

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P644326

Luminaire Tested: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644326
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

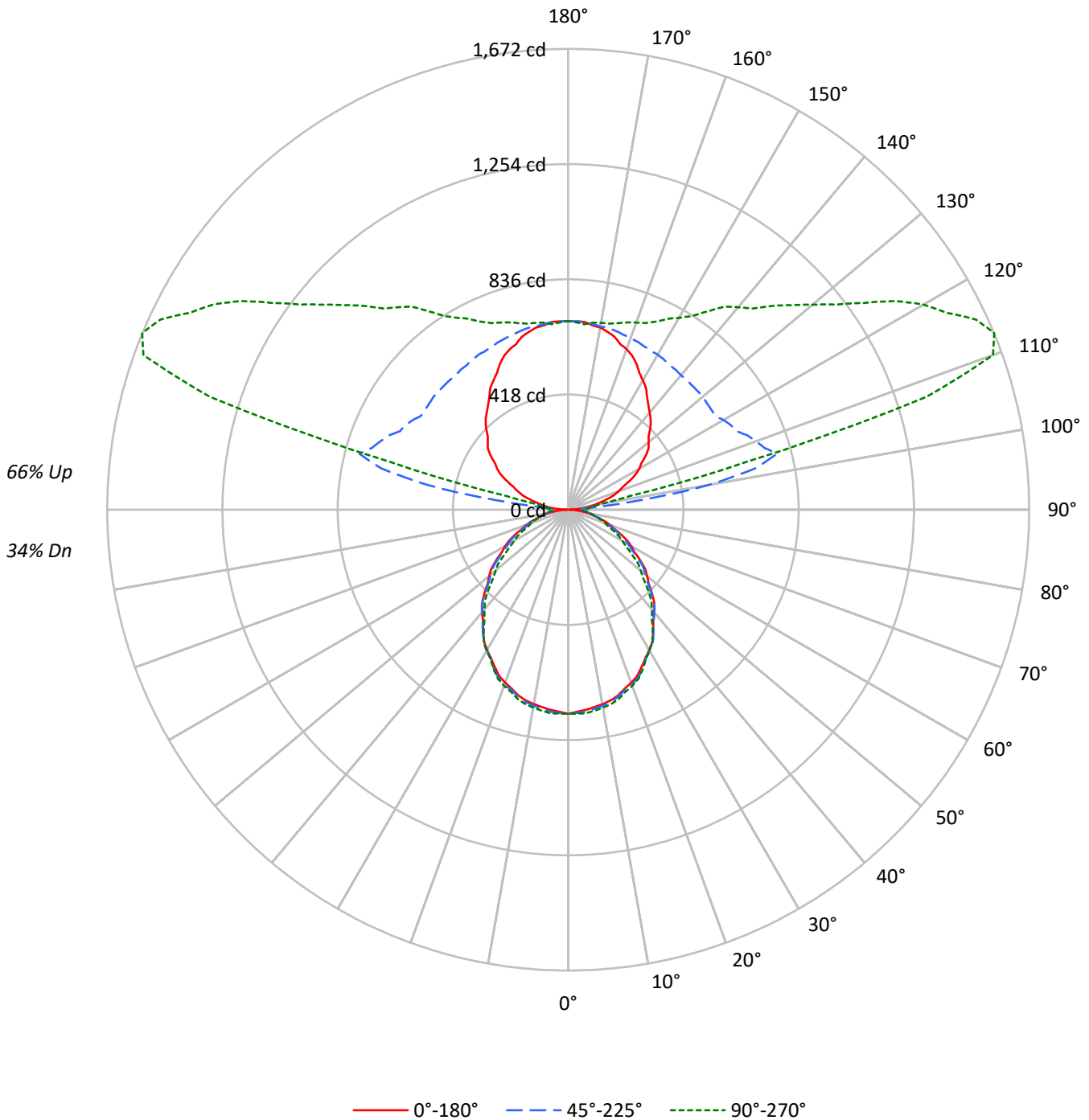
Lumens per Lamp: N/A
Luminaire Lumens: 5584.1 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 43.3
Input Voltage (V): 120
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: 24 FT

TEST NUMBER: P644326

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644326

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34																				
1	94	90	86	82	85	81	78	75	65	63	60	50	48	47	36	35	34	28																				
2	86	78	72	67	77	71	66	61	57	53	50	44	41	39	32	30	29	24																				
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	26	25	20																				
4	71	61	53	47	64	55	49	43	44	40	36	34	31	29	25	23	21	17																				
5	65	54	46	40	59	49	42	37	40	35	31	31	27	25	23	20	19	15																				
6	60	49	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16	13																				
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	15	12																				
8	52	40	32	27	46	36	29	25	29	24	21	23	20	17	17	15	13	11																				
9	48	36	29	24	43	33	27	22	27	22	19	21	18	15	16	14	12	10																				
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9391	8836
15°	11406	8411	7728
20°	11145	7545	6760
25°	10797	6738	5890
30°	10456	5953	5113
35°	9992	5236	4388
40°	9560	4584	3720
45°	9059	3940	3105
50°	8532	3336	2546
55°	7972	2808	2053
60°	7438	2301	1641
65°	6781	1835	1299
70°	6146	1438	1026
75°	5377	1104	809
80°	4489	821	631
85°	3273	597	479

