

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: P644373

Luminaire Tested: CRQ4DIP-SR4F0-50D50U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644373
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-SR4F0-50D50U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

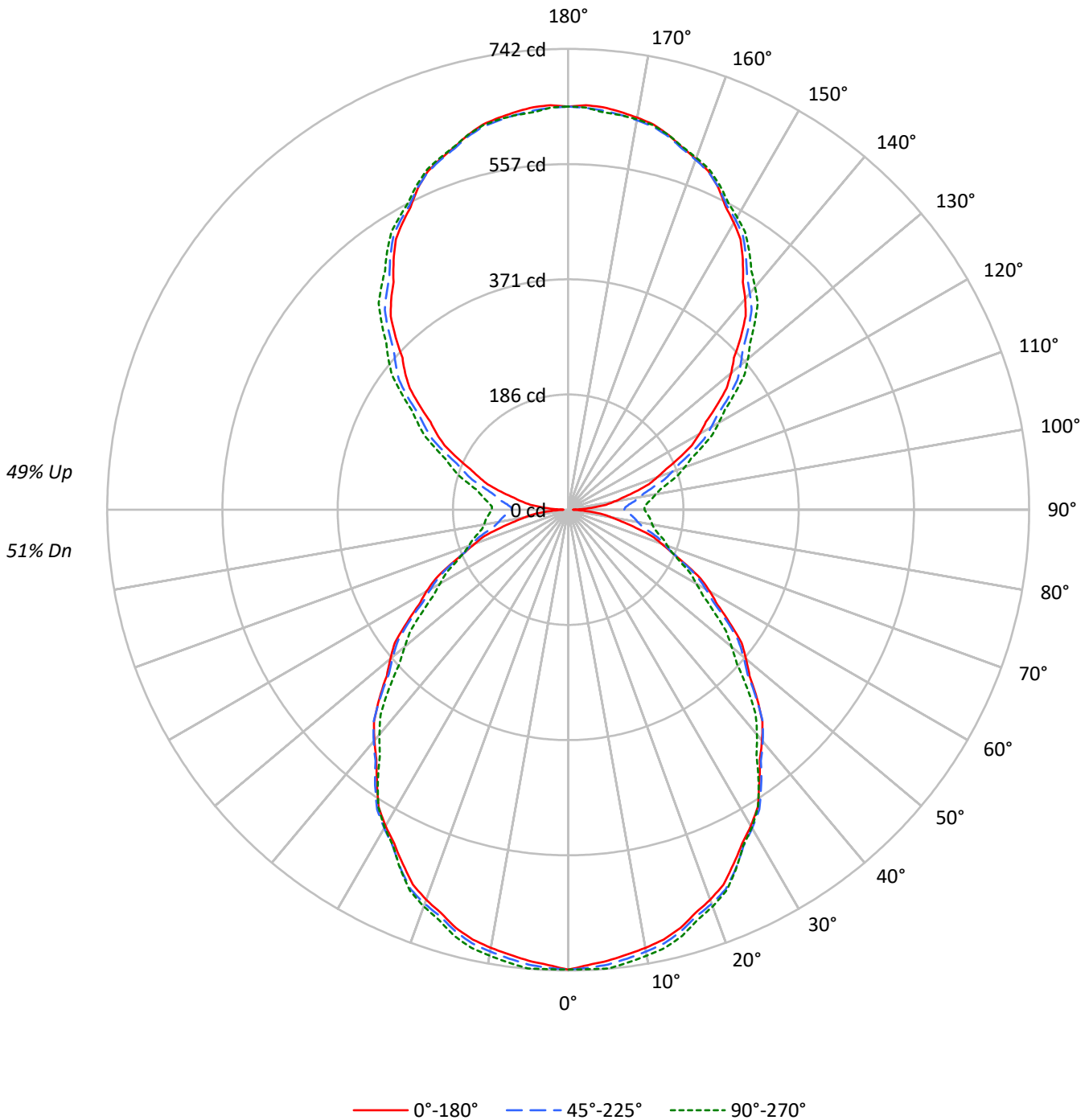
Lumens per Lamp: N/A
Luminaire Lumens: 3826.3 lumens
Efficiency: N/A
Efficacy: 132.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

