

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: P644359

Luminaire Tested: CRQ4DIP-SR4F0-50D25U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644359  
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-SR4F0-50D25U935-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 250 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

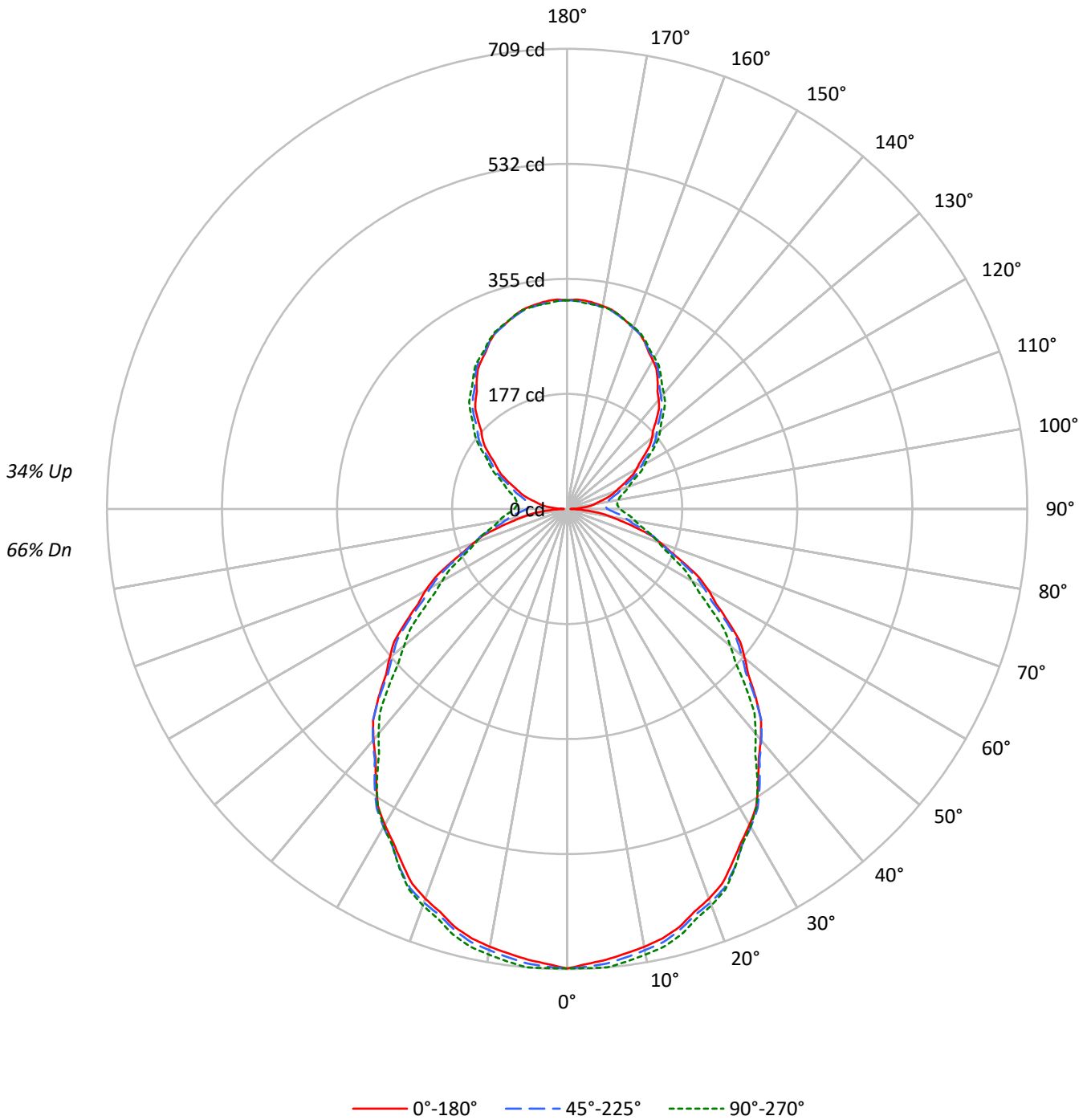
Lumens per Lamp: N/A  
Luminaire Lumens: 2775.1 lumens  
Efficiency: N/A  
Efficacy: 122.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Direct

