

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: P309720

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP250-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: P309720
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: 24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 4274.0 lumens
Efficiency: N/A
Efficacy: 79.7 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

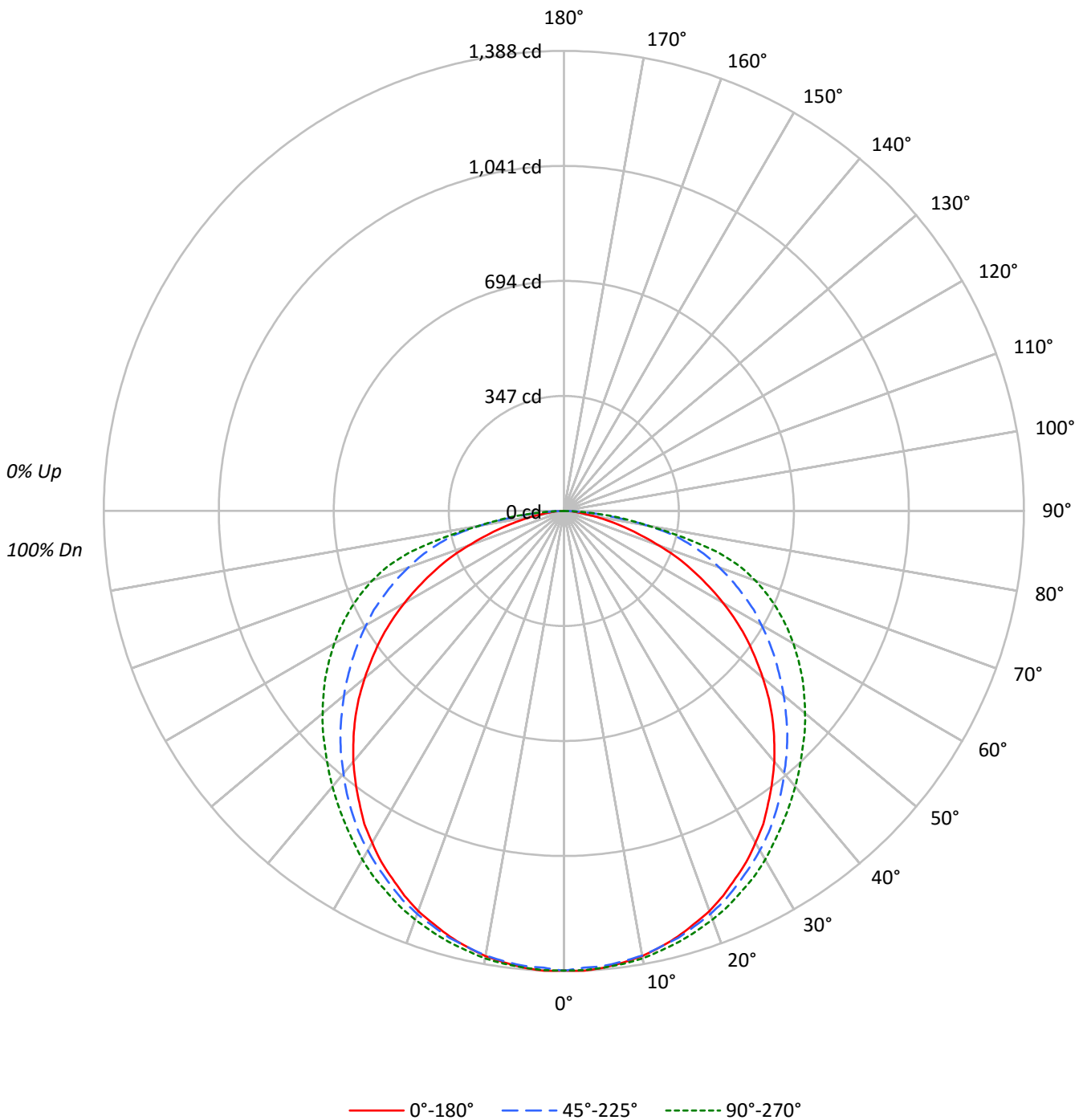
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1866	1866	1866
5°	1868	1861	1868
10°	1863	1860	1873
15°	1852	1857	1874
20°	1839	1852	1878
25°	1817	1844	1881
30°	1796	1837	1888
35°	1766	1828	1890
40°	1735	1816	1908
45°	1696	1815	1937
50°	1640	1813	1989
55°	1582	1826	2061
60°	1493	1854	2152
65°	1379	1897	2273
70°	1204	1964	2421
75°	977	2065	2502
80°	721	2024	2024
85°	553	1491	1684



