

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: P644178

Luminaire Tested: CRQ4DIP-SR4F0-100D100U930-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644178
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-SR4F0-100D100U930-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

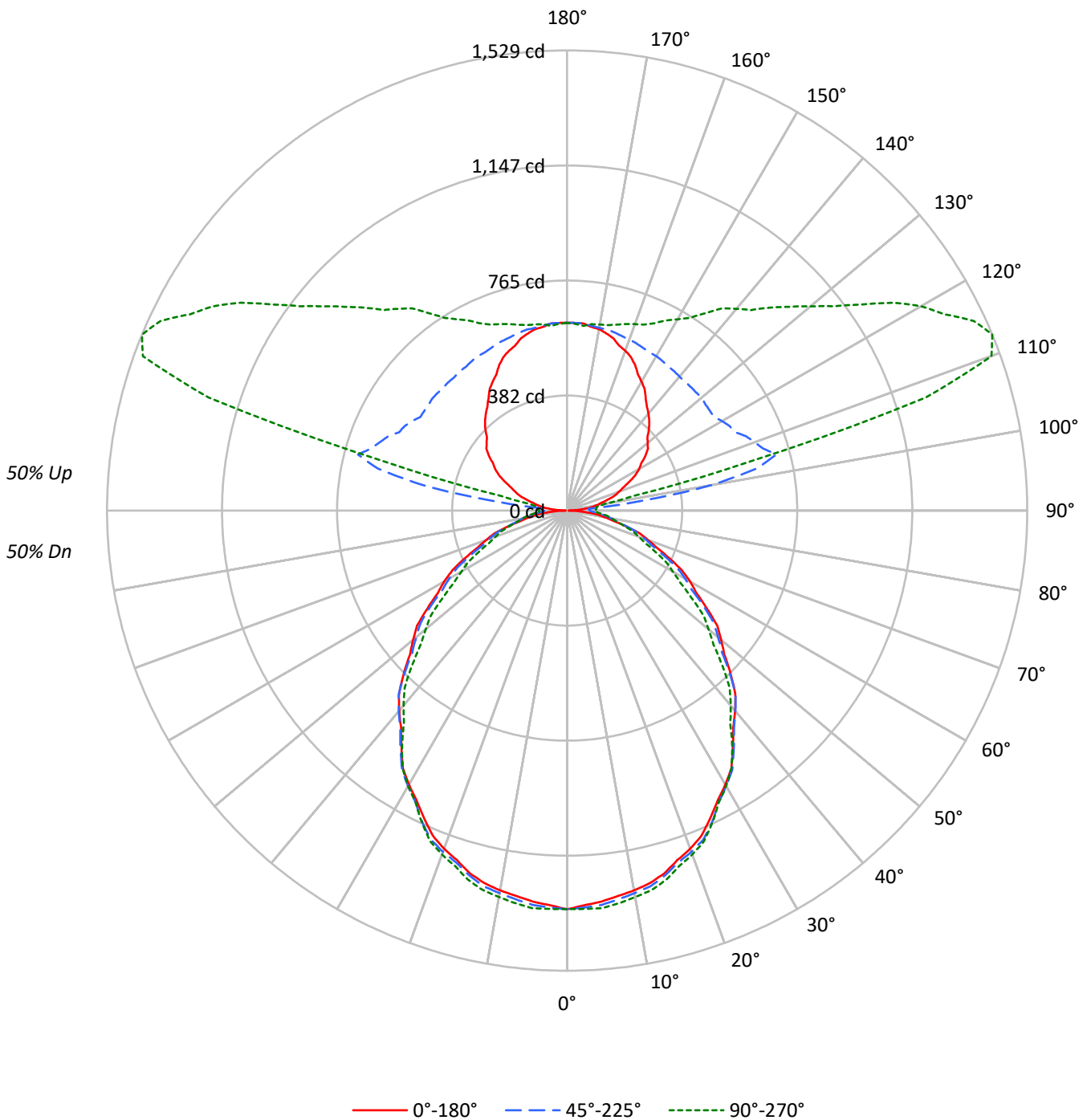
Lumens per Lamp: N/A
Luminaire Lumens: 6767.6 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

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					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	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	97	93	89	86	90	86	83	79	73	70	68	60	59	57	49	48	47	41				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35				
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	29				
4	74	63	56	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25				
5	68	57	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22				
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19				
7	58	46	38	32	53	43	36	31	37	31	27	31	27	23	26	22	20	17				
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	24	20	18	16				
9	50	38	31	26	46	36	29	24	31	25	21	26	22	19	22	19	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21385	21385	21385
5°	20980	18881	18295
10°	20704	16799	15804
15°	20402	15043	13824
20°	19935	13496	12092
25°	19313	12051	10536
30°	18700	10648	9145
35°	17873	9366	7849
40°	17099	8199	6655
45°	16206	7046	5553
50°	15259	5968	4555
55°	14258	5022	3673
60°	13302	4116	2936
65°	12125	3282	2324
70°	10994	2572	1835
75°	9612	1976	1448
80°	8031	1469	1128
85°	5854	1069	857

