

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: P644213

Luminaire Tested: CRQ4DIP-SR4F0-100D25U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644213
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-100D25U930-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 250 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

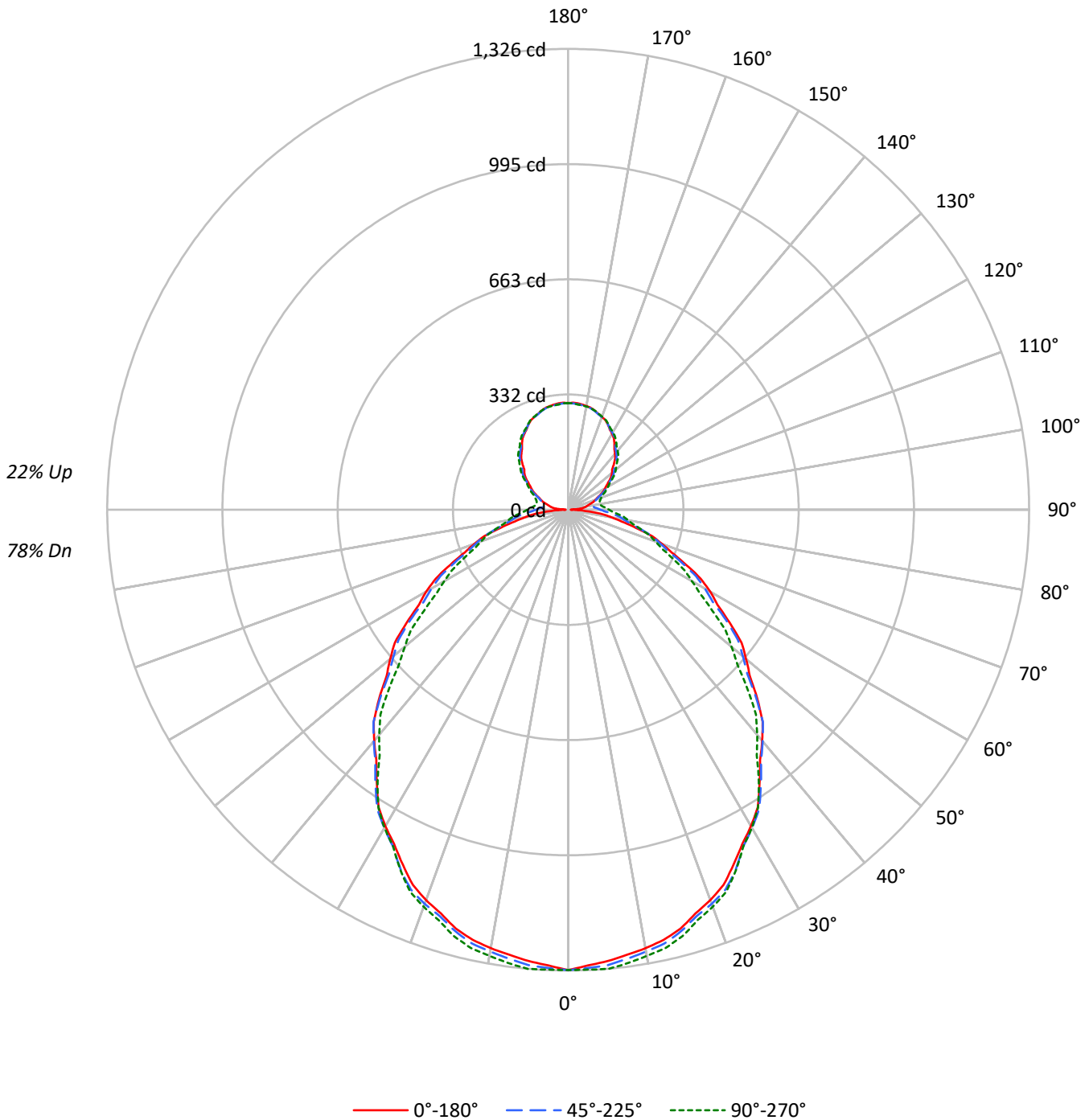
Lumens per Lamp: N/A
Luminaire Lumens: 4320.9 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 38.2
Input Voltage (V): 120
Input Current (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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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	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	87	86	83	81	79	77	74	72	70	69	65																			
2	94	86	80	74	90	83	77	72	76	71	67	69	66	62	63	60	58	54																			
3	86	76	68	62	82	73	66	60	67	61	56	61	57	53	56	53	49	46																			
4	79	68	59	53	75	65	57	51	60	53	48	55	50	45	50	46	43	40																			
5	73	61	52	46	69	58	50	44	54	47	42	49	44	40	46	41	37	35																			
6	67	55	46	40	64	53	45	39	49	42	37	45	39	35	41	37	33	31																			
7	62	50	41	35	59	48	40	34	44	38	33	41	35	31	38	33	29	27																			
8	58	45	37	31	55	44	36	31	41	34	29	38	32	28	35	30	26	24																			
9	54	41	34	28	52	40	33	28	37	31	26	35	29	25	32	28	24	22																			
10	51	38	31	26	49	37	30	25	34	28	24	32	27	23	30	25	22	20																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21385	21385	21385
5°	20980	18881	18295
10°	20704	16803	15804
15°	20402	15048	13824
20°	19935	13499	12092
25°	19313	12051	10536
30°	18700	10655	9145
35°	17873	9375	7849
40°	17099	8202	6655
45°	16206	7050	5553
50°	15259	5977	4555
55°	14258	5028	3690
60°	13302	4128	2974
65°	12125	3312	2390
70°	10994	2623	1935
75°	9612	2066	1589
80°	8031	1614	1319
85°	5854	1285	1110

