

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: P644179

Luminaire Tested: CRQ4DIP-SR4F0-100D100U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644179
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-SR4F0-100D100U935-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

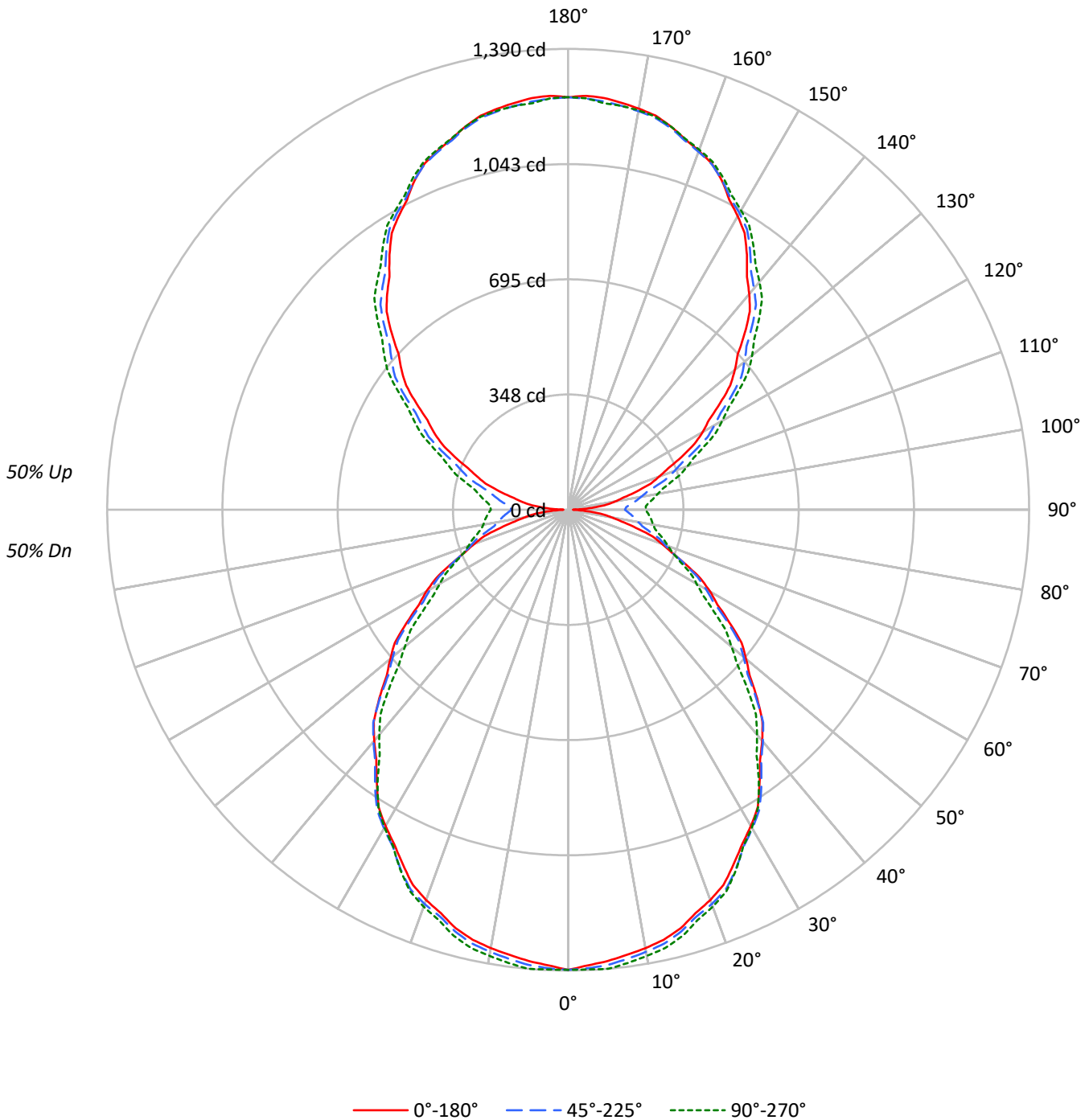
Lumens per Lamp: N/A
Luminaire Lumens: 7252.8 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 58.9
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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	57	57	57	50																				
1	97	93	88	85	89	86	82	79	72	70	67	60	58	57	49	48	46	41																				
2	88	81	74	69	81	75	69	64	63	59	56	53	50	47	43	41	39	34																				
3	81	71	63	57	74	66	59	54	56	51	47	47	43	40	38	35	33	29																				
4	74	63	55	49	68	58	51	46	50	44	40	42	37	34	34	31	29	25																				
5	68	56	48	42	62	52	45	39	44	39	34	37	33	30	31	28	25	22																				
6	62	50	42	36	57	47	39	34	40	34	30	34	29	26	28	25	22	19																				
7	58	45	37	32	53	42	35	30	36	31	26	31	26	23	26	22	20	17																				
8	54	41	33	28	49	38	31	27	33	28	24	28	24	21	24	20	18	15																				
9	50	38	30	25	46	35	28	24	30	25	21	26	22	18	22	18	16	14																				
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	13																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22410	22410	22410
5°	21987	19787	19174
10°	21698	17621	16563
15°	21380	15781	14488
20°	20890	14158	12671
25°	20239	12629	11042
30°	19599	11186	9584
35°	18730	9854	8226
40°	17921	8605	6973
45°	16984	7397	5820
50°	15992	6291	4774
55°	14942	5286	3917
60°	13940	4362	3231
65°	12709	3561	2703
70°	11524	2905	2327
75°	10074	2439	2092
80°	8417	2130	1958
85°	6139	1998	1923

