

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: P644482

Luminaire Tested: CRQ4DP-SR4F0-75D940-FLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644482
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DP-SR4F0-75D940-FLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
DIRECT ONLY
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

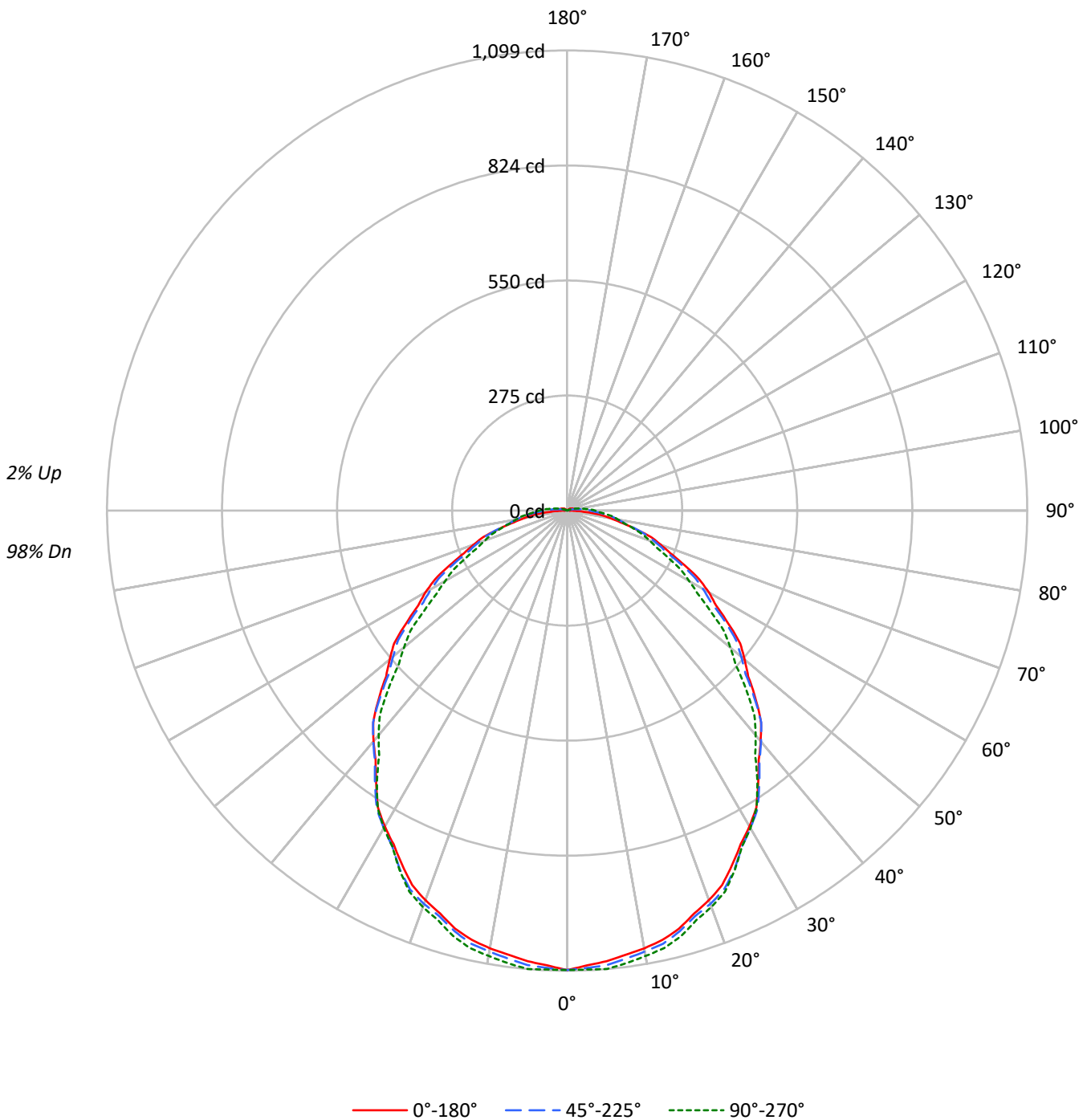
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2828.5 lumens
Efficiency: N/A
Efficacy: 129.7 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: 0.02')
CIE Type: Direct

