

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: P644216

Luminaire Tested: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644216
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

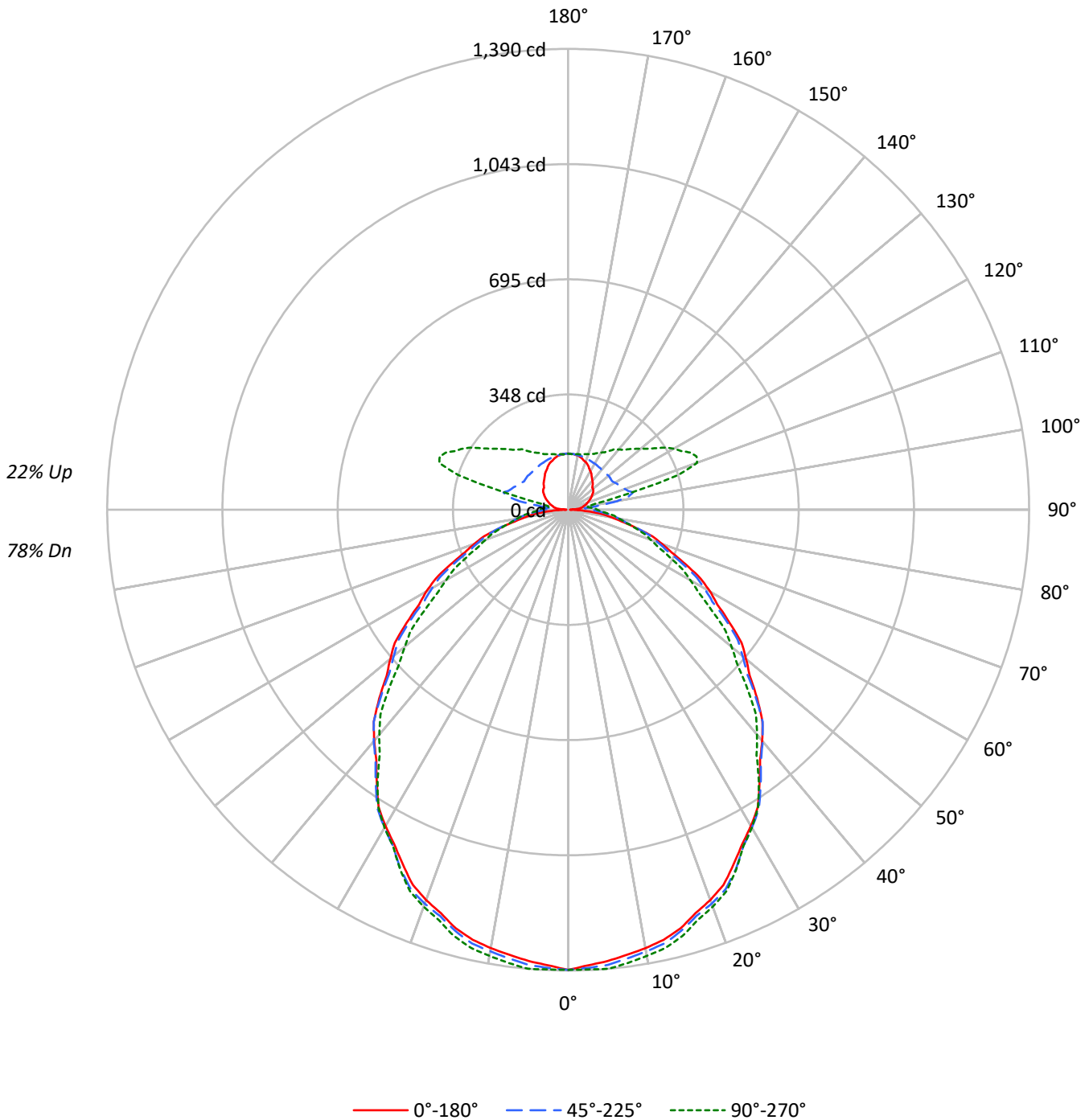
Lumens per Lamp: N/A
Luminaire Lumens: 4486.9 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 38.2
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

