

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: P644323

Luminaire Tested: CRQ4DIP-SR4F0-50D100U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644323
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-SR4F0-50D100U935-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

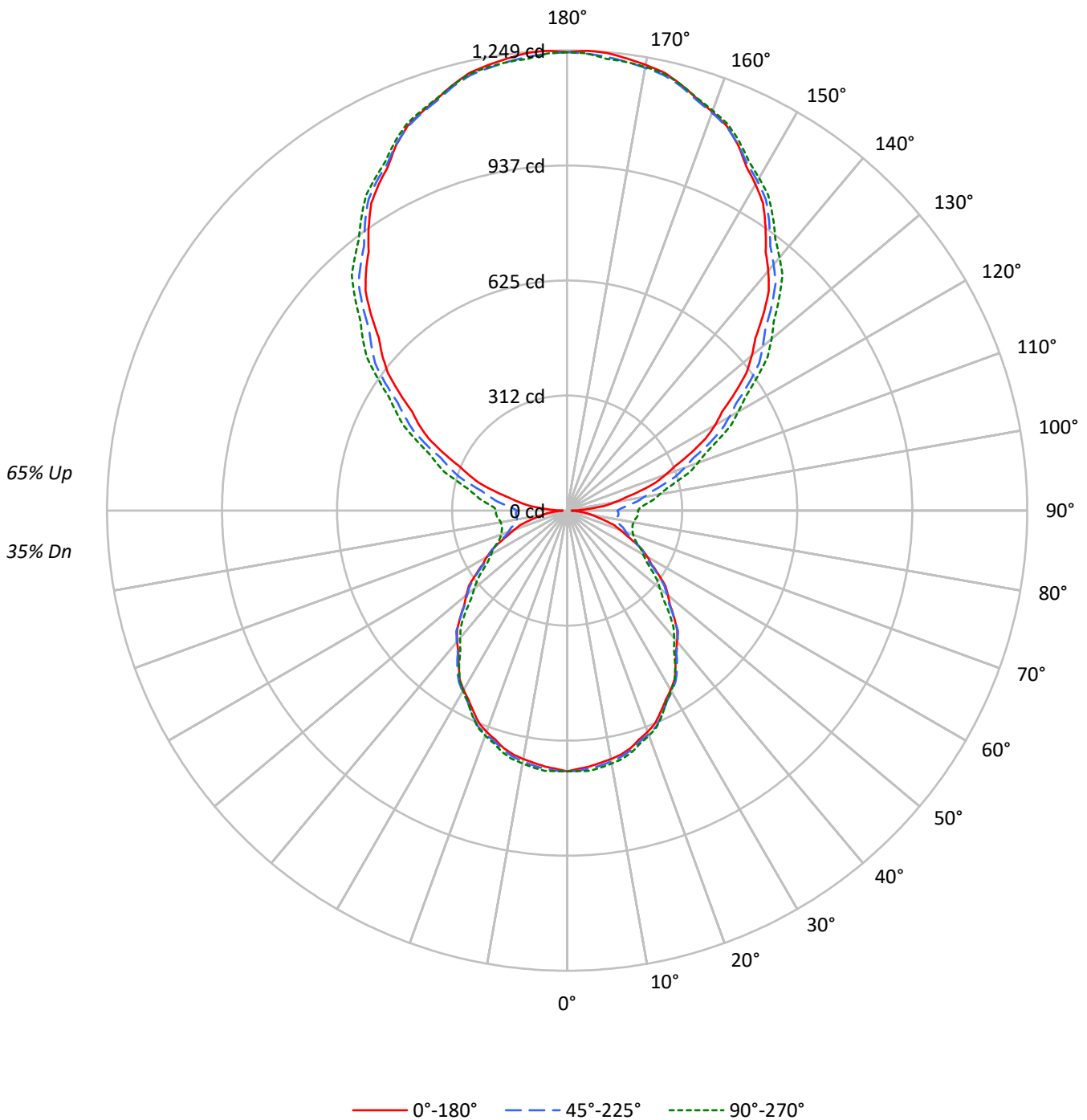
Lumens per Lamp: N/A
Luminaire Lumens: 5499.7 lumens
Efficiency: N/A
Efficacy: 127.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 43.3
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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35																				
1	94	89	85	81	84	81	77	74	65	62	60	50	48	47	36	35	34	28																				
2	85	78	71	66	77	70	65	60	56	53	49	44	41	39	32	30	29	23																				
3	78	68	61	55	70	62	55	50	50	45	41	39	35	33	28	26	24	20																				
4	71	60	52	46	64	55	48	43	44	39	35	34	31	28	25	23	21	17																				
5	65	54	46	40	58	49	42	36	39	34	30	31	27	24	23	20	18	15																				
6	60	48	40	34	54	44	37	32	35	30	26	28	24	21	21	18	16	13																				
7	55	43	35	30	50	39	32	28	32	27	23	25	21	19	19	16	14	11																				
8	51	39	32	26	46	36	29	24	29	24	20	23	19	17	17	15	13	10																				
9	48	36	28	23	43	33	26	22	27	22	18	21	17	15	16	13	12	9																				
10	44	33	26	21	40	30	24	19	25	20	16	20	16	13	15	12	10	8																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11431	11431	11431
5°	11215	10093	9780
10°	11068	8997	8448
15°	10906	8057	7390
20°	10656	7229	6463
25°	10323	6442	5632
30°	9997	5718	4889
35°	9554	5045	4196
40°	9141	4395	3557
45°	8663	3779	2968
50°	8157	3227	2435
55°	7622	2708	2031
60°	7111	2249	1722
65°	6482	1876	1510
70°	5877	1585	1385
75°	5139	1424	1348
80°	4294	1376	1379
85°	3131	1449	1484

