

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: P310385

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P310385
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 3754.0 lumens
Efficiency: N/A
Efficacy: 70.6 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

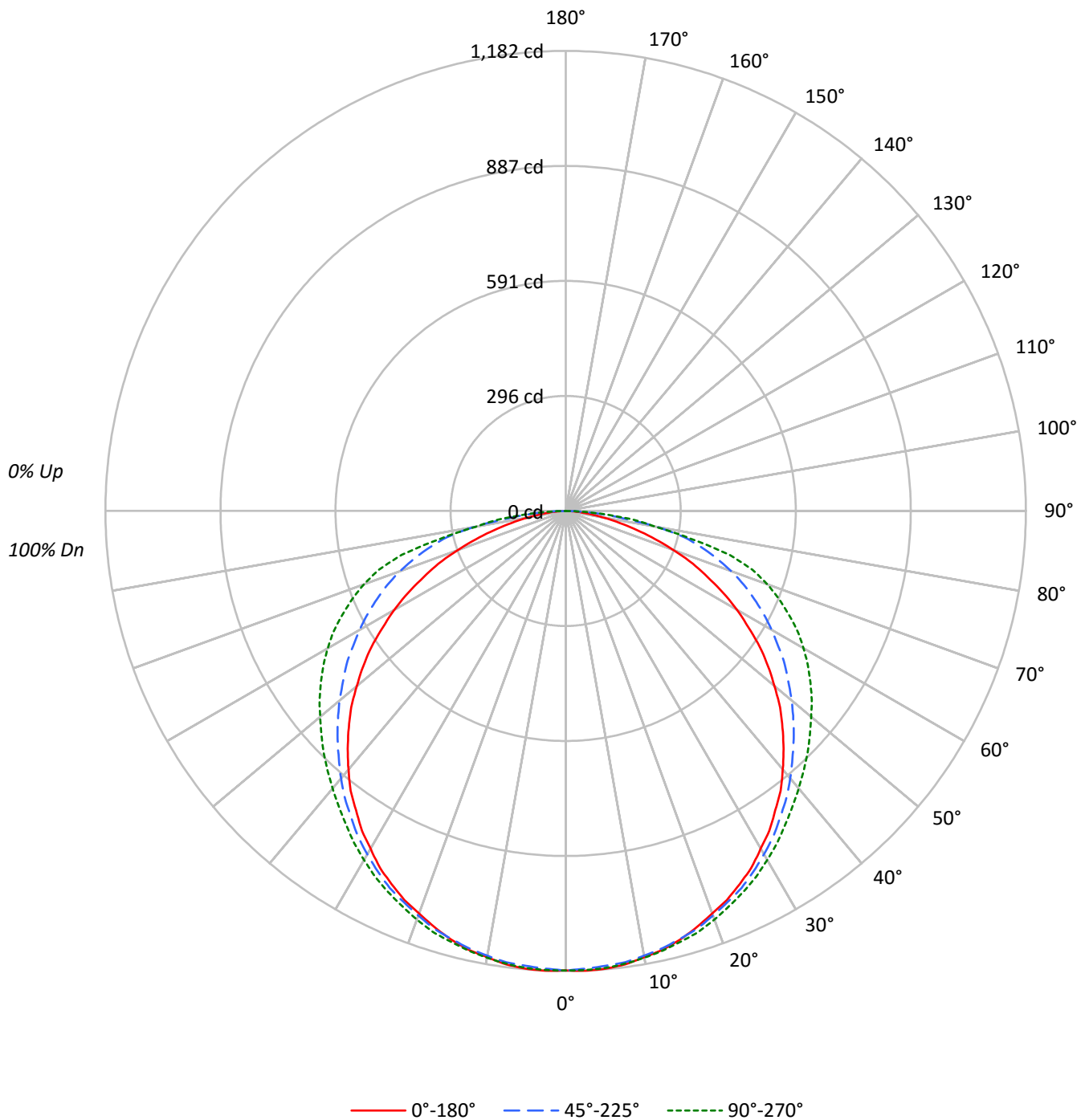
Input Watts (W): 53.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310385

