

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: P644371

Luminaire Tested: CRQ4DIP-SR4F0-50D50U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644371
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-SR4F0-50D50U935-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

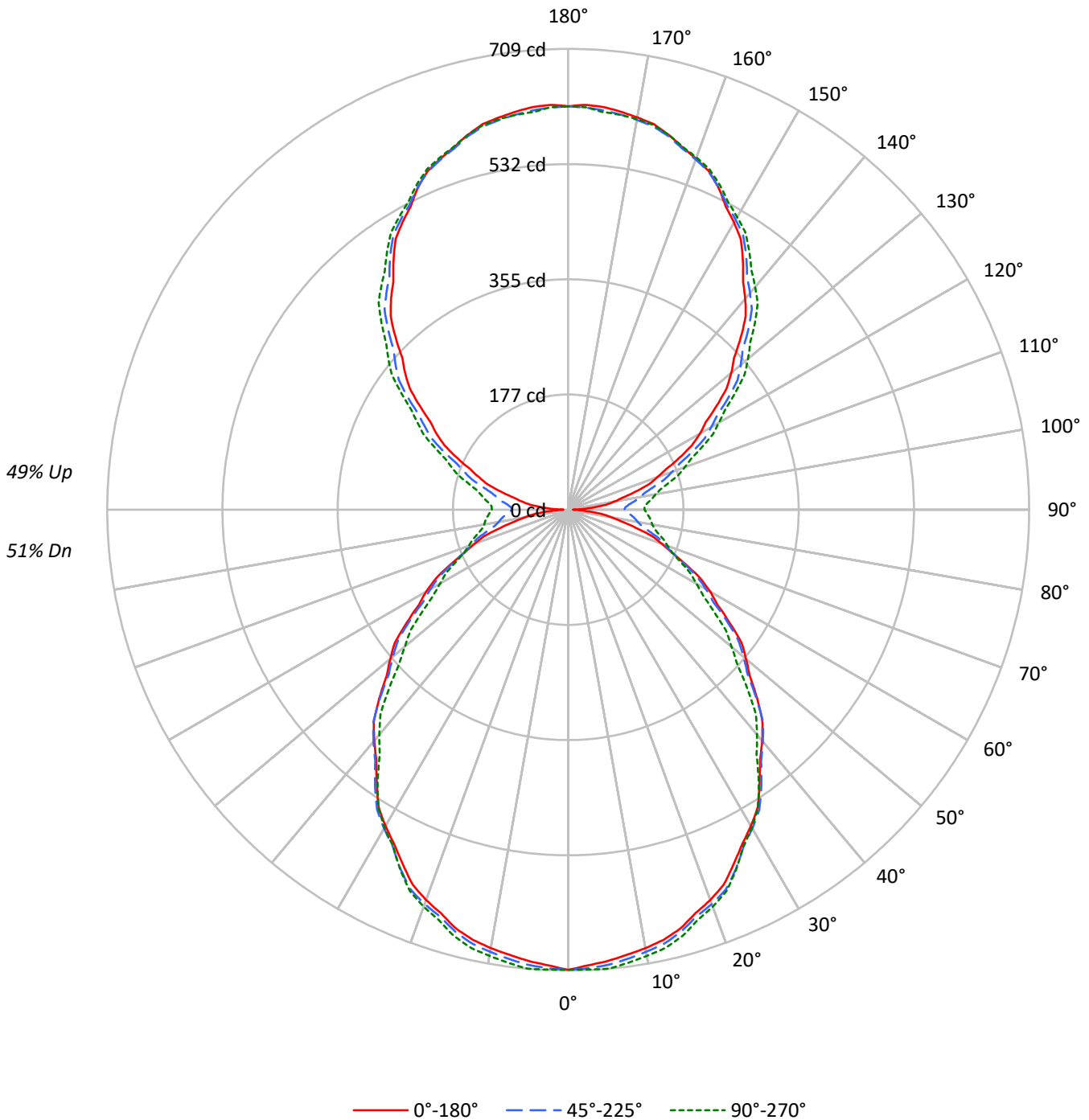
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3658.5 lumens
Efficiency: N/A
Efficacy: 126.6 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: General Diffuse

Input Watts (W): 28.9
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										
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51						51														
1	97	93	89	85	90	86	82	79	73	70	67	60	59	57	49	48	47	42						42														
2	89	81	74	69	81	75	69	65	63	59	56	53	50	47	43	41	39	35						35														
3	81	71	64	58	74	66	59	54	56	51	47	47	43	40	38	36	33	29						29														
4	74	63	55	49	68	58	51	46	50	44	40	42	38	34	34	31	29	25						25														
5	68	56	48	42	62	52	45	39	45	39	35	38	33	30	31	28	25	22						22														
6	63	50	42	36	58	47	40	34	40	34	30	34	30	26	28	25	22	19						19														
7	58	46	37	32	53	42	35	30	37	31	27	31	27	23	26	22	20	17						17														
8	54	41	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15						15														
9	50	38	30	25	46	35	28	24	31	25	21	26	22	19	22	19	16	14						14														
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13						13														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11431	11431	11431
5°	11215	10093	9780
10°	11068	8989	8448
15°	10906	8050	7390
20°	10656	7222	6463
25°	10323	6442	5632
30°	9997	5705	4889
35°	9554	5026	4196
40°	9141	4390	3557
45°	8663	3773	2968
50°	8157	3209	2435
55°	7622	2696	1997
60°	7111	2224	1646
65°	6482	1815	1376
70°	5877	1480	1183
75°	5139	1239	1061
80°	4294	1080	990
85°	3131	1009	970