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	2.9
10°-20°	354.8	8.2
20°-30°	523.8	12.1
30°-40°	602.3	13.9
40°-50°	584.4	13.5
50°-60°	490.0	11.3
60°-70°	356.6	8.3
70°-80°	225.6	5.2
80°-90°	124.5	2.9
90°-100°	77.9	1.8
100°-110°	81.8	1.9
110°-120°	106.4	2.5
120°-130°	133.8	3.1
130°-140°	149.5	3.5
140°-150°	147.5	3.4
150°-160°	124.8	2.9
160°-170°	83.1	1.9
170°-180°	29.1	0.7
0°-30°	1003.6	23.2
0°-40°	1605.9	37.2
0°-60°	2680.3	62.0
0°-90°	3387.0	78.4
90°-120°	266.2	6.2
90°-150°	697.0	16.1
90°-180°	934.0	21.6
0°-180°	4320.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1304	1328	1315	1317	1326	124
15°	1248	1267	1256	1261	1270	351
25°	1126	1145	1141	1136	1143	519
35°	960	975	966	956	956	601
45°	769	777	764	740	730	593
55°	567	575	554	521	506	508
65°	374	378	361	338	331	372
75°	202	205	215	217	216	216
85°	62	82	124	140	143	65
90°	8	48	92	112	117	9
95°	33	38	75	97	100	31
105°	67	60	74	90	94	71
115°	103	100	107	113	114	102
125°	143	145	150	154	155	128
135°	186	190	194	198	201	144
145°	232	234	236	238	240	145
155°	270	272	271	271	273	124
165°	295	296	294	293	295	83
175°	308	309	305	304	304	29
180°	307	307	307	307	307	

