Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: 15998

Luminaire Tested: **201IP-S-P-4T8**

Issue Date: 3/3/2020

Report Generated By E9808136 / USAU2WHP6039969

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Scaled Data Report

Test Information

Test Method:	LM-41-14
Report Number:	15998
Test Lab:	
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	NEO-RAY
Catalog Number:	201IP-S-P-4T8
Description:	NEORAY DIRECT/INDIRECT SUSPENDED LUMINAIRE SHELL II PERF
	WITH SPECULAR REFLECTOR AND WHITE LENS OVER PERFORATIONS
Light Source:	FOUR PHILIPS 32 WATT T8 LAMPS
	F32T8/TL841. LUMEN RATING = 2950 LMS.
Ballast/Driver:	ONE MAGNETEK B432IUNVHP-A BALLAST OPERATING AT 120 VAC AND 107 WATTS

Summary

Lumens per Lamp:	2950 (4 lamps)
Luminaire Lumens:	9374.4 lumens
Efficiency:	79.4%
Efficacy:	87.6 lumens/watt
Spacing Criteria (0/90/45):	1.19 / 1.3 / 1.36
Luminous Opening:	Rectangular w/ Sides (W: 0.88' x L: 4' x H: 0.22')
CIE Type:	Indirect

Input Watts (W):	107
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

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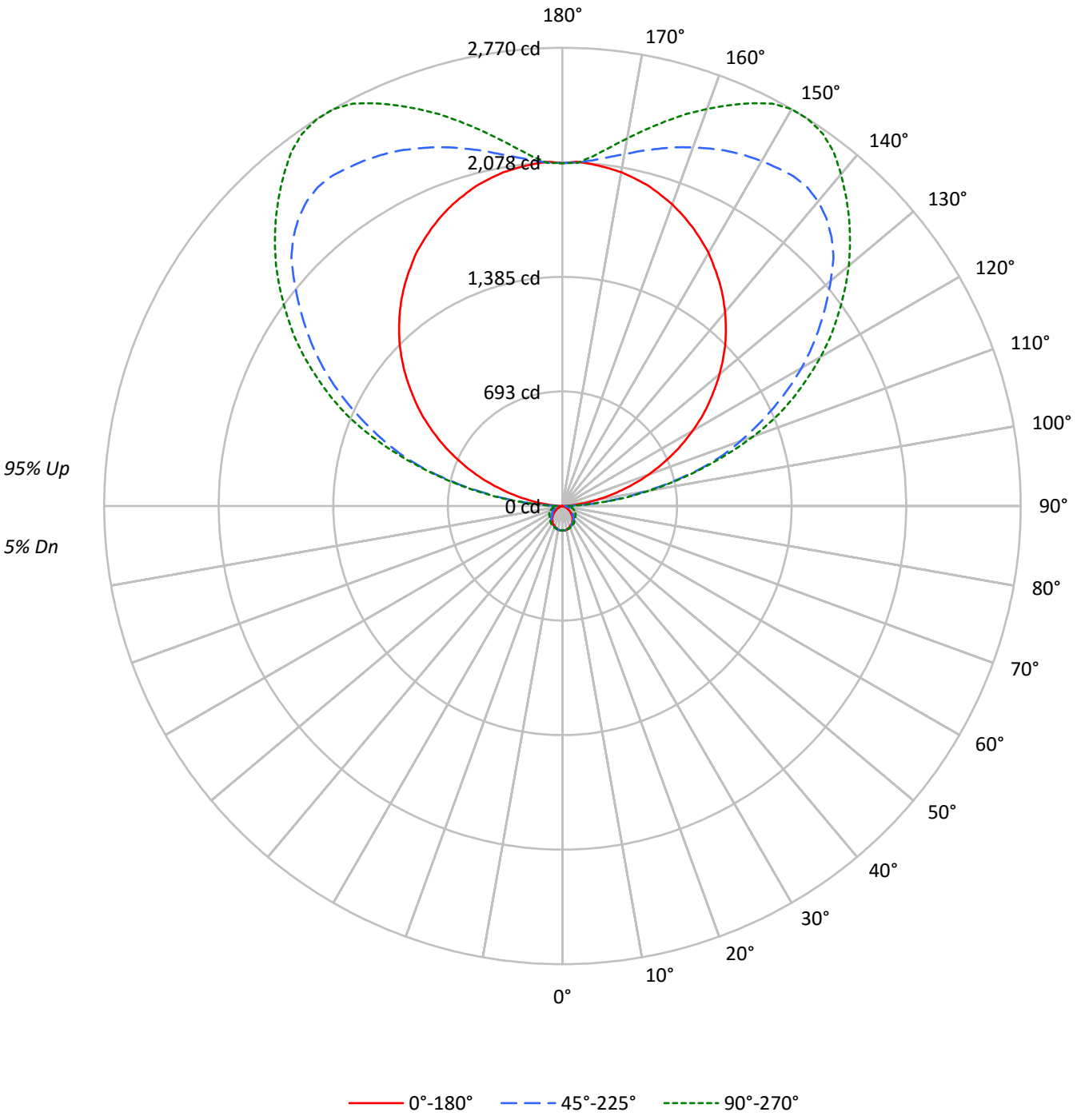
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	77	77	77	77	66	66	66	66	46	46	46	28	28	28	12	12	12	4
1	70	66	63	61	60	57	55	53	40	39	37	24	24	23	10	10	10	3
2	63	58	53	49	54	50	46	43	35	33	31	21	20	19	9	8	8	2
3	58	51	45	41	49	44	39	36	31	28	26	19	17	16	8	7	7	2
4	53	45	39	34	45	39	34	30	27	24	22	17	15	14	7	6	6	2
5	48	40	34	29	41	34	29	26	24	21	19	15	13	12	6	5	5	2
6	44	35	29	25	38	30	26	22	22	18	16	13	11	10	6	5	4	1
7	41	32	26	22	35	27	22	19	19	16	14	12	10	9	5	4	4	1
8	37	28	23	19	32	25	20	17	18	14	12	11	9	8	5	4	3	1
9	35	26	20	16	30	22	18	15	16	13	11	10	8	7	4	3	3	1
10	32	23	18	15	28	20	16	13	14	11	9	9	7	6	4	3	3	1

