

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: P644480

Luminaire Tested: CRQ4DP-SR4F0-75D930-FLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644480
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-SR4F0-75D930-FLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
DIRECT ONLY
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

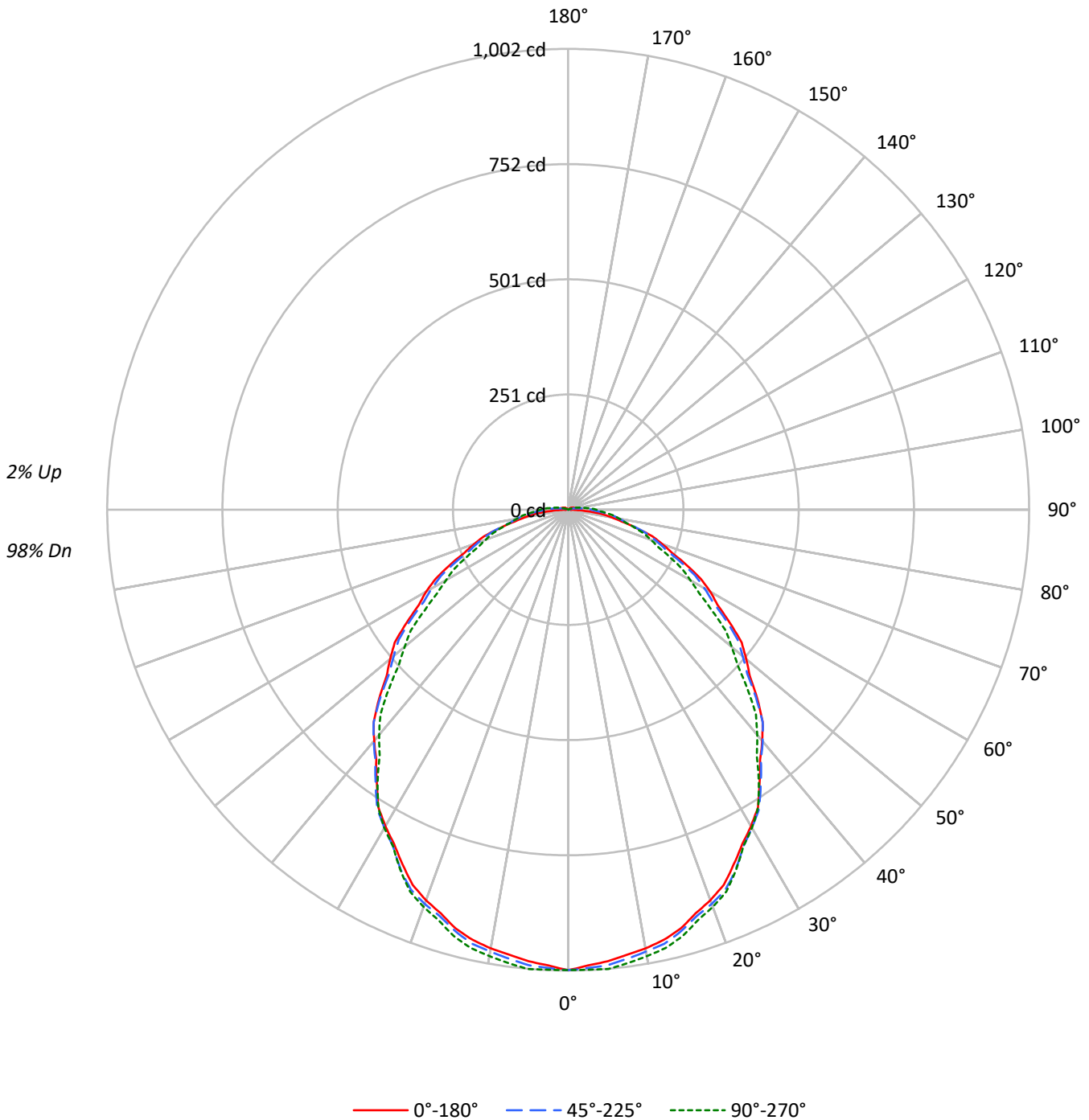
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2580.7 lumens
Efficiency: N/A
Efficacy: 118.4 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): 21.8
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									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	98					98														
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	82	82					82														
2	99	91	84	78	96	88	82	77	85	79	75	81	77	73	78	74	71	69	69					69														
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	69	65	61	58	58					58														
4	83	71	62	56	80	70	62	55	67	60	54	64	58	53	62	57	53	50	50					50														
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	56	50	46	44	44					44														
6	71	58	49	43	69	57	48	42	55	47	42	53	46	41	51	45	41	39	39					39														
7	66	52	44	38	64	51	43	38	50	42	37	48	42	37	47	41	36	34	34					34														
8	61	48	40	34	60	47	39	34	46	38	33	44	38	33	43	37	33	31	31					31														
9	57	44	36	31	56	43	36	30	42	35	30	41	35	30	40	34	30	28	28					28														
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25	25					25														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16162	16162	16162
5°	15964	15956	16038
10°	15861	15689	15741
15°	15738	15402	15427
20°	15489	15064	14973
25°	15120	14613	14384
30°	14761	14001	13707
35°	14234	13348	12887
40°	13754	12682	11964
45°	13186	11862	10948
50°	12586	10985	9883
55°	11953	10175	8817
60°	11382	9275	7864
65°	10661	8342	7030
70°	10039	7525	6382
75°	9309	6868	5939
80°	8630	6385	5682
85°	8074	6369	5692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13186 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	3.7
10°-20°	268.1	10.4
20°-30°	395.8	15.3
30°-40°	455.1	17.6
40°-50°	441.4	17.1
50°-60°	369.5	14.3
60°-70°	266.2	10.3
70°-80°	162.7	6.3
80°-90°	79.0	3.1
90°-100°	31.3	1.2
100°-110°	11.3	0.4
110°-120°	3.9	0.2
120°-130°	1.6	0.1
130°-140°	0.2	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°	758.4	29.4
0°-40°	1213.5	47.0
0°-60°	2024.4	78.4
