

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P644218

Luminaire Tested: CRQ4DIP-SR4F0-100D25U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644218
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-SR4F0-100D25U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

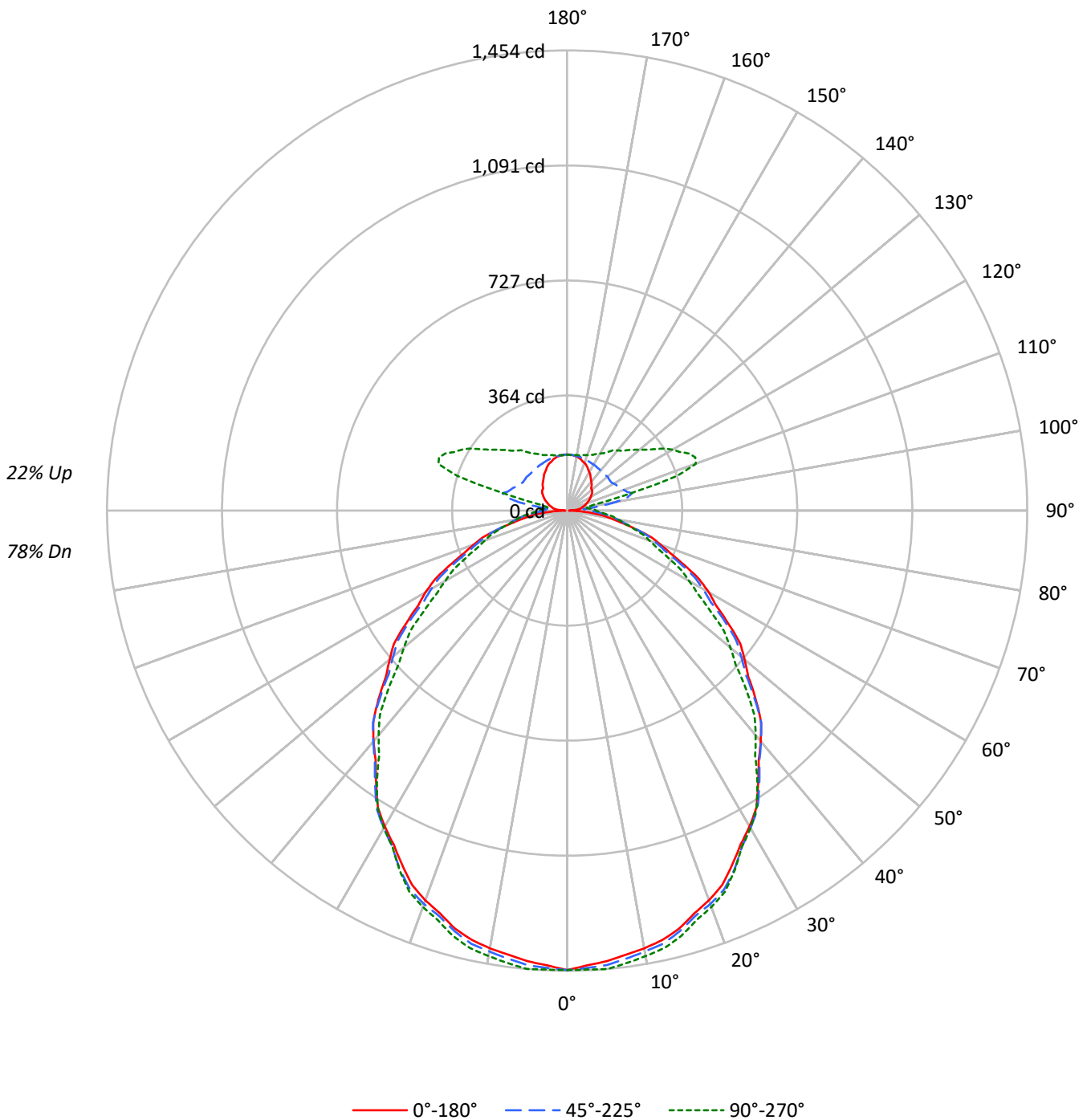
Lumens per Lamp: N/A
Luminaire Lumens: 4692.6 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 38.2
Input Voltage (V): 120
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: 24 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	114	114	114	114	109	109	109	109	99	99	99	90	90	90	82	82	82	78
1	104	99	95	91	99	95	91	88	87	84	81	79	77	75	72	70	69	65
2	95	87	80	75	90	83	77	72	76	71	67	70	66	63	64	61	58	55
3	86	76	69	63	82	73	66	61	67	62	57	62	57	53	57	53	50	47
4	79	68	60	53	75	65	58	52	60	54	49	55	50	46	51	46	43	40
5	73	61	52	46	69	58	51	45	54	47	42	50	44	40	46	41	38	35
6	67	55	46	40	64	53	45	39	49	42	37	45	39	35	42	37	33	31
7	63	50	41	36	60	48	40	35	44	38	33	41	36	31	38	33	30	27
8	58	45	37	32	56	44	36	31	41	34	30	38	32	28	35	30	27	25
9	54	42	34	28	52	40	33	28	37	31	27	35	29	25	32	28	24	22
10	51	38	31	26	49	37	30	25	35	28	24	32	27	23	30	25	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23439	23439	23439
5°	22995	20694	20052
10°	22693	18411	17321
15°	22361	16489	15152
20°	21849	14792	13252
25°	21167	13208	11548
30°	20497	11672	10024
35°	19588	10265	8603
40°	18742	8986	7294
45°	17762	7723	6086
50°	16726	6541	4993
55°	15629	5504	4026
60°	14581	4512	3218
65°	13292	3597	2548
70°	12050	2819	2012
75°	10535	2165	1587
80°	8802	1610	1235
85°	6423	1171	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17762 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	2.9
10°-20°	388.8	8.3
20°-30°	574.0	12.2
30°-40°	659.9	14.1
40°-50°	640.1	13.6
50°-60°	535.9	11.4
60°-70°	386.1	8.2