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	452	452	452
5°	457	446	440
10°	451	433	427
15°	430	425	426
20°	420	415	416
25°	413	395	408
30°	405	382	394
35°	384	379	390
40°	368	352	381
45°	336	339	375
50°	307	299	375
55°	274	303	379
60°	227	306	385
65°	167	296	373
70°	144	302	411
75°	79	276	410
80°	28	265	401
85°	11	233	384

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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	13.9	0.1	0.1
10°-20°	39.7	0.4	0.3
20°-30°	59.7	0.6	0.5
30°-40°	71.3	0.8	0.6
40°-50°	72.8	0.8	0.6
50°-60°	67.2	0.7	0.6
60°-70°	57.5	0.6	0.5
70°-80°	42.5	0.5	0.4
80°-90°	24.0	0.3	0.2
90°-100°	227.4	2.4	1.9
100°-110°	804.7	8.6	6.8
110°-120°	1308.1	14.0	11.1
120°-130°	1587.4	16.9	13.5
130°-140°	1635.8	17.4	13.9
140°-150°	1453.8	15.5	12.3
150°-160°	1075.3	11.5	9.1
160°-170°	631.0	6.7	5.3
170°-180°	202.2	2.2	1.7
0°-30°	113.4	1.2	1.0
0°-40°	184.6	2.0	1.6
0°-60°	324.7	3.5	2.8
0°-90°	448.7	4.8	3.8
90°-120°	2340.2	25.0	19.8
90°-150°	7017.2	74.9	59.5
90°-180°	8926.0	95.2	75.6
0°-180°	9374.4	100.0	79.4