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



TEST NUMBER: P644326

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	1.3
10°-20°	198.3	3.6
20°-30°	292.8	5.2
30°-40°	336.6	6.0
40°-50°	326.5	5.8
50°-60°	273.3	4.9
60°-70°	196.9	3.5
70°-80°	120.3	2.2
80°-90°	60.0	1.1
90°-100°	107.2	1.9
100°-110°	607.6	10.9
110°-120°	816.4	14.6
120°-130°	663.3	11.9
130°-140°	532.6	9.5
140°-150°	419.8	7.5
150°-160°	306.9	5.5
160°-170°	190.7	3.4
170°-180°	65.0	1.2
0°-30°	561.0	10.0
0°-40°	897.6	16.1
0°-60°	1497.4	26.8
0°-90°	1874.7	33.6
90°-120°	1531.1	27.4
90°-150°	3146.8	56.4
90°-180°	3709.0	66.4
0°-180°	5584.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	729	742	735	736	742	69
15°	698	708	702	705	710	196
25°	630	640	638	635	639	290
35°	536	545	540	534	534	336
45°	430	434	427	414	408	331
55°	317	321	310	290	281	284
65°	209	210	200	185	180	208
75°	113	113	115	112	110	121
85°	34	42	58	62	62	36
90°	3	25	46	57	58	5
95°	45	73	56	68	78	47
105°	144	209	784	1004	670	152
115°	244	290	673	1397	1632	242
125°	344	388	633	1106	1308	306
135°	422	468	637	911	1045	325
145°	499	541	641	793	877	313
155°	585	606	654	719	753	269
165°	650	658	671	688	701	182
175°	684	688	684	680	675	65
180°	684	684	684	684	684	

TEST NUMBER: P644326

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.5	740.5	740.5	740.5	740.5
2.5°	733.8	744.4	737.9	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	734.5	728.3	729.7	735.6
10°	716.4	728.7	721.6	723.8	729.0
12.5°	708.9	720.3	714.9	717.1	722.3
15°	697.6	707.8	701.8	705.0	710.1
17.5°	680.8	691.9	685.4	687.2	692.4
20°	668.3	678.5	674.6	674.7	679.8
22.5°	653.2	664.3	661.2	658.8	664.7
25°	629.6	639.8	638.0	634.9	639.0
27.5°	606.2	613.7	610.1	607.1	610.1
30°	587.8	597.0	590.9	587.8	590.9
32.5°	567.7	576.9	570.8	566.9	568.3
35°	536.5	544.7	539.7	534.4	534.4
37.5°	507.0	512.3	508.9	500.1	497.8
40°	485.3	491.4	486.3	475.8	472.7
42.5°	462.7	468.8	462.9	451.5	446.8
45°	429.8	433.9	426.7	414.0	407.9
47.5°	396.0	400.3	390.3	376.3	369.0
50°	373.4	378.5	366.0	351.2	343.0
52.5°	351.6	355.1	343.5	326.1	318.8
55°	316.9	321.0	309.6	290.5	281.3
57.5°	284.5	288.4	274.8	256.7	249.5
60°	263.6	266.6	253.1	234.1	226.9
62.5°	240.1	243.2	230.5	214.0	206.9
65°	209.2	210.2	199.8	185.0	179.9
67.5°	180.1	180.1	171.3	160.3	156.2
70°	160.0	160.0	153.7	145.3	141.2
72.5°	141.6	140.8	137.0	131.1	127.8
75°	113.0	113.0	115.0	111.9	109.8
77.5°	87.9	86.2	95.2	94.7	93.7
80°	71.1	71.1	82.6	84.7	83.7
82.5°	56.1	57.7	72.6	75.5	74.5
85°	34.5	41.7	57.5	61.7	61.7
87.5°	15.7	29.0	46.9	53.2	53.4
90°	3.1	24.7	46.3	56.9	57.9
92.5°	16.8	30.2	49.9	64.0	69.2
95°	44.9	73.3	56.4	68.2	77.6
97.5°	73.6	128.7	268.8	96.6	87.7
100°	94.3	158.6	520.1	167.2	118.8
102.5°	114.1	181.8	695.7	408.7	231.6
105°	143.8	209.2	783.7	1004.0	669.6
107.5°	173.5	221.4	746.2	1453.3	1362.6
110°	193.3	238.7	724.7	1525.1	1639.6



TEST NUMBER: P644326

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U940-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	214.0	259.3	704.0	1480.4	1672.4
115°	243.9	290.3	673.1	1396.7	1632.2
117.5°	274.5	321.2	665.1	1305.3	1547.5
120°	297.7	341.9	650.5	1235.9	1488.2
122.5°	314.9	361.7	633.3	1176.9	1409.0
125°	344.0	388.2	633.3	1105.7	1307.5
127.5°	367.7	413.9	634.2	1023.0	1222.4
130°	380.6	431.1	637.6	967.7	1157.0
132.5°	396.1	446.6	636.8	942.9	1098.5
135°	421.5	467.8	636.6	910.6	1045.2
137.5°	443.0	492.6	636.6	874.9	990.1
140°	460.2	506.5	636.6	854.0	959.1
142.5°	477.4	520.3	640.0	829.8	928.2
145°	498.9	541.0	640.9	793.3	877.4
147.5°	524.7	561.7	646.0	767.1	831.8
150°	541.9	575.6	649.5	749.6	804.3
152.5°	559.1	589.4	649.5	735.6	780.2
155°	585.0	606.0	653.8	719.0	752.7
157.5°	605.6	625.8	658.9	708.5	732.9
160°	619.4	636.2	662.4	701.6	722.6
162.5°	629.7	646.5	665.8	698.0	712.3
165°	649.5	657.9	671.0	688.5	701.1
167.5°	660.7	668.2	675.3	684.0	691.6
170°	671.0	675.2	675.3	684.0	688.2
172.5°	674.4	682.0	678.7	680.5	684.7
175°	683.9	688.1	683.9	679.5	675.3
177.5°	683.9	687.2	683.9	683.8	680.4
180°	683.9	683.9	683.9	683.9	683.9

(END OF REPORT)