Input Watts (W): 21.8
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

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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	100	98					98														
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	84	82					82														
2	99	91	84	78	96	88	82	77	85	79	75	81	77	73	78	74	71	71	69					69														
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	69	65	61	61	58					58														
4	83	71	62	56	80	70	62	55	67	60	54	64	58	53	62	57	53	53	50					50														
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	56	50	46	46	44					44														
6	71	58	49	43	69	57	48	42	55	47	42	53	46	41	51	45	41	41	39					39														
7	66	52	44	38	64	51	43	38	50	42	37	48	42	37	47	41	36	36	34					34														
8	61	48	40	34	60	47	39	34	46	38	33	44	38	33	43	37	33	33	31					31														
9	57	44	36	31	56	43	36	30	42	35	30	41	35	30	40	34	30	30	28					28														
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	27	25					25														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17715	17715	17715
5°	17496	17487	17577
10°	17384	17196	17252
15°	17248	16881	16908
20°	16975	16510	16411
25°	16571	16015	15766
30°	16178	15345	15023
35°	15602	14629	14125
40°	15077	13899	13114
45°	14452	13001	12001
50°	13793	12039	10831
55°	13102	11152	9665
60°	12475	10164	8620
65°	11683	9142	7703
70°	11004	8250	6994
75°	10205	7531	6507
80°	9465	6997	6230
85°	8835	6975	6238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14452 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.6	3.7
10°-20°	293.9	10.4
20°-30°	433.8	15.3
30°-40°	498.8	17.6
40°-50°	483.8	17.1
50°-60°	405.0	14.3
60°-70°	291.8	10.3
70°-80°	178.3	6.3
80°-90°	86.6	3.1
90°-100°	34.3	1.2
100°-110°	12.4	0.4
110°-120°	4.3	0.2
120°-130°	1.8	0.1
130°-140°	0.2	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	831.2	29.4
0°-40°	1330.0	47.0
0°-60°	2218.8	78.4
0°-90°	2775.5	98.1
90°-120°	51.0	1.8
90°-150°	53.0	1.9
90°-180°	53.0	1.9
0°-180°	2828.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1097	1097	1097	1097	1097	
5°	1080	1100	1089	1091	1099	102
15°	1034	1049	1040	1045	1052	291
25°	933	948	945	941	947	430
35°	795	807	800	792	792	498
45°	637	643	632	614	604	491
55°	470	476	459	430	417	421
65°	310	312	296	274	266	308
75°	167	167	170	166	163	179
85°	51	62	85	91	91	54
90°	5	30	56	65	67	6
95°	16	14	32	43	45	13
105°	16	6	8	14	17	16
115°	11	5	3	3	3	11
125°	6	3	2	0	0	5
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1097.2	1097.2	1097.2	1097.2	1097.2
2.5°	1087.3	1103.0	1093.5	1096.0	1097.2
5°	1080.1	1099.8	1089.4	1091.1	1098.7
7.5°	1070.2	1088.4	1079.2	1081.3	1090.0
10°	1061.5	1079.7	1069.3	1072.6	1080.1
12.5°	1050.4	1067.3	1059.4	1062.6	1070.2
15°	1033.6	1048.8	1039.8	1044.7	1052.2
17.5°	1008.8	1025.2	1015.7	1018.3	1025.9
20°	990.2	1005.4	999.5	999.7	1007.3
22.5°	967.9	984.3	979.7	976.2	985.0
25°	932.9	948.1	945.3	940.8	946.9
27.5°	898.2	909.4	904.1	899.5	904.1
30°	870.9	884.6	875.6	871.0	875.6
32.5°	841.2	854.8	845.8	840.0	842.1
35°	795.0	807.1	799.6	791.9	791.9
37.5°	751.3	759.2	754.1	741.0	737.6
40°	719.1	728.1	720.6	705.0	700.5
42.5°	685.6	694.7	685.9	669.0	662.0
45°	636.9	643.0	632.3	613.5	604.4
47.5°	586.7	593.1	578.3	557.6	546.7
50°	553.2	560.8	542.4	520.4	508.3
52.5°	521.0	526.2	508.9	483.3	472.3
55°	469.6	475.6	458.7	430.5	416.9
57.5°	421.5	427.3	407.3	380.4	369.8
60°	390.5	395.1	375.0	346.9	336.3
62.5°	355.8	360.4	341.6	317.1	306.5
65°	309.9	311.5	296.0	274.1	266.5
67.5°	266.9	266.9	253.8	237.6	231.5
70°	237.1	237.1	227.8	215.3	209.2
72.5°	209.8	208.6	203.0	194.2	189.4
75°	167.4	167.4	170.5	165.7	162.7
77.5°	130.2	127.7	141.0	140.4	138.9
80°	105.4	105.4	122.4	125.5	124.0
82.5°	83.1	85.5	107.5	111.9	110.3
85°	51.1	61.7	85.2	91.4	91.4
87.5°	23.2	41.7	66.9	75.0	75.3
90°	4.6	30.4	55.8	65.1	66.6
92.5°	9.6	23.2	45.9	55.2	58.0
95°	15.5	14.0	32.5	43.4	44.9
97.5°	18.6	9.2	23.6	32.6	34.4
100°	18.6	8.0	18.6	26.4	29.4
102.5°	17.4	6.7	13.6	21.4	23.2
105°	15.5	6.4	7.7	14.0	17.0
107.5°	13.6	4.8	4.3	8.7	10.2
110°	12.4	4.8	3.1	6.2	7.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	12.4	4.8	3.1	3.8	5.3
115°	10.8	4.8	3.1	3.1	3.1
117.5°	9.0	4.7	2.8	1.2	1.2
120°	7.7	4.7	1.5	0.0	0.0
122.5°	7.7	3.5	1.5	0.0	0.0
125°	6.2	3.2	1.5	0.0	0.0
127.5°	4.3	3.1	1.5	0.0	0.0
130°	3.1	3.1	1.5	0.0	0.0
132.5°	0.6	0.6	0.3	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)