

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: P313307

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-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: P313307
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L83050-HRP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 3873.0 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

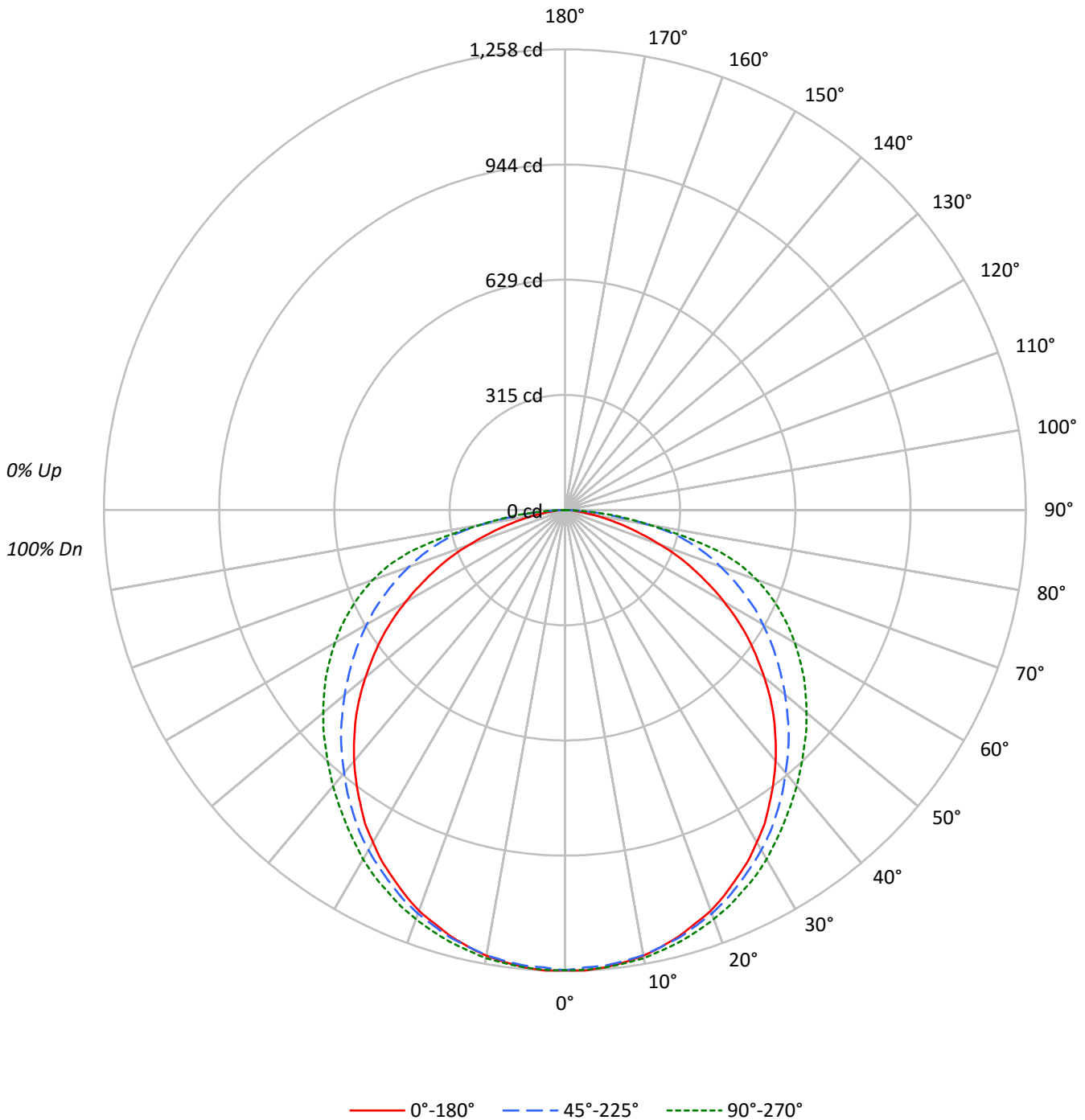
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313307