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

TEST NUMBER: P644373

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U940-FLLFLL-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644373

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U940-FLLFLL-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	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																												
1	97	93	89	85	90	86	82	79	73	70	67	60	59	57	49	48	47	42																												
2	89	81	74	69	81	75	69	65	63	59	56	53	50	47	43	41	39	35																												
3	81	71	64	58	74	66	59	54	56	51	47	47	43	40	38	36	33	29																												
4	74	63	55	49	68	58	51	46	50	44	40	42	38	34	34	31	29	25																												
5	68	56	48	42	62	52	45	39	45	39	35	38	33	30	31	28	25	22																												
6	63	50	42	36	58	47	40	34	40	34	30	34	30	26	28	25	22	19																												
7	58	46	37	32	53	42	35	30	37	31	27	31	27	23	26	22	20	17																												
8	54	41	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15																												
9	50	38	30	25	46	35	28	24	31	25	21	26	22	19	22	19	16	14																												
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9400	8836
15°	11406	8419	7728
20°	11145	7553	6760
25°	10797	6738	5890
30°	10456	5967	5113
35°	9992	5256	4388
40°	9560	4590	3720
45°	9059	3946	3105
50°	8532	3355	2546
55°	7972	2820	2089
60°	7438	2327	1722
65°	6781	1898	1439
70°	6146	1548	1236
75°	5377	1296	1109
80°	4489	1129	1035
85°	3273	1055	1014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



TEST NUMBER: P644373

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U940-FLLFLL-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	1.8
10°-20°	198.4	5.2
20°-30°	293.0	7.7
30°-40°	337.1	8.8
40°-50°	327.2	8.6
50°-60°	275.7	7.2
60°-70°	206.1	5.4
70°-80°	142.3	3.7
80°-90°	100.6	2.6
90°-100°	100.4	2.6
100°-110°	149.7	3.9
110°-120°	217.0	5.7
120°-130°	279.7	7.3
130°-140°	315.9	8.3
140°-150°	312.1	8.2
150°-160°	264.0	6.9
160°-170°	175.7	4.6
170°-180°	61.5	1.6
0°-30°	561.3	14.7
0°-40°	898.5	23.5
0°-60°	1501.3	39.2
0°-90°	1950.4	51.0
90°-120°	467.1	12.2
90°-150°	1374.8	35.9
90°-180°	1876.0	49.0
0°-180°	3826.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	729	742	735	736	742	69
15°	698	709	702	705	710	196
25°	630	641	638	635	639	290
35°	536	547	542	534	534	336
45°	430	436	427	414	408	331
55°	317	324	311	293	286	284
65°	209	214	207	201	199	208
75°	113	118	135	147	150	121
85°	34	58	102	125	131	37
90°	8	44	90	115	123	7
95°	42	55	98	123	128	41
105°	112	115	142	163	167	119
115°	197	204	220	233	236	195
125°	292	301	315	325	328	261
135°	393	402	409	420	424	303
145°	490	496	499	502	508	306
155°	572	575	573	574	577	263
165°	624	627	622	620	624	176
175°	651	653	645	642	642	62
180°	649	649	649	649	649	