70°-80°	235.9	5.0
80°-90°	115.0	2.5
90°-100°	67.1	1.4
100°-110°	171.3	3.7
110°-120°	216.0	4.6
120°-130°	173.5	3.7
130°-140°	138.0	2.9
140°-150°	108.5	2.3
150°-160°	79.4	1.7
160°-170°	49.3	1.1
170°-180°	16.8	0.4
0°-30°	1099.8	23.4
0°-40°	1759.7	37.5
0°-60°	2935.7	62.6
0°-90°	3672.7	78.3
90°-120°	454.4	9.7
90°-150°	874.5	18.6
90°-180°	1020.0	21.7
0°-180°	4692.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1429	1455	1441	1444	1454	136
15°	1368	1388	1376	1382	1392	385
25°	1234	1254	1251	1245	1253	569
35°	1052	1068	1058	1048	1048	659
45°	843	851	836	812	800	650
55°	621	629	607	570	552	557
65°	410	412	392	363	353	408
75°	221	221	226	219	215	237
85°	68	82	113	121	121	71
90°	6	41	76	90	92	8
95°	29	35	52	68	72	27
105°	55	61	212	276	193	58
115°	76	80	178	365	426	75
125°	96	104	166	286	338	85
135°	109	121	165	235	270	84
145°	129	140	166	205	227	81
155°	151	157	169	186	195	69
165°	168	170	174	178	181	47
175°	177	178	177	176	175	17
180°	177	177	177	177	177	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1451.7	1451.7	1451.7	1451.7	1451.7
2.5°	1438.5	1459.4	1446.7	1450.1	1451.7
5°	1429.1	1455.2	1441.4	1443.7	1453.7
7.5°	1416.0	1440.0	1427.9	1430.6	1442.2
10°	1404.5	1428.6	1414.7	1419.1	1429.1
12.5°	1389.7	1412.2	1401.6	1406.0	1416.0
15°	1367.6	1387.6	1375.8	1382.2	1392.2
17.5°	1334.8	1356.4	1343.8	1347.3	1357.3
20°	1310.2	1330.2	1322.5	1322.7	1332.7
22.5°	1280.7	1302.3	1296.2	1291.6	1303.2
25°	1234.3	1254.4	1250.7	1244.8	1252.8
27.5°	1188.4	1203.2	1196.2	1190.2	1196.2
30°	1152.3	1170.3	1158.5	1152.4	1158.5
32.5°	1112.9	1131.0	1119.1	1111.4	1114.2
35°	1051.8	1067.9	1058.0	1047.7	1047.7
37.5°	994.0	1004.4	997.7	980.4	976.0
40°	951.4	963.4	953.4	932.8	926.8
42.5°	907.1	919.1	907.5	885.1	875.9
45°	842.7	850.7	836.5	811.7	799.6
47.5°	776.3	784.7	765.2	737.8	723.4
50°	732.0	742.0	717.6	688.6	672.5
52.5°	689.3	696.1	673.3	639.4	625.0