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP187-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313307

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP187-W2A-U-4000K

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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1691	1691	1691
5°	1693	1686	1693
10°	1688	1686	1697
15°	1678	1683	1698
20°	1667	1679	1702
25°	1646	1671	1704
30°	1627	1665	1710
35°	1601	1657	1713
40°	1572	1646	1729
45°	1537	1644	1756
50°	1487	1643	1802
55°	1434	1654	1867
60°	1352	1680	1950
65°	1249	1719	2060
70°	1091	1780	2194
75°	885	1871	2268
80°	653	1834	1834
85°	500	1352	1527



TEST NUMBER: P313307

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP187-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	3.1
10°-20°	341.8	8.8
20°-30°	520.4	13.4
30°-40°	631.9	16.3
40°-50°	667.6	17.2
50°-60°	629.9	16.3
60°-70°	523.8	13.5
70°-80°	344.6	8.9
80°-90°	93.9	2.4
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°	981.3	25.3
0°-40°	1613.2	41.7
0°-60°	2910.7	75.2
0°-90°	3873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3873.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1257	1257	1257	1257	1257	
5°	1253	1253	1248	1253	1253	119
15°	1205	1206	1208	1219	1219	340
25°	1109	1116	1125	1145	1148	512
35°	974	986	1008	1034	1043	610
45°	808	824	864	906	923	622
55°	611	637	705	772	796	544
65°	392	438	540	619	647	388
75°	170	248	360	426	436	183
85°	32	71	88	97	99	40
90°	0	0	0	0	0	



TEST NUMBER: P313307

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-HRP-CP187-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1256.6	1256.6	1256.6	1256.6	1256.6
2.5°	1258.2	1256.6	1250.1	1256.6	1256.6
5°	1253.4	1253.4	1248.5	1253.4	1253.4
7.5°	1245.2	1245.2	1242.0	1248.5	1248.5
10°	1235.5	1235.5	1233.9	1242.0	1242.0
12.5°	1220.9	1222.5	1220.9	1230.7	1230.7
15°	1204.7	1206.3	1208.0	1219.3	1219.3
17.5°	1183.6	1186.9	1190.1	1203.1	1204.7
20°	1164.2	1165.8	1172.3	1186.9	1188.5
22.5°	1138.2	1143.1	1151.2	1165.8	1170.7
25°	1109.0	1115.5	1125.3	1144.7	1148.0
27.5°	1081.5	1086.3	1099.3	1120.4	1126.9
30°	1047.4	1055.5	1071.8	1092.8	1100.9
32.5°	1015.0	1023.1	1042.6	1065.3	1071.8
35°	974.5	985.8	1008.5	1034.5	1042.6
37.5°	935.6	946.9	974.5	1003.7	1013.4
40°	895.0	908.0	937.2	971.2	984.2
42.5°	851.2	869.1	901.5	938.8	953.4
45°	807.5	823.7	864.2	906.4	922.6
47.5°	760.4	779.9	823.7	873.9	893.4
50°	710.2	734.5	784.8	839.9	861.0
52.5°	659.9	687.5	744.2	805.8	828.5
55°	611.3	637.2	705.3	771.8	796.1
57.5°	557.8	590.2	664.8	736.1	760.4
60°	502.6	538.3	624.2	698.8	724.8
62.5°	447.5	488.0	585.3	659.9	687.5
65°	392.4	437.8	539.9	619.4	646.9
67.5°	338.9	389.1	497.8	577.2	604.8
70°	277.3	340.5	452.4	530.2	557.8
72.5°	220.5	293.5	408.6	481.6	505.9
75°	170.2	248.1	360.0	426.4	436.2
77.5°	124.8	202.7	309.7	332.4	334.0
80°	84.3	162.1	236.7	233.5	236.7
82.5°	55.1	121.6	149.2	167.0	168.6
85°	32.4	71.3	87.6	97.3	98.9
87.5°	16.2	24.3	30.8	32.4	35.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)