

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: P313733

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP187-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: P313733
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-L83050-RDP-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 3986.0 lumens
Efficiency: N/A
Efficacy: 72.2 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

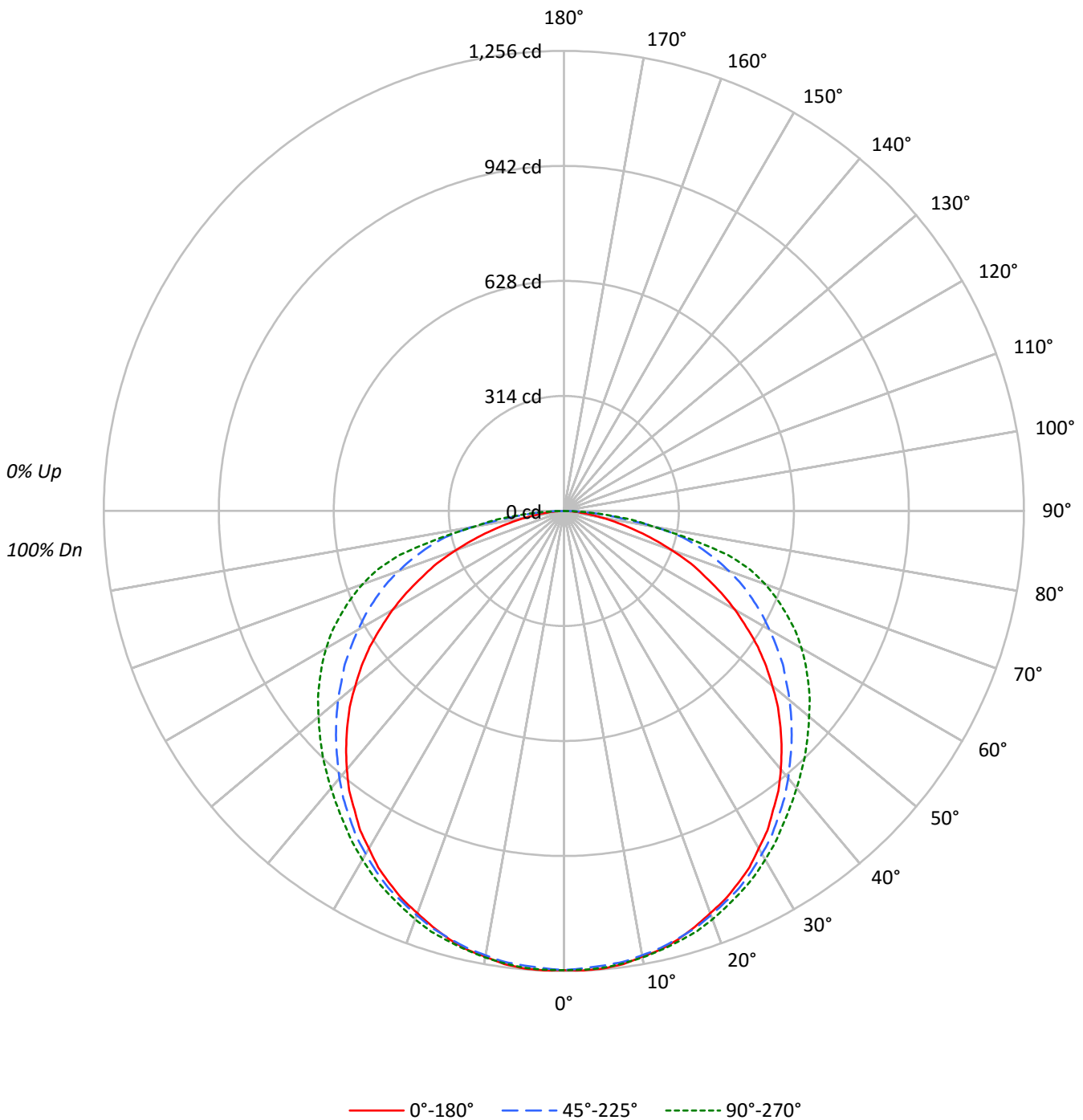
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313733

