

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: P644479

Luminaire Tested: CRQ4DP-SR4F0-75D840-FLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644479
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-SR4F0-75D840-FLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
DIRECT ONLY
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

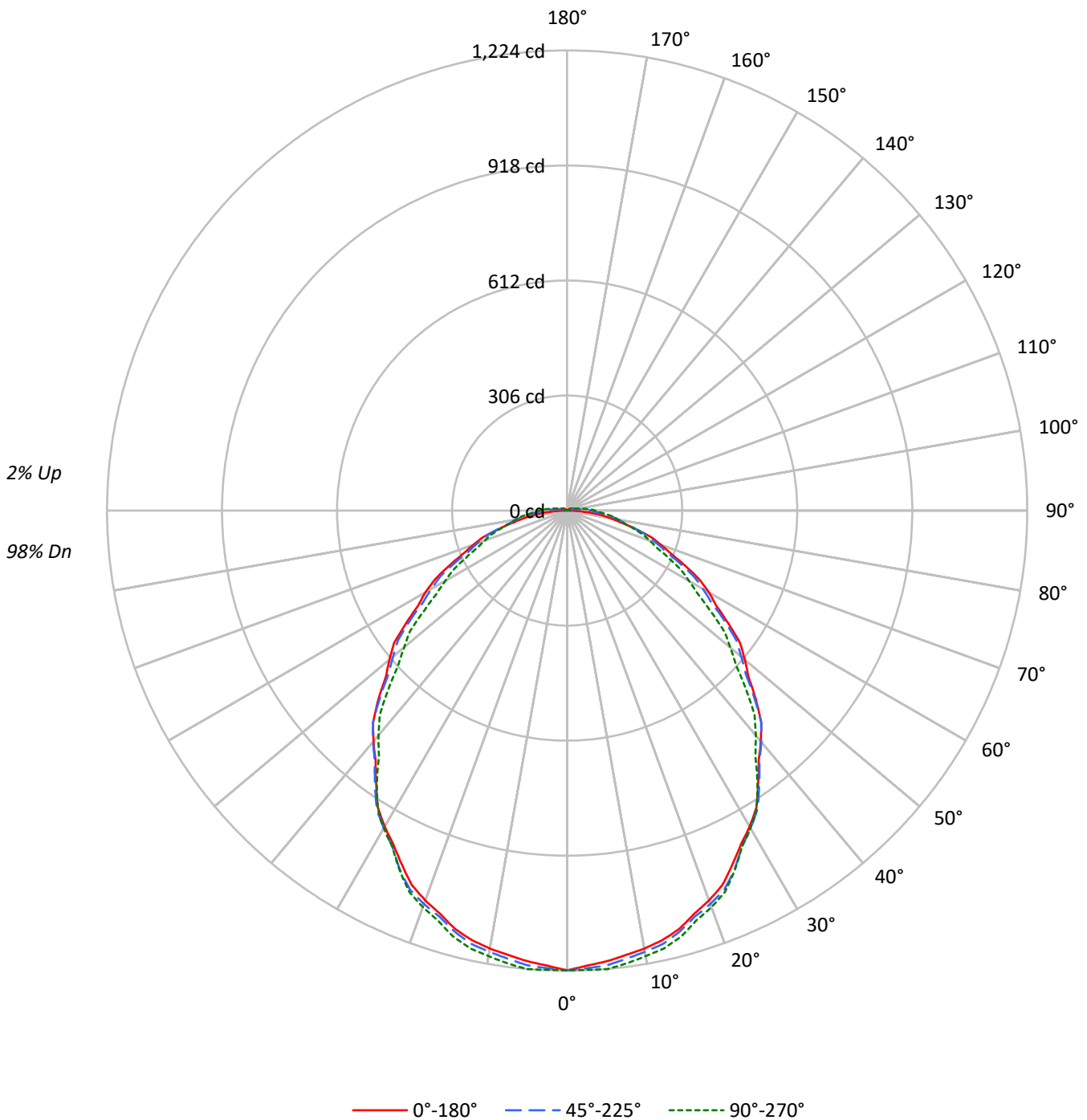
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3151.9 lumens
Efficiency: N/A
Efficacy: 144.6 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: 0.02')
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°	19740	19740	19740
5°	19497	19488	19586
10°	19372	19161	19224
15°	19221	18811	18842
20°	18916	18398	18287
25°	18467	17847	17568
30°	18029	17100	16741
35°	17385	16301	15739
40°	16799	15489	14611
45°	16104	14486	13373
50°	15371	13415	12070
55°	14597	12426	10769
60°	13903	11327	9604
65°	13021	10186	8585
70°	12262	9191	7793
75°	11369	8392	7251
80°	10542	7797	6938
85°	9855	7777	6954