MAXIMUM LUMINANCE 45°-90°:

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	1.8
10°-20°	372.0	5.1
20°-30°	549.3	7.6
30°-40°	632.0	8.7
40°-50°	613.4	8.5
50°-60°	516.8	7.1
60°-70°	386.8	5.3
70°-80°	267.7	3.7
80°-90°	190.4	2.6
90°-100°	191.5	2.6
100°-110°	286.6	4.0
110°-120°	415.7	5.7
120°-130°	535.9	7.4
130°-140°	605.4	8.3
140°-150°	598.1	8.2
150°-160°	505.9	7.0
160°-170°	336.8	4.6
170°-180°	117.8	1.6
0°-30°	1052.3	14.5
0°-40°	1684.3	23.2
0°-60°	2814.5	38.8
0°-90°	3659.3	50.5
90°-120°	893.7	12.3
90°-150°	2633.1	36.3
90°-180°	3594.0	49.6
0°-180°	7252.8	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	1329	1317	1322	1331	368
25°	1180	1202	1196	1190	1198	544
35°	1006	1025	1016	1002	1002	630
45°	806	817	801	776	765	621
55°	594	607	583	549	537	533
65°	392	402	388	377	374	390
75°	212	222	254	277	284	226
85°	65	109	192	236	248	69
90°	15	83	171	219	234	14
95°	79	104	188	235	244	78
105°	214	220	273	312	320	228
115°	377	390	421	446	453	374
125°	559	577	603	624	629	501
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°	1388.0	<i>1388.0</i>	1388.0	1388.0	1388.0
2.5°	<i>1375.5</i>	<i>1395.4</i>	<i>1384.4</i>	<i>1386.5</i>	<i>1388.0</i>
5°	1366.5	<i>1391.4</i>	1378.2	1380.4	1390.0
7.5°	1353.9	<i>1377.9</i>	1366.6	1367.9	1379.0
10°	1342.9	<i>1365.9</i>	1354.0	1356.9	1366.5
12.5°	1328.8	<i>1352.3</i>	1340.4	1344.3	1353.9
15°	1307.6	<i>1329.4</i>	1316.8	1321.6	1331.2
17.5°	1276.3	<i>1298.3</i>	1286.2	1288.3	1297.8
20°	1252.7	<i>1273.2</i>	1265.8	1264.7	1274.3
22.5°	1224.5	<i>1246.5</i>	1240.7	1235.0	1246.1
25°	1180.2	<i>1202.0</i>	1195.9	1190.2	1197.9
27.5°	1136.3	<i>1155.1</i>	1145.3	1138.0	1143.7
30°	1101.8	<i>1121.6</i>	1110.3	1101.9	1107.7
32.5°	1064.1	<i>1085.0</i>	1072.7	1062.6	1065.3
35°	1005.7	<i>1024.9</i>	1015.6	1001.8	1001.8
37.5°	950.4	<i>965.6</i>	955.3	937.4	933.2
40°	909.7	<i>926.3</i>	912.9	891.9	886.1
42.5°	867.3	<i>884.0</i>	870.1	846.3	837.5
45°	805.8	<i>817.3</i>	801.2	776.1	764.6
47.5°	742.2	<i>755.2</i>	733.5	705.5	691.7
50°	699.9	<i>713.3</i>	690.1	658.4	643.0
52.5°	659.1	<i>670.5</i>	646.7	612.4	599.7
55°	594.0	<i>606.9</i>	582.9	548.7	536.6
57.5°	533.2	<i>545.7</i>	519.4	493.1	482.6
60°	494.0	<i>505.0</i>	479.7	456.1	446.6
62.5°	450.1	<i>462.1</i>	439.5	423.8	416.3
65°	392.1	<i>401.8</i>	387.7	377.3	374.2
67.5°	337.6	<i>345.3</i>	339.4	340.6	341.0
70°	300.0	<i>307.7</i>	310.6	318.8	320.1
72.5°	265.4	<i>272.7</i>	286.7	300.6	303.5
75°	211.7	<i>222.1</i>	254.0	277.3	283.8
77.5°	164.7	<i>175.6</i>	228.3	259.4	268.1
80°	133.3	<i>151.4</i>	214.3	250.2	259.9
82.5°	105.1	<i>130.4</i>	203.9	244.5	254.2
85°	64.7	<i>109.1</i>	192.4	236.1	247.7
87.5°	31.3	<i>92.6</i>	180.8	227.0	240.3
90°	15.1	<i>82.6</i>	171.0	218.7	233.5
92.5°	39.4	<i>87.4</i>	175.3	222.0	234.2
95°	79.0	<i>104.2</i>	187.8	234.7	244.4
97.5°	117.3	<i>130.5</i>	207.0	250.3	259.9
100°	143.7	<i>152.2</i>	223.0	264.7	273.7
102.5°	171.7	<i>177.2</i>	242.0	281.6	291.2
105°	213.8	<i>220.3</i>	272.6	312.3	320.1
107.5°	260.5	<i>268.0</i>	311.6	348.5	355.8
110°	291.7	<i>302.8</i>	340.7	373.9	382.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	326.6	337.7	371.4	401.4	409.8
115°	376.9	389.9	421.3	446.5	453.0
117.5°	429.5	444.3	472.7	495.7	501.9
120°	468.1	482.3	509.1	531.1	536.2
122.5°	503.0	518.8	546.1	568.0	573.2
125°	558.6	576.7	602.9	623.5	628.7
127.5°	615.7	634.0	658.1	679.0	685.7
130°	656.4	673.2	694.0	716.0	723.8
132.5°	693.4	710.2	729.4	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)