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CP187-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P313733

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CP187-W2A-U-4500K

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°	1687	1687	1687
5°	1693	1682	1690
10°	1688	1683	1691
15°	1685	1683	1694
20°	1673	1682	1699
25°	1667	1685	1702
30°	1653	1680	1708
35°	1637	1676	1715
40°	1618	1674	1736
45°	1591	1674	1776
50°	1556	1684	1829
55°	1517	1711	1911
60°	1452	1745	2016
65°	1360	1806	2140
70°	1237	1890	2302
75°	1049	1994	2405
80°	828	2007	1946
85°	610	1527	1709



TEST NUMBER: P313733

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CP187-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.9	3.0
10°-20°	342.2	8.6
20°-30°	523.3	13.1
30°-40°	639.7	16.0
40°-50°	681.8	17.1
50°-60°	651.9	16.4
60°-70°	552.3	13.9
70°-80°	371.2	9.3
80°-90°	104.7	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°	984.4	24.7
0°-40°	1624.2	40.7
0°-60°	2957.9	74.2
0°-90°	3986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1254	1252	1246	1252	1252	119
15°	1210	1210	1208	1218	1216	341
25°	1123	1127	1135	1145	1147	518
35°	996	1004	1020	1040	1044	624
45°	836	850	880	917	933	645
55°	646	670	730	787	815	576
65°	427	471	567	643	672	424
75°	202	275	384	449	463	216
85°	40	81	99	107	111	49
90°	0	0	0	0	0	



TEST NUMBER: P313733

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-RDP-CP187-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1253.5	1253.5	1253.5	1253.5	1253.5
2.5°	1255.5	1255.5	1249.5	1253.5	1253.5
5°	1253.5	1251.5	1245.6	1251.5	1251.5
7.5°	1247.6	1245.6	1241.6	1247.6	1245.6
10°	1235.7	1235.7	1231.7	1237.7	1237.7
12.5°	1225.8	1223.8	1221.8	1229.8	1227.8
15°	1210.0	1210.0	1208.0	1217.9	1215.9
17.5°	1190.2	1192.2	1194.2	1202.1	1204.1
20°	1168.5	1172.4	1174.4	1186.3	1186.3
22.5°	1148.7	1150.7	1154.6	1166.5	1166.5
25°	1123.0	1126.9	1134.9	1144.7	1146.7
27.5°	1097.3	1099.3	1109.2	1123.0	1125.0
30°	1063.7	1069.6	1081.5	1097.3	1099.3
32.5°	1034.0	1040.0	1053.8	1069.6	1073.6
35°	996.5	1004.4	1020.2	1040.0	1043.9
37.5°	962.8	968.8	988.6	1010.3	1016.2
40°	921.3	933.2	953.0	978.7	988.6
42.5°	879.8	891.7	915.4	949.0	960.9
45°	836.3	850.2	879.8	917.4	933.2
47.5°	792.8	808.6	842.2	885.7	903.5
50°	743.4	763.2	804.7	854.1	873.9
52.5°	695.9	719.7	765.1	820.5	846.2
55°	646.5	670.2	729.6	786.9	814.6
57.5°	591.2	622.8	688.0	753.3	782.9
60°	539.7	569.4	648.5	719.7	749.3
62.5°	484.4	523.9	608.9	684.1	713.7
65°	427.1	470.6	567.4	642.6	672.2
67.5°	375.6	423.1	525.9	601.0	630.7
70°	314.4	373.7	480.4	555.6	585.2
72.5°	257.0	322.3	433.0	506.1	533.8
75°	201.7	274.8	383.6	448.8	462.6
77.5°	150.3	227.4	332.2	359.8	349.9
80°	106.8	181.9	259.0	245.2	251.1
82.5°	69.2	138.4	160.1	181.9	187.8
85°	39.5	81.1	98.9	106.8	110.7
87.5°	17.8	29.7	39.5	39.5	37.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)