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CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U930-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1324.5	1324.5	1324.5	1324.5	1324.5
2.5°	1312.5	1331.5	1320.2	1323.0	1324.5
5°	1303.9	1327.7	1315.1	1317.2	1326.3
7.5°	1291.9	1314.1	1303.1	1305.2	1315.9
10°	1281.4	1303.4	1291.1	1294.7	1303.9
12.5°	1268.0	1289.0	1278.9	1282.8	1291.9
15°	1247.8	1266.7	1255.6	1261.1	1270.2
17.5°	1217.8	1237.9	1226.4	1229.3	1238.4
20°	1195.4	1214.0	1206.9	1206.8	1216.0
22.5°	1168.4	1188.5	1183.0	1178.4	1189.0
25°	1126.2	1145.1	1141.1	1135.7	1143.0
27.5°	1084.3	1098.9	1091.8	1085.9	1091.4
30°	1051.3	1068.4	1057.6	1051.5	1056.9
32.5°	1015.4	1032.8	1021.7	1014.0	1016.5
35°	959.7	975.3	966.3	955.9	955.9
37.5°	906.9	917.7	910.6	894.5	890.5
40°	868.0	880.3	870.2	851.0	845.6
42.5°	827.6	839.8	828.6	807.6	799.2
45°	768.9	777.1	763.6	740.5	729.6
47.5°	708.2	717.1	698.6	673.2	660.0
50°	667.8	677.9	655.7	628.2	613.6
52.5°	628.9	636.4	615.1	583.6	570.7
55°	566.8	575.4	554.4	520.7	505.5
57.5°	508.8	517.1	492.7	462.1	450.0
60°	471.4	478.2	454.0	423.0	411.2
62.5°	429.5	436.5	414.1	388.4	377.1
65°	374.1	377.9	360.6	338.4	330.9
67.5°	322.1	324.0	310.9	296.7	291.3
70°	286.2	288.1	280.5	271.3	266.2
72.5°	253.3	254.0	252.4	248.0	244.4
75°	202.0	204.6	215.2	216.8	215.6
77.5°	157.1	157.7	182.5	189.6	190.4
80°	127.2	131.7	162.4	174.0	175.1
82.5°	100.3	108.7	146.6	160.4	161.5
85°	61.7	82.2	123.7	140.1	143.0
87.5°	28.5	60.2	104.5	123.1	126.7
90°	7.9	47.6	92.1	112.2	117.3
92.5°	18.3	42.4	84.3	104.2	109.6
95°	33.4	38.2	75.4	96.8	100.5
97.5°	45.6	40.4	72.2	90.9	94.9
100°	52.1	44.7	71.6	88.9	93.9
102.5°	57.9	49.7	71.9	88.7	92.6
105°	66.6	60.1	74.2	89.6	94.2
107.5°	76.5	70.5	80.8	93.8	96.9
110°	83.1	79.0	86.8	97.8	101.2



TEST NUMBER: P644213

CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U930-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	91.7	87.6	94.4	102.4	105.8
115°	102.7	100.5	106.7	112.9	114.5
117.5°	114.0	113.8	119.1	123.4	124.9
120°	122.4	123.2	127.0	131.0	132.3
122.5°	131.0	131.1	136.1	140.1	141.4
125°	143.3	145.1	150.1	153.8	155.1
127.5°	155.8	159.2	163.7	167.5	169.2
130°	164.7	168.8	172.6	176.6	178.5
132.5°	171.6	175.7	180.2	185.5	187.7
135°	185.7	189.9	193.5	198.5	200.7
137.5°	199.9	203.9	206.7	210.6	213.4
140°	209.5	213.0	215.0	218.7	221.2
142.5°	218.4	221.9	223.4	226.5	229.0
145°	231.6	234.5	235.9	237.6	240.1
147.5°	244.1	246.9	247.5	249.0	250.5
150°	252.2	254.7	254.8	255.5	257.1
152.5°	259.7	262.0	261.3	261.7	263.6
155°	270.4	272.0	270.7	271.1	272.7
157.5°	278.9	280.5	278.5	279.1	280.4
160°	284.1	285.7	283.5	283.8	285.1
162.5°	289.1	290.1	288.1	287.7	289.5
165°	295.2	296.5	294.2	293.3	295.2
167.5°	300.4	301.7	298.7	297.7	299.6
170°	303.0	304.3	301.0	299.8	301.7
172.5°	305.3	306.6	303.1	301.6	303.0
175°	307.6	308.8	305.0	303.7	303.7
177.5°	308.2	309.0	306.1	304.9	306.4
180°	306.9	306.9	306.9	306.9	306.9

(END OF REPORT)