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	1.8
10°-20°	189.7	5.2
20°-30°	280.2	7.7
30°-40°	322.4	8.8
40°-50°	312.8	8.6
50°-60°	263.6	7.2
60°-70°	197.1	5.4
70°-80°	136.1	3.7
80°-90°	96.2	2.6
90°-100°	96.0	2.6
100°-110°	143.2	3.9
110°-120°	207.4	5.7
120°-130°	267.4	7.3
130°-140°	302.0	8.3
140°-150°	298.4	8.2
150°-160°	252.4	6.9
160°-170°	168.0	4.6
170°-180°	58.8	1.6
0°-30°	536.7	14.7
0°-40°	859.1	23.5
0°-60°	1435.5	39.2
0°-90°	1864.9	51.0
90°-120°	446.6	12.2
90°-150°	1314.4	35.9
90°-180°	1794.0	49.0
0°-180°	3658.5	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	678	672	674	679	188
25°	602	613	610	607	611	277
35°	513	523	518	511	511	321
45°	411	417	409	396	390	317
55°	303	310	297	280	274	272
65°	200	205	198	192	190	199
75°	108	113	129	141	144	115
85°	33	55	97	119	125	35
90°	8	42	86	110	118	7
95°	40	52	94	118	123	39
105°	107	110	136	156	160	114
115°	188	195	210	223	226	187
125°	279	288	301	311	314	250
135°	376	384	391	401	406	290
145°	468	474	477	480	486	293
155°	547	550	548	548	552	251
165°	597	600	595	593	597	168
175°	622	625	617	614	614	59
180°	621	621	621	621	621	



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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	706.1	707.2	708.0
5°	697.0	709.7	703.0	704.1	709.0
7.5°	690.6	702.8	697.1	697.7	703.4
10°	685.0	696.7	690.7	692.1	697.0
12.5°	677.8	689.8	683.7	685.7	690.6
15°	667.0	678.1	671.7	674.1	679.0
17.5°	651.0	662.2	656.1	657.1	662.0
20°	639.0	649.4	645.7	645.1	650.0
22.5°	624.6	635.8	632.9	629.9	635.6
25°	602.0	613.1	610.0	607.1	611.0
27.5°	579.6	589.2	584.2	580.5	583.4
30°	562.0	572.1	566.3	562.1	565.0
32.5°	542.8	553.4	547.1	542.0	543.4
35°	513.0	522.8	518.0	511.0	511.0
37.5°	484.8	492.5	487.3	478.2	476.0
40°	464.0	472.4	465.7	454.9	452.0
42.5°	442.4	450.8	443.8	431.7	427.2
45°	411.0	416.8	408.7	395.9	390.0
47.5°	378.6	385.2	374.1	359.8	352.8
50°	357.0	363.8	352.0	335.8	328.0
52.5°	336.2	342.0	329.8	312.4	305.9
55°	303.0	309.5	297.3	279.8	273.6
57.5°	272.0	278.3	264.9	251.4	246.0
60°	252.0	257.5	244.6	232.5	227.5
62.5°	229.6	235.6	224.1	215.9	212.0
65°	200.0	204.8	197.6	192.1	190.5
67.5°	172.2	176.1	172.9	173.3	173.4
70°	153.0	156.9	158.2	162.1	162.7
72.5°	135.4	139.0	145.9	152.7	154.1
75°	108.0	113.2	129.1	140.7	143.9
77.5°	84.0	89.4	115.9	131.4	135.7
80°	68.0	77.0	108.7	126.6	131.4
82.5°	53.6	66.2	103.3	123.6	128.4
85°	33.0	55.3	97.2	119.1	124.9
87.5°	15.9	46.8	91.2	114.3	121.0
90°	7.6	41.6	86.1	110.0	117.5
92.5°	19.8	43.9	88.1	111.5	117.7
95°	39.7	52.2	94.1	117.7	122.6
97.5°	58.8	65.2	103.6	125.4	130.1
100°	72.0	76.1	111.5	132.4	137.0
102.5°	85.9	88.5	121.0	140.8	145.6
105°	106.9	110.0	136.1	156.0	159.9
107.5°	130.2	133.8	155.5	174.0	177.7
110°	145.7	151.1	170.0	186.6	190.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	163.1	168.5	185.3	200.3	204.5
115°	188.2	194.6	210.2	222.8	226.0
117.5°	214.4	221.7	235.9	247.3	250.4
120°	233.7	240.7	254.0	265.0	267.5
122.5°	251.1	258.9	272.5	283.4	286.0
125°	278.8	287.8	300.8	311.1	313.7
127.5°	307.2	316.4	328.4	338.8	342.1
130°	327.5	335.9	346.3	357.2	361.1
132.5°	346.0	354.3	363.9	375.2	379.6
135°	375.6	384.0	391.4	401.4	405.9
137.5°	404.2	412.3	418.0	425.9	431.6
140°	423.7	430.8	434.9	442.3	447.4
142.5°	441.6	448.7	451.8	458.1	463.2
145°	468.5	474.3	477.1	480.5	485.6
147.5°	493.7	499.4	500.5	503.5	506.7
150°	510.0	515.2	515.3	516.7	519.9
152.5°	525.3	530.0	528.5	529.4	533.1
155°	546.9	550.1	547.6	548.3	551.5
157.5°	564.1	567.3	563.3	564.5	567.1
160°	574.6	577.8	573.3	574.0	576.6
162.5°	584.6	586.8	582.8	581.9	585.5
165°	597.0	599.6	595.0	593.1	597.0
167.5°	607.6	610.1	604.1	602.1	606.0
170°	612.8	615.4	608.9	606.3	610.2
172.5°	617.6	620.1	613.1	610.0	612.8
175°	622.0	624.6	616.8	614.1	614.1
177.5°	623.4	624.9	619.1	616.6	619.7
180°	620.7	620.7	620.7	620.7	620.7

(END OF REPORT)