TEST NUMBER: P644373

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U940-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.5	740.5	740.5	740.5	740.5
2.5°	733.8	744.4	738.5	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	735.1	729.0	729.7	735.6
10°	716.4	728.7	722.3	723.8	729.0
12.5°	708.9	721.4	715.1	717.1	722.3
15°	697.6	709.2	702.5	705.0	710.1
17.5°	680.8	692.6	686.1	687.2	692.4
20°	668.3	679.2	675.3	674.7	679.8
22.5°	653.2	665.0	661.9	658.8	664.7
25°	629.6	641.2	638.0	634.9	639.0
27.5°	606.2	616.2	611.0	607.1	610.1
30°	587.8	598.3	592.3	587.8	590.9
32.5°	567.7	578.8	572.2	566.9	568.3
35°	536.5	546.7	541.7	534.4	534.4
37.5°	507.0	515.0	509.6	500.1	497.8
40°	485.3	494.1	487.0	475.8	472.7
42.5°	462.7	471.5	464.1	451.5	446.8
45°	429.8	436.0	427.4	414.0	407.9
47.5°	396.0	402.8	391.3	376.3	369.0
50°	373.4	380.5	368.1	351.2	343.0
52.5°	351.6	357.7	345.0	326.7	319.9
55°	316.9	323.7	310.9	292.7	286.2
57.5°	284.5	291.1	277.1	262.9	257.3
60°	263.6	269.3	255.9	243.1	238.0
62.5°	240.1	246.4	234.4	225.8	221.8
65°	209.2	214.2	206.6	200.9	199.2
67.5°	180.1	184.1	180.8	181.2	181.3
70°	160.0	164.1	165.5	169.5	170.1
72.5°	141.6	145.4	152.6	159.7	161.2
75°	113.0	118.3	135.0	147.1	150.5
77.5°	87.9	93.5	121.2	137.4	141.9
80°	71.1	80.6	113.6	132.4	137.4
82.5°	56.1	69.3	108.0	129.2	134.3
85°	34.5	57.8	101.6	124.6	130.6
87.5°	16.7	48.9	95.4	119.6	126.5
90°	8.0	43.5	90.0	115.1	122.8
92.5°	20.7	45.9	92.2	116.6	123.1
95°	41.5	54.6	98.5	123.1	128.2
97.5°	61.5	68.2	108.4	131.1	136.1
100°	75.3	79.6	116.6	138.5	143.2
102.5°	89.9	92.5	126.5	147.3	152.3
105°	111.8	115.1	142.4	163.2	167.3
107.5°	136.1	139.9	162.7	182.0	185.8
110°	152.4	158.1	177.8	195.2	199.6



TEST NUMBER: P644373

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U940-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	170.6	176.3	193.8	209.5	213.9
115°	196.8	203.5	219.9	233.0	236.4
117.5°	224.3	231.9	246.7	258.7	261.9
120°	244.4	251.8	265.7	277.1	279.8
122.5°	262.6	270.8	285.0	296.4	299.1
125°	291.6	301.0	314.6	325.3	328.0
127.5°	321.3	330.9	343.4	354.3	357.8
130°	342.5	351.3	362.2	373.6	377.7
132.5°	361.8	370.6	380.6	392.4	397.0
135°	392.8	401.6	409.4	419.8	424.5
137.5°	422.7	431.2	437.2	445.5	451.4
140°	443.1	450.5	454.8	462.6	467.9
142.5°	461.9	469.3	472.5	479.1	484.5
145°	490.0	496.1	499.0	502.5	507.9
147.5°	516.3	522.3	523.5	526.6	530.0
150°	533.4	538.8	538.9	540.4	543.7
152.5°	549.4	554.3	552.7	553.6	557.5
155°	572.0	575.4	572.7	573.5	576.8
157.5°	589.9	593.3	589.1	590.4	593.1
160°	600.9	604.3	599.6	600.3	603.0
162.5°	611.4	613.7	609.5	608.6	612.4
165°	624.4	627.1	622.3	620.3	624.4
167.5°	635.4	638.1	631.8	629.7	633.8
170°	640.9	643.6	636.8	634.1	638.2
172.5°	645.9	648.6	641.2	638.0	640.9
175°	650.6	653.3	645.1	642.3	642.3
177.5°	651.9	653.6	647.5	644.9	648.1
180°	649.2	649.2	649.2	649.2	649.2

(END OF REPORT)