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	148	148	148	148	148	
5°	150	146	148	146	146	14
15°	138	138	142	142	144	39
25°	126	126	129	135	135	58
35°	107	111	117	120	123	67
45°	82	85	95	105	108	63
55°	55	60	74	89	96	49
65°	26	37	60	78	79	26
75°	8	20	42	60	67	9
85°	0	5	23	35	42	1
90°	0	3	23	27	35	3
95°	70	186	207	210	223	87
105°	373	730	856	858	869	397
115°	731	1250	1410	1510	1535	723
125°	1077	1623	1899	1980	2039	963
135°	1392	1849	2300	2422	2451	1072
145°	1654	1995	2434	2692	2745	1034
155°	1859	2059	2368	2600	2686	857
165°	2005	2083	2236	2361	2407	565
175°	2074	2077	2097	2115	2122	197
180°	2072	2072	2072	2072	2072	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	147.8	147.8	147.8	147.8	*147.8*
2.5°	148.1	144.9	144.9	144.9	*149.7*
5°	149.7	146.5	148.1	146.5	*146.5*
7.5°	146.5	144.9	146.5	144.9	*143.7*
10°	146.5	142.1	144.9	146.5	*143.7*
12.5°	143.7	143.3	143.7	143.7	*143.7*
15°	137.7	137.7	142.1	142.1	*143.7*
17.5°	137.7	134.5	137.7	140.9	*137.7*
20°	131.6	133.3	137.7	137.7	*139.3*
22.5°	127.2	130.4	134.5	136.1	*134.5*
25°	125.6	125.6	128.8	134.9	*134.9*
27.5°	124.4	120.0	125.6	130.0	*133.3*
30°	118.4	116.8	121.6	126.0	*127.6*
32.5°	109.6	111.2	120.0	124.4	*126.0*
35°	106.8	111.2	116.8	120.0	*122.8*
37.5°	101.2	100.8	106.8	115.6	*117.2*
40°	96.4	98.0	104.0	109.6	*115.6*
42.5°	89.1	89.1	102.4	105.2	*112.8*
45°	81.9	84.7	95.2	105.2	*108.4*
47.5°	74.7	77.1	89.1	100.8	*104.0*
50°	68.7	69.9	79.1	98.0	*102.4*
52.5°	61.1	65.5	80.3	91.9	*98.0*
55°	55.4	59.9	74.3	89.1	*96.4*
57.5°	46.6	52.6	71.5	89.1	*95.2*
60°	40.6	49.4	68.7	84.7	*90.3*
62.5°	31.8	42.2	65.5	80.3	*90.3*
65°	25.8	37.4	59.9	77.5	*79.1*
67.5°	20.2	31.8	59.9	75.9	*80.3*
70°	18.5	29.0	53.8	68.7	*77.5*
72.5°	12.5	24.6	49.4	63.9	*69.9*
75°	8.1	19.8	42.2	59.9	*67.1*
77.5°	2.9	14.1	40.6	56.6	*61.5*
80°	2.1	12.5	33.4	51.0	*55.0*
82.5°	0.5	10.9	27.4	43.8	*46.2*
85°	0.5	5.3	23.0	35.0	*42.2*
87.5°	0.5	1.3	16.9	27.4	*36.2*
90°	0.5	2.9	22.6	27.0	*35.4*
92.5°	21.4	64.3	83.1	87.9	*96.8*
95°	69.9	186.2	206.6	209.9	*222.7*
97.5°	134.9	323.0	356.2	359.5	*372.7*
100°	208.3	499.0	513.9	560.8	*534.3*
102.5°	290.1	566.4	682.7	643.0	*700.4*
105°	372.7	729.6	856.0	857.6	*869.2*
107.5°	462.1	862.0	1013.2	1039.7	*1046.9*
110°	554.8	981.1	1143.9	1210.1	*1225.0*

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	641.4	1120.3	1276.3	1372.9	*1389.4*
115°	731.2	1249.8	1409.8	1510.1	*1534.6*
117.5°	820.7	1372.9	1540.6	1643.3	*1668.5*
120°	907.3	1478.8	1668.5	1770.0	*1800.9*
122.5°	997.1	1590.3	1787.6	1922.8	*1925.6*
125°	1076.6	1622.8	1899.1	1979.8	*2038.7*
127.5°	1158.8	1702.2	2009.0	2120.9	*2151.8*
130°	1239.4	1756.8	2116.5	2225.2	*2259.3*
132.5°	1317.2	1806.9	2222.4	2326.7	*2357.6*
135°	1392.2	1849.0	2300.2	2421.7	*2451.4*
137.5°	1461.2	1887.1	2360.4	2505.6	*2536.8*
140°	1529.0	1925.2	2404.5	2587.0	*2619.1*
142.5°	1593.5	1959.3	2429.4	2649.9	*2694.1*
145°	1653.7	1994.6	2433.8	2692.5	*2745.4*
147.5°	1709.4	2006.6	2421.7	2693.7	*2769.1*
150°	*1766.8*	*2031.1*	*2408.5*	*2687.6*	*2770.3*
152.5°	1814.1	2044.7	2389.6	2652.7	*2742.2*
155°	1859.4	2059.2	2367.6	2599.8	*2686.4*
157.5°	1902.0	2069.6	2338.3	2544.1	*2621.9*
160°	1940.1	2078.4	2307.4	2487.9	*2554.5*
162.5°	1972.5	2080.0	2273.7	2426.5	*2483.5*
165°	2005.0	2082.8	2235.6	2360.8	*2407.3*
167.5°	2027.1	2085.6	2198.7	2276.9	*2331.1*
170°	2049.1	2081.2	2159.0	2247.3	*2256.1*
172.5°	2062.0	2079.6	2126.6	2172.3	*2185.5*
175°	2074.0	2076.8	2097.3	2114.9	*2122.1*
177.5°	2082.8	2078.4	2078.4	2076.8	*2075.6*
180°	2072.2	2072.2	2072.2	2072.2	*2072.2*

(END OF REPORT)