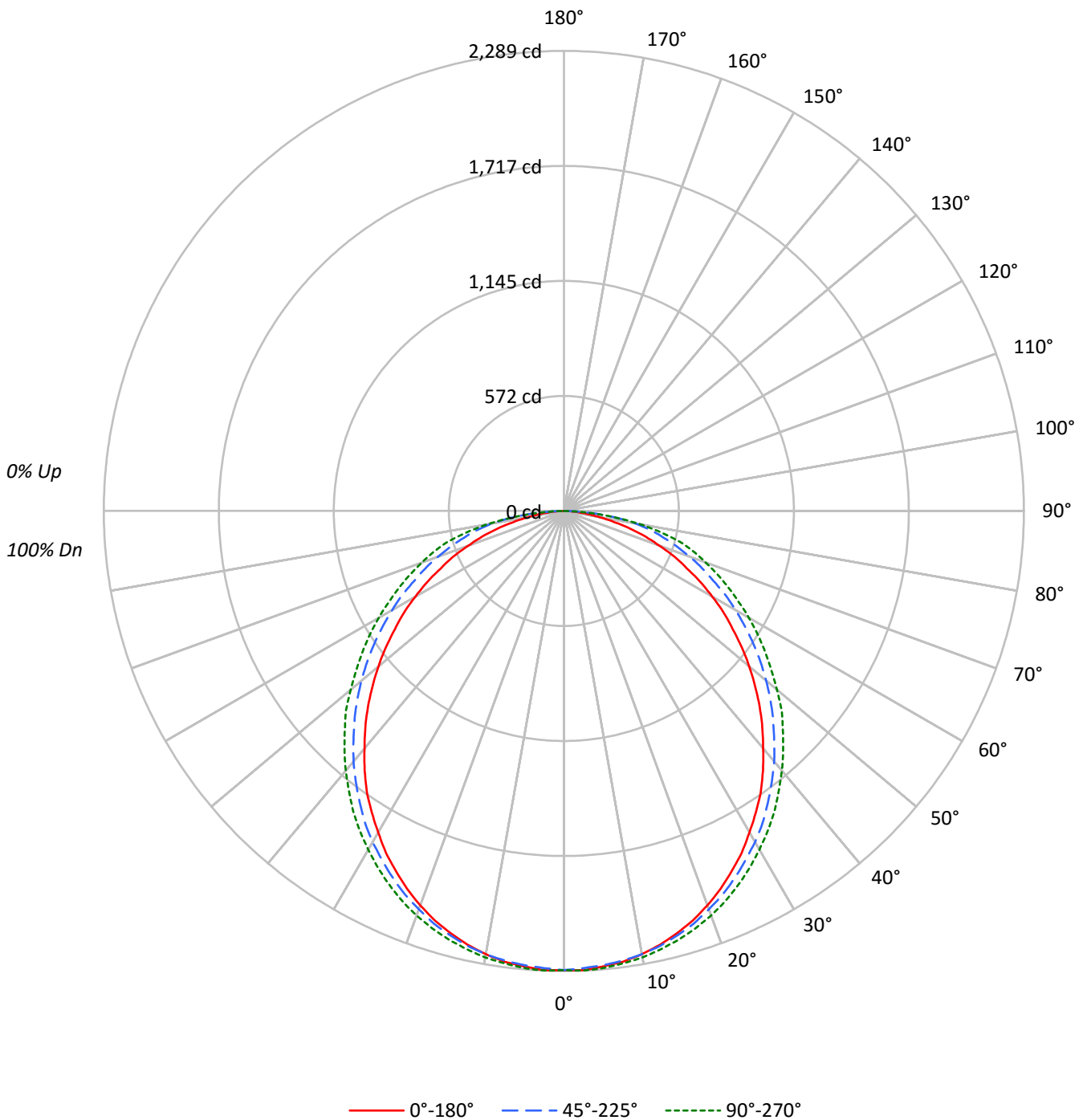
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3074	3074	3074
5°	3072	3063	3083
10°	3059	3059	3082
15°	3030	3044	3076
20°	2990	3020	3067
25°	2935	2990	3048
30°	2869	2956	3023
35°	2806	2908	2999
40°	2710	2859	2964
45°	2622	2802	2932
50°	2521	2750	2897
55°	2408	2699	2868
60°	2296	2657	2863
65°	2150	2611	2880
70°	1991	2625	2958
75°	1783	2674	3125
80°	1440	2833	3057
85°	1084	2487	2424



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.3	3.3
10°-20°	618.0	9.5
20°-30°	929.0	14.3
30°-40°	1106.6	17.0
40°-50°	1132.5	17.4
50°-60°	1019.6	15.7
60°-70°	800.7	12.3
70°-80°	519.7	8.0
80°-90°	160.7	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°	1763.2	27.1
0°-40°	2869.8	44.1
0°-60°	5021.9	77.2
0°-90°	6503.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6503.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2284	2284	2284	2284	2284	
5°	2274	2278	2268	2280	2282	216
15°	2175	2181	2185	2204	2208	613
25°	1977	1993	2014	2047	2053	911
35°	1708	1729	1770	1814	1826	1066
45°	1378	1411	1473	1528	1541	1062
55°	1027	1072	1150	1210	1223	920
65°	675	727	820	888	905	672
75°	343	409	514	585	601	363
85°	70	130	161	157	157	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2284.5	2284.5	2284.5	2284.5	2284.5
2.5°	2286.6	2286.6	2276.3	2286.6	2288.7
5°	2274.2	2278.3	2268.0	2280.4	2282.5