TEST NUMBER: P644216

CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644216

CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW

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	114	114	114	114	109	109	109	109	99	99	99	90	90	90	82	82	82	78																				
1	104	99	95	91	99	95	91	88	87	84	81	79	77	75	72	70	69	65																				
2	95	87	80	75	90	83	77	72	76	71	67	70	66	63	64	61	58	55																				
3	86	76	69	63	82	73	66	61	67	62	57	62	57	53	57	53	50	47																				
4	79	68	60	53	75	65	58	52	60	54	49	55	50	46	51	46	43	40																				
5	73	61	52	46	69	58	51	45	54	47	42	50	44	40	46	41	38	35																				
6	67	55	46	40	64	53	45	39	49	42	37	45	39	35	42	37	33	31																				
7	63	50	41	36	60	48	40	35	44	38	33	41	36	31	38	33	30	27																				
8	58	45	37	32	56	44	36	31	41	34	30	38	32	28	35	30	27	25																				
9	54	42	34	28	52	40	33	28	37	31	27	35	29	25	32	28	24	22																				
10	51	38	31	26	49	37	30	25	35	28	24	32	27	23	30	25	22	20																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22410	22410	22410
5°	21987	19787	19174
10°	21698	17605	16563
15°	21380	15766	14488
20°	20890	14143	12671
25°	20239	12629	11042
30°	19599	11160	9584
35°	18730	9815	8226
40°	17921	8592	6973
45°	16984	7385	5820
50°	15992	6255	4774
55°	14942	5263	3850
60°	13940	4313	3077
65°	12709	3440	2436
70°	11524	2695	1924
75°	10074	2071	1517
80°	8417	1540	1181
85°	6139	1120	898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16984 cd/sqm



TEST NUMBER: P644216

CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.0	2.9
10°-20°	371.8	8.3
20°-30°	548.8	12.2
30°-40°	631.0	14.1
40°-50°	612.1	13.6
50°-60°	512.4	11.4
60°-70°	369.2	8.2
70°-80°	225.6	5.0
80°-90°	110.0	2.5
90°-100°	64.2	1.4
100°-110°	163.8	3.7
110°-120°	206.6	4.6
120°-130°	165.9	3.7
130°-140°	131.9	2.9
140°-150°	103.8	2.3
150°-160°	75.9	1.7
160°-170°	47.1	1.1
170°-180°	16.1	0.4
0°-30°	1051.6	23.4
0°-40°	1682.5	37.5
0°-60°	2807.0	62.6
0°-90°	3511.7	78.3
90°-120°	434.5	9.7
90°-150°	836.1	18.6
90°-180°	975.0	21.7
0°-180°	4486.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1366	1391	1378	1380	1390	130
15°	1308	1327	1316	1322	1331	368
25°	1180	1199	1196	1190	1198	544
35°	1006	1021	1012	1002	1002	630
45°	806	813	800	776	765	621
55°	594	602	580	545	527	533
65°	392	394	374	347	337	390
75°	212	212	216	210	206	226
85°	65	78	108	116	116	68
90°	6	40	73	86	88	8
95°	28	34	50	65	68	26
105°	53	59	202	264	184	56
115°	72	77	170	349	407	71
125°	92	99	158	273	323	81
135°	104	116	157	225	258	81
145°	123	134	158	196	217	77
155°	145	150	162	178	186	66
165°	160	163	166	170	173	45
175°	169	170	169	168	167	16
180°	169	169	169	169	169	