0°-90°	2532.3	98.1
90°-120°	46.5	1.8
90°-150°	48.4	1.9
90°-180°	48.0	1.9
0°-180°	2580.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	986	1004	994	996	1002	94
15°	943	957	949	953	960	265
25°	851	865	862	858	864	392
35°	725	736	730	722	722	454
45°	581	587	577	560	551	448
55°	428	434	418	393	380	384
65°	283	284	270	250	243	281
75°	153	153	156	151	148	163
85°	47	56	78	83	83	49
90°	4	28	51	59	61	5
95°	14	13	30	40	41	12
105°	14	6	7	13	16	15
115°	10	4	3	3	3	10
125°	6	3	1	0	0	5
135°	0	0	0	0	0	0
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°	1001.0	1001.0	1001.0	1001.0	1001.0
2.5°	992.0	1006.4	997.6	999.9	1001.0
5°	985.5	1003.5	994.0	995.5	1002.5
7.5°	976.4	993.0	984.6	986.5	994.5
10°	968.5	985.1	975.6	978.6	985.5
12.5°	958.3	973.8	966.5	969.5	976.4
15°	943.1	956.9	948.7	953.1	960.0
17.5°	920.4	935.4	926.7	929.1	936.0
20°	903.5	917.3	912.0	912.1	919.0
22.5°	883.1	898.0	893.9	890.7	898.7
25°	851.2	865.0	862.5	858.4	863.9
27.5°	819.5	829.7	824.9	820.7	824.9
30°	794.6	807.1	798.9	794.7	798.9
32.5°	767.5	779.9	771.7	766.4	768.3
35°	725.3	736.4	729.6	722.5	722.5
37.5°	685.5	692.6	688.0	676.1	673.0
40°	656.0	664.3	657.5	643.2	639.1
42.5°	625.5	633.8	625.8	610.4	604.0
45°	581.1	586.6	576.9	559.7	551.4
47.5°	535.3	541.1	527.7	508.8	498.8
50°	504.8	511.7	494.9	474.8	463.8
52.5°	475.4	480.1	464.3	440.9	431.0
55°	428.4	433.9	418.5	392.8	380.3
57.5°	384.6	389.8	371.6	347.0	337.4
60°	356.3	360.4	342.2	316.5	306.8
62.5°	324.6	328.8	311.6	289.3	279.7
65°	282.8	284.2	270.1	250.1	243.2
67.5°	243.5	243.5	231.6	216.8	211.2
70°	216.3	216.3	207.8	196.4	190.9
72.5°	191.4	190.3	185.2	177.2	172.8
75°	152.7	152.7	155.5	151.2	148.5
77.5°	118.8	116.6	128.7	128.1	126.7
80°	96.1	96.1	111.7	114.5	113.1
82.5°	75.8	78.0	98.1	102.1	100.7
85°	46.7	56.3	77.8	83.4	83.4
87.5°	21.2	38.1	61.1	68.4	68.7
90°	4.2	27.7	50.9	59.4	60.8
92.5°	8.8	21.2	41.9	50.4	52.9
95°	14.1	12.8	29.7	39.6	41.0
97.5°	17.0	8.4	21.5	29.7	31.4
100°	17.0	7.3	17.0	24.1	26.9
102.5°	15.8	6.2	12.4	19.5	21.2
105°	14.1	5.8	7.1	12.8	15.6
107.5°	12.4	4.4	4.0	7.9	9.3
110°	11.3	4.4	2.8	5.7	7.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	11.3	4.4	2.8	3.4	4.8
115°	9.9	4.4	2.8	2.8	2.8
117.5°	8.2	4.3	2.5	1.1	1.1
120°	7.1	4.3	1.4	0.0	0.0
122.5°	7.1	3.2	1.4	0.0	0.0
125°	5.7	2.9	1.4	0.0	0.0
127.5°	4.0	2.9	1.4	0.0	0.0
130°	2.8	2.8	1.4	0.0	0.0
132.5°	0.6	0.6	0.3	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)