7.5°	2261.8	2261.8	2255.6	2268.0	2270.1
10°	2239.1	2241.2	2239.1	2253.6	2255.6
12.5°	2210.2	2214.3	2216.4	2230.8	2232.9
15°	2175.1	2181.3	2185.4	2204.0	2208.1
17.5°	2135.8	2142.0	2152.3	2173.0	2177.1
20°	2088.3	2096.6	2109.0	2135.8	2142.0
22.5°	2036.7	2044.9	2065.6	2090.4	2100.7
25°	1976.8	1993.3	2014.0	2047.0	2053.2
27.5°	1916.9	1931.3	1958.2	1993.3	2001.6
30°	1846.6	1869.4	1902.4	1937.5	1945.8
32.5°	1778.5	1801.2	1840.4	1877.6	1888.0
35°	1708.2	1728.9	1770.2	1813.6	1826.0
37.5°	1627.7	1654.5	1700.0	1743.4	1755.8
40°	1543.0	1576.0	1627.7	1673.1	1687.6
42.5°	1462.4	1497.6	1549.2	1598.8	1615.3
45°	1377.8	1410.8	1472.8	1528.5	1540.9
47.5°	1291.0	1328.2	1394.3	1450.0	1470.7
50°	1204.2	1243.5	1313.7	1371.6	1383.9
52.5°	1117.5	1158.8	1233.2	1295.1	1301.3
55°	1026.6	1072.0	1150.5	1210.4	1222.8
57.5°	944.0	983.2	1067.9	1129.9	1144.3
60°	853.1	896.5	987.4	1045.2	1063.8
62.5°	766.3	811.8	906.8	964.6	981.2
65°	675.4	727.1	820.0	888.2	904.7
67.5°	597.0	646.5	745.7	811.8	828.3
70°	506.1	561.8	667.2	735.4	751.9
72.5°	427.6	485.4	590.8	656.9	681.6
75°	342.9	409.0	514.3	584.6	601.1
77.5°	260.3	336.7	444.1	497.8	497.8
80°	185.9	266.5	365.6	390.4	394.5
82.5°	121.9	200.4	270.6	268.5	268.5
85°	70.2	130.1	161.1	157.0	157.0
87.5°	26.9	53.7	57.8	57.8	55.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)