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°	66.9	1.2
10°-20°	189.8	3.5
20°-30°	280.4	5.1
30°-40°	322.9	5.9
40°-50°	313.5	5.7
50°-60°	265.8	4.8
60°-70°	205.9	3.7
70°-80°	157.1	2.9
80°-90°	136.7	2.5
90°-100°	170.2	3.1
100°-110°	278.9	5.1
110°-120°	413.0	7.5
120°-130°	534.8	9.7
130°-140°	605.3	11.0
140°-150°	598.1	10.9
150°-160°	505.9	9.2
160°-170°	336.8	6.1
170°-180°	117.8	2.1
0°-30°	537.1	9.8
0°-40°	860.0	15.6
0°-60°	1439.3	26.2
0°-90°	1939.0	35.3
90°-120°	862.1	15.7
90°-150°	2600.3	47.3
90°-180°	3561.0	64.7
0°-180°	5499.7	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	679	672	674	679	188
25°	602	614	610	607	611	277
35°	513	525	520	511	511	321
45°	411	419	409	396	390	317
55°	303	312	299	282	278	272
65°	200	209	204	207	209	199
75°	108	118	148	174	183	115
85°	33	71	140	180	191	35
90°	12	64	136	178	192	10
95°	69	96	168	208	216	70
105°	204	216	268	304	310	218
115°	370	387	419	445	451	368
125°	555	575	602	624	629	497
135°	753	770	784	804	814	580
145°	939	951	956	963	973	587
155°	1096	1103	1098	1099	1106	503
165°	1197	1202	1193	1189	1197	337
175°	1247	1252	1236	1231	1231	118
180°	1244	1244	1244	1244	1244	