55°	621.3	629.3	606.9	569.6	551.5
57.5°	557.7	565.3	538.8	503.2	489.2
60°	516.7	522.7	496.2	459.0	444.9
62.5°	470.8	476.8	451.9	419.6	405.6
65°	410.1	412.1	391.6	362.7	352.7
67.5°	353.1	353.1	335.8	314.3	306.3
70°	313.7	313.7	301.4	284.8	276.8
72.5°	277.6	276.0	268.6	257.0	250.6
75°	221.4	221.4	225.5	219.3	215.3
77.5°	172.2	169.0	186.6	185.7	183.7
80°	139.4	139.4	162.0	166.0	164.0
82.5°	109.9	113.1	142.3	148.0	146.0
85°	67.7	81.7	112.8	121.0	121.0
87.5°	30.8	55.4	89.0	99.9	100.3
90°	6.2	41.3	76.0	89.5	91.5
92.5°	15.4	34.5	65.6	80.0	84.5
95°	29.4	35.0	52.0	67.5	71.7
97.5°	40.4	43.8	96.5	62.4	62.2
100°	45.7	50.2	155.8	73.6	64.5
102.5°	49.4	54.7	195.5	130.3	86.6
105°	55.0	61.4	211.5	275.6	192.7
107.5°	60.5	62.8	197.9	385.7	364.0
110°	64.2	67.2	190.9	401.4	432.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	69.6	72.6	185.6	387.0	438.4
115°	75.5	80.5	177.6	364.6	425.5
117.5°	81.3	88.5	175.2	338.9	401.5
120°	85.9	93.8	170.0	319.5	384.7
122.5°	90.3	97.5	165.5	304.3	364.3
125°	96.0	104.0	165.5	285.8	338.0
127.5°	100.0	110.6	165.7	264.5	316.0
130°	102.0	115.0	166.6	250.2	299.1
132.5°	103.1	116.2	165.0	243.8	284.0
135°	109.0	120.9	164.6	235.4	270.2
137.5°	114.5	127.4	164.6	226.2	256.0
140°	119.0	130.9	164.6	220.8	248.0
142.5°	123.4	134.5	165.5	214.5	240.0
145°	129.0	139.9	165.7	205.1	226.8
147.5°	135.7	145.2	167.0	198.3	215.0
150°	140.1	148.8	167.9	193.8	207.9
152.5°	144.6	152.4	167.9	190.2	201.7
155°	151.2	156.7	169.0	185.9	194.6
157.5°	156.6	161.8	170.3	183.2	189.5
160°	160.1	164.5	171.2	181.4	186.8
162.5°	162.8	167.1	172.1	180.4	184.1
165°	167.9	170.1	173.5	178.0	181.2
167.5°	170.8	172.7	174.6	176.8	178.8
170°	173.5	174.5	174.6	176.8	177.9
172.5°	174.4	176.3	175.5	175.9	177.0
175°	176.8	177.9	176.8	175.7	174.6
177.5°	176.8	177.7	176.8	176.8	175.9
180°	176.8	176.8	176.8	176.8	176.8

(END OF REPORT)