TEST NUMBER: P644216

CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1388.0	1388.0	1388.0	1388.0	1388.0
2.5°	1375.5	1395.4	1383.3	1386.5	1388.0
5°	1366.5	1391.4	1378.2	1380.4	1390.0
7.5°	1353.9	1376.9	1365.3	1367.9	1379.0
10°	1342.9	1365.9	1352.7	1356.9	1366.5
12.5°	1328.8	1350.3	1340.2	1344.3	1353.9
15°	1307.6	1326.8	1315.5	1321.6	1331.2
17.5°	1276.3	1297.0	1284.9	1288.3	1297.8
20°	1252.7	1271.9	1264.5	1264.7	1274.3
22.5°	1224.5	1245.2	1239.4	1235.0	1246.1
25°	1180.2	1199.4	1195.9	1190.2	1197.9
27.5°	1136.3	1150.5	1143.7	1138.0	1143.7
30°	1101.8	1119.0	1107.7	1101.9	1107.7
32.5°	1064.1	1081.4	1070.0	1062.6	1065.3
35°	1005.7	1021.1	1011.6	1001.8	1001.8
37.5°	950.4	960.4	954.0	937.4	933.2
40°	909.7	921.2	911.6	891.9	886.1
42.5°	867.3	878.8	867.7	846.3	837.5
45°	805.8	813.4	799.9	776.1	764.6
47.5°	742.2	750.3	731.6	705.5	691.7
50°	699.9	709.5	686.2	658.4	643.0
52.5°	659.1	665.6	643.8	611.4	597.6
55°	594.0	601.7	580.3	544.6	527.4
57.5°	533.2	540.5	515.2	481.2	467.8
60°	494.0	499.8	474.4	438.8	425.4
62.5°	450.1	455.9	432.1	401.2	387.8
65°	392.1	394.0	374.5	346.8	337.2
67.5°	337.6	337.6	321.1	300.6	292.9
70°	300.0	300.0	288.2	272.3	264.7
72.5°	265.4	263.9	256.8	245.7	239.6
75°	211.7	211.7	215.7	209.7	205.8
77.5°	164.7	161.6	178.4	177.6	175.7
80°	133.3	133.3	154.9	158.8	156.8
82.5°	105.1	108.1	136.1	141.5	139.6
85°	64.7	78.1	107.8	115.7	115.7
87.5°	29.4	53.0	85.1	95.5	95.9
90°	5.9	39.5	72.7	85.6	87.5
92.5°	14.7	33.0	62.7	76.5	80.8
95°	28.1	33.5	49.7	64.6	68.5
97.5°	38.6	41.9	92.3	59.7	59.5
100°	43.7	48.0	149.0	70.3	61.7
102.5°	47.3	52.3	186.9	124.6	82.8
105°	52.6	58.7	202.2	263.6	184.2
107.5°	57.9	60.1	189.2	368.8	348.1
110°	61.4	64.3	182.5	383.8	413.8



TEST NUMBER: P644216

CATALOG NUMBER: CRQ4DIP-SR4F0-100D25U935-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	66.5	69.4	177.4	370.1	419.2
115°	72.2	77.0	169.8	348.7	406.9
117.5°	77.7	84.6	167.5	324.0	383.9
120°	82.1	89.7	162.5	305.5	367.9
122.5°	86.4	93.3	158.2	290.9	348.3
125°	91.8	99.4	158.2	273.3	323.2
127.5°	95.6	105.8	158.5	252.9	302.2
130°	97.5	110.0	159.3	239.2	286.0
132.5°	98.6	111.1	157.7	233.1	271.5
135°	104.2	115.6	157.4	225.1	258.4
137.5°	109.5	121.8	157.4	216.3	244.7
140°	113.8	125.2	157.4	211.1	237.1
142.5°	118.0	128.6	158.2	205.1	229.4
145°	123.3	133.7	158.4	196.1	216.9
147.5°	129.7	138.9	159.7	189.6	205.6
150°	134.0	142.3	160.5	185.3	198.8
152.5°	138.2	145.7	160.5	181.8	192.9
155°	144.6	149.8	161.6	177.7	186.1
157.5°	149.7	154.7	162.9	175.1	181.2
160°	153.1	157.3	163.7	173.4	178.6
162.5°	155.7	159.8	164.6	172.5	176.1
165°	160.5	162.6	165.9	170.2	173.3
167.5°	163.3	165.2	166.9	169.1	171.0
170°	165.9	166.9	166.9	169.1	170.1
172.5°	166.7	168.6	167.8	168.2	169.3
175°	169.0	170.1	169.0	168.0	166.9
177.5°	169.0	169.9	169.0	169.0	168.2
180°	169.0	169.0	169.0	169.0	169.0

(END OF REPORT)