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16104 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	3.7
10°-20°	327.5	10.4
20°-30°	483.4	15.3
30°-40°	555.8	17.6
40°-50°	539.1	17.1
50°-60°	451.3	14.3
60°-70°	325.2	10.3
70°-80°	198.7	6.3
80°-90°	96.5	3.1
90°-100°	38.2	1.2
100°-110°	13.8	0.4
110°-120°	4.8	0.2
120°-130°	2.0	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°	926.3	29.4
0°-40°	1482.0	47.0
0°-60°	2472.5	78.4
0°-90°	3092.8	98.1
90°-120°	56.9	1.8
90°-150°	59.1	1.9
90°-180°	59.0	1.9
0°-180°	3151.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1204	1226	1214	1216	1224	114
15°	1152	1169	1159	1164	1172	324
25°	1040	1056	1053	1048	1055	479
35°	886	899	891	882	882	555
45°	710	716	704	684	674	547
55°	523	530	511	480	464	469
65°	345	347	330	306	297	344
75°	186	186	190	185	181	199
85°	57	69	95	102	102	60
90°	5	34	62	73	74	6
95°	17	16	36	48	50	15
105°	17	7	9	16	19	18
115°	12	5	4	4	4	12
125°	7	4	2	0	0	6
135°	0	0	0	0	0	1
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°	1222.6	1222.6	1222.6	1222.6	1222.6
2.5°	1211.5	1229.1	1218.5	1221.2	1222.6
5°	1203.6	1225.5	1214.0	1215.9	1224.3
7.5°	1192.5	1212.8	1202.6	1204.9	1214.7
10°	1182.9	1203.1	1191.5	1195.2	1203.6
12.5°	1170.4	1189.4	1180.5	1184.1	1192.5
15°	1151.8	1168.7	1158.7	1164.1	1172.5
17.5°	1124.2	1142.4	1131.8	1134.7	1143.2
20°	1103.4	1120.3	1113.8	1114.0	1122.4
22.5°	1078.6	1096.8	1091.7	1087.8	1097.6
25°	1039.6	1056.4	1053.4	1048.3	1055.1
27.5°	1000.9	1013.4	1007.4	1002.4	1007.4
30°	970.5	985.7	975.7	970.6	975.7
32.5°	937.3	952.5	942.5	936.0	938.4
35°	885.9	899.4	891.0	882.4	882.4
37.5°	837.2	845.9	840.3	825.7	822.0
40°	801.2	811.4	803.0	785.6	780.5
42.5°	763.9	774.1	764.3	745.5	737.7
45°	709.7	716.5	704.5	683.6	673.5
47.5°	653.8	660.9	644.5	621.4	609.2
50°	616.5	624.9	604.4	579.9	566.4
52.5°	580.6	586.3	567.1	538.5	526.3
55°	523.2	530.0	511.1	479.7	464.5
57.5°	469.7	476.1	453.8	423.8	412.0
60°	435.2	440.2	417.9	386.5	374.7
62.5°	396.5	401.5	380.6	353.4	341.6
65°	345.4	347.1	329.8	305.5	297.0
67.5°	297.4	297.4	282.9	264.7	258.0
70°	264.2	264.2	253.8	239.9	233.1
72.5°	233.8	232.5	226.2	216.4	211.0
75°	186.5	186.5	190.0	184.7	181.3
77.5°	145.1	142.4	157.1	156.4	154.7
80°	117.4	117.4	136.4	139.8	138.1
82.5°	92.6	95.3	119.8	124.6	123.0
85°	57.0	68.8	95.0	101.9	101.9
87.5°	25.9	46.5	74.6	83.6	83.9
90°	5.2	33.9	62.2	72.6	74.3
92.5°	10.7	25.9	51.1	61.5	64.6
95°	17.3	15.6	36.3	48.4	50.1
97.5°	20.7	10.3	26.2	36.3	38.3
100°	20.7	8.9	20.7	29.4	32.8
102.5°	19.3	7.5	15.2	23.9	25.9
105°	17.3	7.1	8.6	15.6	19.0
107.5°	15.2	5.4	4.8	9.7	11.4
110°	13.8	5.4	3.5	6.9	8.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	13.8	5.4	3.5	4.2	5.9
115°	12.1	5.3	3.5	3.5	3.5
117.5°	10.0	5.3	3.1	1.4	1.4
120°	8.6	5.3	1.7	0.0	0.0
122.5°	8.6	3.9	1.7	0.0	0.0
125°	6.9	3.5	1.7	0.0	0.0
127.5°	4.8	3.5	1.7	0.0	0.0
130°	3.5	3.5	1.7	0.0	0.0
132.5°	0.7	0.7	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)