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	1.8
10°-20°	354.7	5.2
20°-30°	523.7	7.7
30°-40°	602.1	8.9
40°-50°	584.0	8.6
50°-60°	488.9	7.2
60°-70°	352.2	5.2
70°-80°	215.2	3.2
80°-90°	106.0	1.6
90°-100°	118.1	1.7
100°-110°	561.7	8.3
110°-120°	747.4	11.0
120°-130°	606.2	9.0
130°-140°	486.1	7.2
140°-150°	383.0	5.7
150°-160°	280.1	4.1
160°-170°	173.9	2.6
170°-180°	59.3	0.9
0°-30°	1003.4	14.8
0°-40°	1605.5	23.7
0°-60°	2678.5	39.6
0°-90°	3351.9	49.5
90°-120°	1427.1	21.1
90°-150°	2902.4	42.9
90°-180°	3416.0	50.5
0°-180°	6767.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1304	1328	1315	1317	1326	124
15°	1248	1266	1255	1261	1270	351
25°	1126	1144	1141	1136	1143	519
35°	960	974	965	956	956	601
45°	769	776	763	740	730	593
55°	567	574	554	520	503	508
65°	374	376	357	331	322	372
75°	202	202	206	200	196	216
85°	62	74	103	110	110	65
90°	6	40	75	90	92	8
95°	50	75	71	88	97	51
105°	140	195	720	924	621	148
115°	229	268	616	1276	1491	227
125°	318	356	579	1009	1193	282
135°	385	427	581	831	954	296
145°	455	494	585	724	800	286
155°	534	553	596	656	687	245
165°	593	600	612	628	640	166
175°	624	628	624	620	616	59
180°	624	624	624	624	624	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1324.5	1324.5	1324.5	1324.5	1324.5
2.5°	1312.5	1331.5	1320.0	1323.0	1324.5
5°	1303.9	1327.7	1315.1	1317.2	1326.3
7.5°	1291.9	1313.9	1302.8	1305.2	1315.9
10°	1281.4	1303.4	1290.8	1294.7	1303.9
12.5°	1268.0	1288.4	1278.8	1282.8	1291.9
15°	1247.8	1266.0	1255.2	1261.1	1270.2
17.5°	1217.8	1237.6	1226.1	1229.3	1238.4
20°	1195.4	1213.7	1206.6	1206.8	1216.0
22.5°	1168.4	1188.2	1182.7	1178.4	1189.0
25°	1126.2	1144.5	1141.1	1135.7	1143.0
27.5°	1084.3	1097.8	1091.4	1085.9	1091.4
30°	1051.3	1067.8	1056.9	1051.5	1056.9
32.5°	1015.4	1031.9	1021.0	1014.0	1016.5
35°	959.7	974.3	965.3	955.9	955.9
37.5°	906.9	916.4	910.3	894.5	890.5
40°	868.0	879.0	869.9	851.0	845.6
42.5°	827.6	838.6	828.0	807.6	799.2
45°	768.9	776.2	763.2	740.5	729.6
47.5°	708.2	715.9	698.1	673.2	660.0
50°	667.8	677.0	654.7	628.2	613.6
52.5°	628.9	635.1	614.3	583.4	570.2
55°	566.8	574.1	553.7	519.7	503.2
57.5°	508.8	515.8	491.6	459.2	446.3
60°	471.4	476.9	452.7	418.7	405.9
62.5°	429.5	435.0	412.3	382.8	370.0
65°	374.1	376.0	357.3	330.9	321.8
67.5°	322.1	322.1	306.4	286.8	279.5
70°	286.2	286.2	275.0	259.9	252.5
72.5°	253.3	251.8	245.1	234.5	228.6
75°	202.0	202.0	205.8	200.1	196.4
77.5°	157.1	154.2	170.2	169.4	167.6
80°	127.2	127.2	147.8	151.5	149.7
82.5°	100.3	103.2	129.8	135.0	133.2
85°	61.7	74.5	102.9	110.4	110.4
87.5°	28.1	51.1	82.4	92.9	93.3
90°	5.6	40.5	75.2	90.4	92.2
92.5°	21.0	41.3	72.6	91.1	97.4
95°	50.1	75.1	70.7	87.9	97.4
97.5°	78.2	122.9	259.2	107.4	100.4
100°	97.0	149.4	485.5	168.2	125.8
102.5°	114.3	169.8	642.8	385.6	225.1
105°	140.4	194.6	719.6	924.3	621.0
107.5°	166.4	204.9	683.3	1331.1	1249.3
110°	183.7	220.6	663.0	1395.1	1500.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	202.5	239.4	644.2	1352.9	1529.0
115°	228.9	267.7	615.9	1276.2	1491.0
117.5°	255.7	295.9	608.5	1191.6	1412.6
120°	276.2	314.8	594.4	1127.6	1357.8
122.5°	291.9	332.1	578.7	1073.8	1285.6
125°	317.5	356.0	578.7	1008.8	1193.0
127.5°	338.0	379.5	579.5	933.4	1115.3
130°	349.1	395.1	582.7	883.0	1055.6
132.5°	361.8	407.8	581.2	860.3	1002.2
135°	384.6	426.8	580.8	830.8	953.6
137.5°	404.2	449.5	580.8	798.2	903.4
140°	419.9	462.1	580.8	779.2	875.1
142.5°	435.6	474.7	583.9	757.1	846.8
145°	455.2	493.6	584.7	723.8	800.5
147.5°	478.8	512.5	589.4	699.9	758.9
150°	494.5	525.1	592.6	683.9	733.8
152.5°	510.1	537.8	592.6	671.2	711.9
155°	533.7	552.9	596.5	656.0	686.7
157.5°	552.5	570.9	601.2	646.4	668.7
160°	565.1	580.4	604.3	640.1	659.3
162.5°	574.5	589.9	607.5	636.8	649.9
165°	592.6	600.2	612.2	628.1	639.6
167.5°	602.8	609.7	616.1	624.1	631.0
170°	612.2	616.0	616.1	624.0	627.9
172.5°	615.3	622.2	619.2	620.9	624.7
175°	624.0	627.8	624.0	619.9	616.1
177.5°	624.0	627.0	624.0	623.9	620.8
180°	624.0	624.0	624.0	624.0	624.0

(END OF REPORT)