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P310385

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-4000K

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	50	30	10	50	30	10
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	68	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°	1588	1588	1588
5°	1594	1584	1592
10°	1590	1585	1592
15°	1587	1585	1595
20°	1576	1584	1600
25°	1570	1587	1603
30°	1556	1582	1608
35°	1542	1578	1615
40°	1524	1576	1635
45°	1499	1577	1672
50°	1465	1586	1723
55°	1428	1612	1800
60°	1368	1643	1899
65°	1280	1701	2016
70°	1165	1780	2168
75°	987	1878	2265
80°	779	1890	1832
85°	574	1437	1610



TEST NUMBER: P310385

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.0
10°-20°	322.3	8.6
20°-30°	492.8	13.1
30°-40°	602.5	16.0
40°-50°	642.1	17.1
50°-60°	614.0	16.4
60°-70°	520.1	13.9
70°-80°	349.6	9.3
80°-90°	98.6	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°	927.1	24.7
0°-40°	1529.6	40.7
0°-60°	2785.7	74.2
0°-90°	3754.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3754.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1180	1180	1180	1180	1180	
5°	1180	1179	1173	1179	1179	112
15°	1140	1140	1138	1147	1145	321
25°	1058	1061	1069	1078	1080	487
35°	938	946	961	979	983	588
45°	788	801	829	864	879	608
55°	609	631	687	741	767	542
65°	402	443	534	605	633	399
75°	190	259	361	423	436	203
85°	37	76	93	100	104	46
90°	0	0	0	0	0	



TEST NUMBER: P310385

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.5	1180.5	1180.5	1180.5	1180.5
2.5°	1182.4	1182.4	1176.8	1180.5	1180.5
5°	1180.5	1178.7	1173.1	1178.7	1178.7
7.5°	1174.9	1173.1	1169.4	1174.9	1173.1
10°	1163.8	1163.8	1160.0	1165.6	1165.6
12.5°	1154.5	1152.6	1150.7	1158.2	1156.3
15°	1139.6	1139.6	1137.7	1147.0	1145.1
17.5°	1120.9	1122.8	1124.7	1132.1	1134.0
20°	1100.5	1104.2	1106.0	1117.2	1117.2
22.5°	1081.8	1083.7	1087.4	1098.6	1098.6
25°	1057.6	1061.4	1068.8	1078.1	1080.0
27.5°	1033.4	1035.3	1044.6	1057.6	1059.5
30°	1001.8	1007.4	1018.5	1033.4	1035.3
32.5°	973.8	979.4	992.5	1007.4	1011.1
35°	938.5	945.9	960.8	979.4	983.2
37.5°	906.8	912.4	931.0	951.5	957.1
40°	867.7	878.9	897.5	921.7	931.0
42.5°	828.6	839.8	862.1	893.8	904.9
45°	787.6	800.7	828.6	864.0	878.9
47.5°	746.7	761.6	793.2	834.2	850.9
50°	700.1	718.7	757.8	804.4	823.0
52.5°	655.4	677.8	720.6	772.7	796.9
55°	608.9	631.2	687.1	741.1	767.2
57.5°	556.7	586.5	648.0	709.4	737.4
60°	508.3	536.3	610.7	677.8	705.7
62.5°	456.2	493.4	573.5	644.3	672.2
65°	402.2	443.2	534.4	605.2	633.1
67.5°	353.8	398.5	495.3	566.1	594.0
70°	296.1	351.9	452.5	523.2	551.2
72.5°	242.1	303.5	407.8	476.7	502.7
75°	189.9	258.8	361.2	422.7	435.7
77.5°	141.5	214.1	312.8	338.9	329.6
80°	100.5	171.3	243.9	230.9	236.5
82.5°	65.2	130.3	150.8	171.3	176.9
85°	37.2	76.3	93.1	100.5	104.3
87.5°	16.8	27.9	37.2	37.2	35.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)