Input Watts (W): 22.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66																				
1	101	96	92	88	95	91	87	83	80	77	75	70	68	66	62	60	59	54																				
2	92	84	77	72	86	79	73	68	70	66	62	62	58	55	54	52	49	45																				
3	84	74	66	60	78	70	63	57	62	57	52	55	51	47	48	45	42	39																				
4	77	66	57	51	72	62	55	49	55	49	45	49	44	40	43	39	36	33																				
5	71	59	50	44	66	55	48	42	50	43	39	44	39	35	39	35	32	29																				
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25																				
7	60	48	39	34	57	45	38	32	41	34	30	36	31	27	32	28	25	23																				
8	56	43	35	30	53	41	34	29	37	31	27	33	28	25	30	26	23	20																				
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	23	20	18																				
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17																				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11431	11431	11431
5°	11215	10093	9780
10°	11068	8984	8448
15°	10906	8045	7390
20°	10656	7218	6463
25°	10323	6442	5632
30°	9997	5699	4889
35°	9554	5016	4196
40°	9141	4386	3557
45°	8663	3770	2968
50°	8157	3199	2435
55°	7622	2691	1981
60°	7111	2213	1609
65°	6482	1786	1312
70°	5877	1429	1085
75°	5139	1151	922
80°	4294	938	803
85°	3131	799	723

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8663 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.8	2.4
10°-20°	189.7	6.8
20°-30°	280.0	10.1
30°-40°	322.1	11.6
40°-50°	312.5	11.3
50°-60°	262.5	9.5
60°-70°	192.8	6.9
70°-80°	125.9	4.5
80°-90°	76.8	2.8
90°-100°	60.4	2.2
100°-110°	78.0	2.8
110°-120°	108.8	3.9
120°-130°	139.1	5.0
130°-140°	156.6	5.6
140°-150°	154.6	5.6
150°-160°	130.8	4.7
160°-170°	87.1	3.1
170°-180°	30.4	1.1
0°-30°	536.6	19.3
0°-40°	858.7	30.9
0°-60°	1433.7	51.7
0°-90°	1829.3	65.9
90°-120°	247.3	8.9
90°-150°	697.6	25.1
90°-180°	946.0	34.1
0°-180°	2775.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	697	710	703	704	709	66
15°	667	677	671	674	679	188
25°	602	612	610	607	611	277
35°	513	522	517	511	511	321
45°	411	416	408	396	390	317
55°	303	308	297	279	271	272
65°	200	203	194	185	182	199
75°	108	111	120	124	125	115
85°	33	48	77	90	93	35
90°	5	31	62	77	82	5
95°	25	31	59	74	78	24
105°	60	59	73	85	88	64
115°	101	102	110	116	118	100
125°	146	150	156	161	162	131
135°	195	199	203	208	210	150
145°	243	246	247	249	252	152
155°	283	285	284	284	286	130
165°	309	311	308	307	309	87
175°	322	324	320	318	318	31
180°	322	322	322	322	322	

