

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: P644464

Luminaire Tested: CRQ4DP-SR4F0-100D940-FLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644464
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DP-SR4F0-100D940-FLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
DIRECT ONLY
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

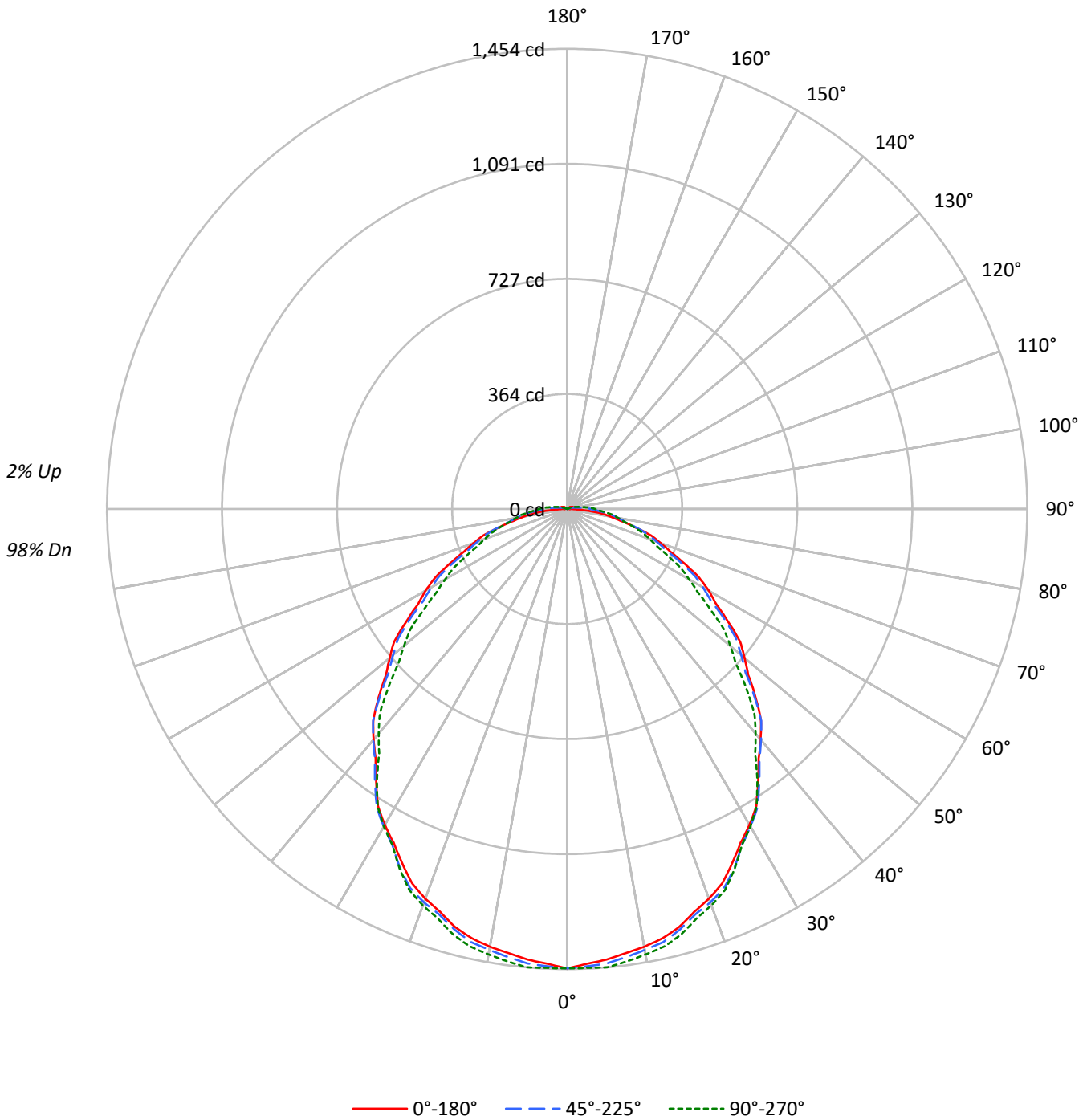
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3742.5 lumens
Efficiency: N/A
Efficacy: 125.2 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: 0.02')
CIE Type: Direct