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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	706.7	707.2	708.0
5°	697.0	709.7	703.0	704.1	709.0
7.5°	690.6	703.4	697.7	697.7	703.4
10°	685.0	696.7	691.3	692.1	697.0
12.5°	677.8	690.8	683.9	685.7	690.6
15°	667.0	679.4	672.3	674.1	679.0
17.5°	651.0	662.9	656.7	657.1	662.0
20°	639.0	650.1	646.3	645.1	650.0
22.5°	624.6	636.5	633.5	629.9	635.6
25°	602.0	614.4	610.0	607.1	611.0
27.5°	579.6	591.5	585.0	580.5	583.4
30°	562.0	573.4	567.6	562.1	565.0
32.5°	542.8	555.2	548.4	542.0	543.4
35°	513.0	524.7	520.0	511.0	511.0
37.5°	484.8	495.0	487.9	478.2	476.0
40°	464.0	475.0	466.3	454.9	452.0
42.5°	442.4	453.4	445.0	431.7	427.2
45°	411.0	418.8	409.3	395.9	390.0
47.5°	378.6	387.6	375.0	359.8	352.8
50°	357.0	365.8	354.0	335.8	328.0
52.5°	336.2	344.4	331.3	312.9	306.9
55°	303.0	312.1	298.6	281.9	278.2
57.5°	272.0	280.9	267.0	257.4	253.4
60°	252.0	260.1	247.3	241.1	238.1
62.5°	229.6	238.7	227.8	227.2	226.3
65°	200.0	208.7	204.2	207.4	209.0
67.5°	172.2	179.9	182.0	193.4	197.5
70°	153.0	160.7	169.5	185.3	190.5
72.5°	135.4	143.4	160.8	180.2	186.1
75°	108.0	118.3	148.3	174.5	182.9
77.5°	84.0	96.4	140.9	172.4	182.1
80°	68.0	86.1	138.4	172.4	183.0
82.5°	53.6	77.4	137.3	175.2	185.8
85°	33.0	70.8	139.5	179.5	191.1
87.5°	16.8	66.7	139.4	180.5	193.6
90°	12.2	63.7	136.4	178.4	192.2
92.5°	33.4	72.9	146.9	187.7	198.3
95°	69.4	95.6	167.6	207.8	216.5
97.5°	105.8	124.8	192.4	230.1	238.5
100°	132.2	147.3	211.4	248.3	255.4
102.5°	161.0	173.0	233.6	268.4	276.8
105°	204.2	216.4	267.8	303.7	309.5
107.5°	252.1	265.0	309.0	343.1	349.5
110°	284.0	299.8	338.8	370.0	377.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	318.9	334.7	369.4	399.1	406.5
115°	370.2	387.0	419.4	444.6	451.1
117.5°	424.0	441.4	470.9	494.9	501.1
120°	463.3	479.4	508.2	531.1	536.2
122.5°	498.2	516.6	545.2	568.0	573.2
125°	554.8	574.8	601.9	623.5	628.7
127.5°	613.0	632.1	657.2	679.0	685.7
130°	654.5	671.2	693.1	716.0	723.8
132.5°	693.0	709.8	729.3	752.0	760.8
135°	752.8	769.6	784.5	804.5	813.6
137.5°	810.2	826.4	837.9	853.7	865.1
140°	849.2	863.5	871.7	886.5	896.8
142.5°	885.2	899.4	905.5	918.2	928.5
145°	939.1	950.7	956.2	963.1	973.4
147.5°	989.5	1000.9	1003.2	1009.2	1015.7
150°	1022.3	1032.6	1032.8	1035.6	1042.1
152.5°	1052.9	1062.2	1059.2	1061.0	1068.5
155°	1096.2	1102.7	1097.5	1099.0	1105.5
157.5°	1130.6	1137.0	1129.0	1131.5	1136.6
160°	1151.7	1158.2	1149.1	1150.5	1155.7
162.5°	1171.8	1176.2	1168.1	1166.4	1173.6
165°	1196.6	1201.8	1192.6	1188.9	1196.6
167.5°	1217.7	1222.9	1210.9	1206.8	1214.6
170°	1228.3	1233.5	1220.4	1215.3	1223.0
172.5°	1237.8	1243.0	1228.8	1222.6	1228.3
175°	1246.8	1252.0	1236.2	1230.9	1230.9
177.5°	1249.4	1252.5	1241.0	1235.8	1242.0
180°	1244.2	1244.2	1244.2	1244.2	1244.2

(END OF REPORT)