TEST NUMBER: P644359

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	708.0	708.0	708.0	708.0	708.0
2.5°	701.6	711.8	705.9	707.2	708.0
5°	697.0	709.7	703.0	704.1	709.0
7.5°	690.6	702.6	696.7	697.7	703.4
10°	685.0	696.7	690.3	692.1	697.0
12.5°	677.8	689.3	683.7	685.7	690.6
15°	667.0	677.4	671.3	674.1	679.0
17.5°	651.0	661.9	655.7	657.1	662.0
20°	639.0	649.1	645.3	645.1	650.0
22.5°	624.6	635.5	632.5	629.9	635.6
25°	602.0	612.4	610.0	607.1	611.0
27.5°	579.6	588.0	583.8	580.5	583.4
30°	562.0	571.5	565.7	562.1	565.0
32.5°	542.8	552.5	546.5	542.0	543.4
35°	513.0	521.8	517.0	511.0	511.0
37.5°	484.8	491.2	486.9	478.2	476.0
40°	464.0	471.2	465.3	454.9	452.0
42.5°	442.4	449.6	443.2	431.7	427.2
45°	411.0	415.9	408.3	395.9	390.0
47.5°	378.6	384.0	373.7	359.8	352.8
50°	357.0	362.9	351.0	335.8	328.0
52.5°	336.2	340.8	329.2	312.1	305.3
55°	303.0	308.2	296.7	278.9	271.4
57.5°	272.0	277.1	263.9	248.5	242.4
60°	252.0	256.3	243.4	228.3	222.5
62.5°	229.6	234.1	222.3	210.5	205.2
65°	200.0	203.0	194.4	184.8	181.6
67.5°	172.2	174.2	168.5	163.7	161.8
70°	153.0	155.0	152.8	150.9	149.3
72.5°	135.4	136.9	138.7	139.5	138.7
75°	108.0	110.7	119.9	124.4	125.1
77.5°	84.0	86.0	103.9	111.7	113.5
80°	68.0	72.7	94.4	104.6	106.6
82.5°	53.6	60.9	87.0	98.8	100.8
85°	33.0	47.9	76.9	90.1	93.1
87.5°	15.5	37.2	68.1	82.6	86.1
90°	5.4	31.0	61.9	77.3	81.6
92.5°	13.2	30.0	59.9	75.0	79.0
95°	25.4	31.4	58.9	74.5	77.5
97.5°	36.2	36.7	61.0	75.1	78.1
100°	43.1	41.9	63.6	76.8	80.1
102.5°	49.9	47.9	66.9	79.6	82.7
105°	60.2	59.0	72.9	85.2	88.2
107.5°	71.7	70.8	81.9	92.9	95.2
110°	79.4	79.8	89.1	98.6	101.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	88.4	88.8	97.0	105.0	107.6
115°	100.9	102.3	109.9	116.4	118.1
117.5°	113.9	116.4	123.1	128.5	130.1
120°	123.5	126.2	132.1	137.3	138.6
122.5°	132.5	135.2	141.7	146.9	148.2
125°	146.4	150.1	156.4	161.2	162.5
127.5°	160.5	164.9	170.6	175.5	177.3
130°	170.7	175.0	179.9	185.1	187.1
132.5°	179.5	183.8	188.7	194.4	196.7
135°	194.6	199.0	202.8	208.0	210.3
137.5°	209.4	213.6	216.6	220.7	223.6
140°	219.5	223.2	225.4	229.2	231.8
142.5°	228.8	232.5	234.1	237.4	240.0
145°	242.8	245.8	247.2	249.0	251.6
147.5°	255.8	258.7	259.4	260.9	262.6
150°	264.3	266.9	267.0	267.7	269.4
152.5°	272.2	274.6	273.8	274.3	276.2
155°	283.4	285.1	283.7	284.1	285.8
157.5°	292.3	293.9	291.9	292.5	293.8
160°	297.7	299.4	297.1	297.4	298.8
162.5°	302.9	304.1	302.0	301.5	303.4
165°	309.3	310.7	308.3	307.3	309.3
167.5°	314.8	316.1	313.0	312.0	314.0
170°	317.5	318.9	315.5	314.2	316.2
172.5°	320.0	321.3	317.7	316.1	317.5
175°	322.3	323.7	319.6	318.2	318.2
177.5°	323.0	323.8	320.8	319.5	321.1
180°	321.6	321.6	321.6	321.6	321.6

(END OF REPORT)