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.4	3.1
10°-20°	377.2	8.8
20°-30°	574.3	13.4
30°-40°	697.3	16.3
40°-50°	736.7	17.2
50°-60°	695.2	16.3
60°-70°	578.0	13.5
70°-80°	380.3	8.9
80°-90°	103.6	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°	1082.9	25.3
0°-40°	1780.2	41.7
0°-60°	3212.1	75.2
0°-90°	4274.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4274.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1387	1387	1387	1387	1387	
5°	1383	1383	1378	1383	1383	131
15°	1329	1331	1333	1346	1346	375
25°	1224	1231	1242	1263	1267	565
35°	1075	1088	1113	1142	1150	673
45°	891	909	954	1000	1018	686
55°	675	703	778	852	878	601
65°	433	483	596	684	714	428
75°	188	274	397	471	481	202
85°	36	79	97	107	109	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1386.7	1386.7	1386.7	1386.7	1386.7
2.5°	1388.5	1386.7	1379.5	1386.7	1386.7
5°	1383.1	1383.1	1377.8	1383.1	1383.1
7.5°	1374.2	1374.2	1370.6	1377.8	1377.8
10°	1363.4	1363.4	1361.7	1370.6	1370.6
12.5°	1347.3	1349.1	1347.3	1358.1	1358.1
15°	1329.4	1331.2	1333.0	1345.5	1345.5
17.5°	1306.2	1309.8	1313.3	1327.7	1329.4
20°	1284.7	1286.5	1293.7	1309.8	1311.6
22.5°	1256.1	1261.5	1270.4	1286.5	1291.9
25°	1223.9	1231.0	1241.8	1263.2	1266.8
27.5°	1193.5	1198.8	1213.1	1236.4	1243.6
30°	1155.9	1164.8	1182.7	1206.0	1214.9
32.5°	1120.1	1129.0	1150.5	1175.6	1182.7
35°	1075.4	1087.9	1112.9	1141.6	1150.5
37.5°	1032.4	1044.9	1075.4	1107.6	1118.3
40°	987.7	1002.0	1034.2	1071.8	1086.1
42.5°	939.4	959.1	994.8	1036.0	1052.1
45°	891.1	909.0	953.7	1000.2	1018.1
47.5°	839.2	860.7	909.0	964.4	985.9
50°	783.7	810.6	866.0	926.9	950.1
52.5°	728.2	758.7	821.3	889.3	914.3
55°	674.6	703.2	778.3	851.7	878.5
57.5°	615.5	651.3	733.6	812.3	839.2
60°	554.7	594.0	688.9	771.2	799.8
62.5°	493.8	538.6	645.9	728.2	758.7
65°	433.0	483.1	595.8	683.5	713.9
67.5°	374.0	429.4	549.3	637.0	667.4
70°	306.0	375.8	499.2	585.1	615.5
72.5°	243.3	323.9	450.9	531.4	558.3
75°	187.9	273.8	397.2	470.6	481.3
77.5°	137.8	223.7	341.8	366.8	368.6
80°	93.0	178.9	261.2	257.7	261.2
82.5°	60.8	134.2	164.6	184.3	186.1
85°	35.8	78.7	96.6	107.4	109.1
87.5°	17.9	26.8	34.0	35.8	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)