Input Watts (W): 29.9
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					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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	100	100	100	100	100	100	98		
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	84	84	84	84	84	84	82		
2	99	91	84	78	96	88	82	77	85	79	75	81	77	73	78	74	71	71	71	71	71	71	71	69		
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	69	65	61	61	61	61	61	61	61	58		
4	83	71	62	56	80	70	62	55	67	60	54	64	58	53	62	57	53	53	53	53	53	53	53	50		
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	56	50	46	46	46	46	46	46	46	44		
6	71	58	49	43	69	57	48	42	55	47	42	53	46	41	51	45	41	41	41	41	41	41	41	39		
7	66	52	44	38	64	51	43	38	50	42	37	48	42	37	47	41	36	36	36	36	36	36	36	34		
8	61	48	40	34	60	47	39	34	46	38	33	44	38	33	43	37	33	33	33	33	33	33	33	31		
9	57	44	36	31	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	30	30	30	28		
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	27	27	27	27	27	27	25		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23439	23439	23439
5°	23150	23138	23256
10°	23001	22751	22826
15°	22822	22336	22372
20°	22461	21845	21713
25°	21925	21189	20860
30°	21406	20303	19877
35°	20641	19356	18688
40°	19948	18390	17350
45°	19122	17200	15876
50°	18251	15928	14330
55°	17335	14756	12785
60°	16506	13449	11404
65°	15460	12095	10195
70°	14559	10915	9253
75°	13497	9960	8611
80°	12518	9260	8239
85°	11705	9235	8258

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19122 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	3.7
10°-20°	388.8	10.4
20°-30°	574.0	15.3
30°-40°	659.9	17.6
40°-50°	640.1	17.1
50°-60°	535.9	14.3
60°-70°	386.1	10.3
70°-80°	235.9	6.3
80°-90°	114.6	3.1
90°-100°	45.4	1.2
100°-110°	16.4	0.4
110°-120°	5.7	0.2
120°-130°	2.4	0.1
130°-140°	0.3	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°	1099.8	29.4
0°-40°	1759.7	47.0
0°-60°	2935.7	78.4
0°-90°	3672.3	98.1
90°-120°	67.5	1.8
90°-150°	70.2	1.9
90°-180°	70.0	1.9
0°-180°	3742.5	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	40	74	86	88	8
95°	20	18	43	58	60	17
105°	20	8	10	18	23	22
115°	14	6	4	4	4	14
125°	8	4	2	0	0	7
135°	0	0	0	0	0	1
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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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	55.2	88.6	99.2	99.6
90°	6.2	40.2	73.8	86.2	88.2
92.5°	12.7	30.8	60.7	73.1	76.7
95°	20.5	18.5	43.1	57.5	59.5
97.5°	24.6	12.2	31.2	43.1	45.5
100°	24.6	10.6	24.6	34.9	39.0
102.5°	23.0	8.9	18.0	28.3	30.8
105°	20.5	8.5	10.3	18.5	22.6
107.5°	18.0	6.4	5.7	11.5	13.5
110°	16.4	6.4	4.1	8.2	10.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	16.4	6.4	4.1	5.0	7.0
115°	14.4	6.3	4.1	4.1	4.1
117.5°	11.9	6.3	3.7	1.6	1.6
120°	10.3	6.2	2.1	0.0	0.0
122.5°	10.3	4.6	2.1	0.0	0.0
125°	8.2	4.2	2.1	0.0	0.0
127.5°	5.7	4.1	2.1	0.0	0.0
130°	4.1	4.1	2.1	0.0	0.0
132.5°	0.8	0.8	0.4	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)