

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: P644606

Luminaire Tested: OMN4DIP-SR4F0-100D50U830-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644606
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-19)
Test Lab: INNOVATION CENTER
Issue Date: 2/16/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-100D50U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - FLAT FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

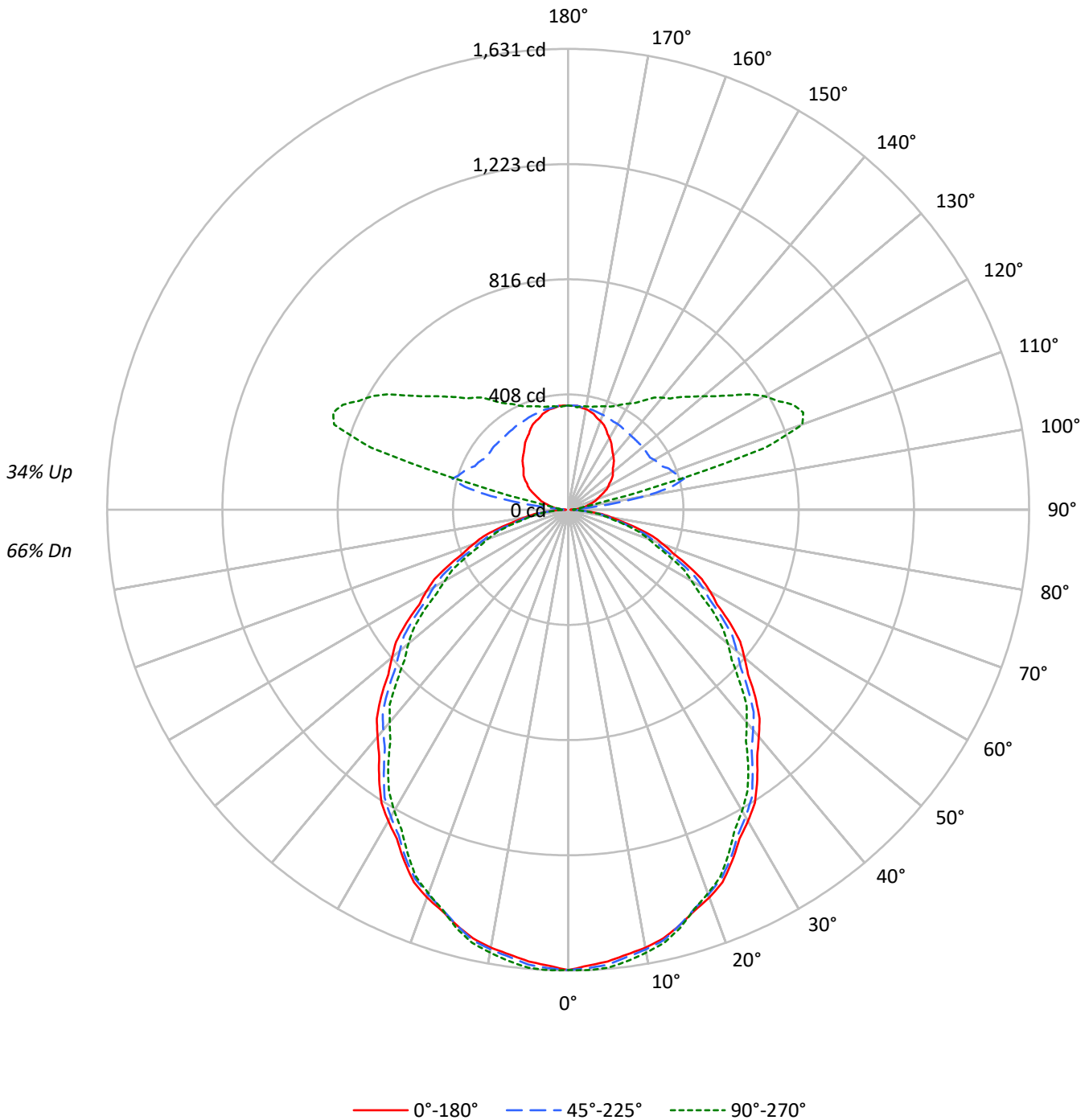
Lumens per Lamp: N/A
Luminaire Lumens: 5956.2 lumens
Efficiency: N/A
Efficacy: 133.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 44.5
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

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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	0
RCR																		
0	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66
1	102	97	93	90	95	92	88	85	81	79	76	72	70	68	63	62	60	56
2	93	85	79	73	87	80	75	70	71	67	63	63	60	57	56	53	51	47
3	85	75	67	61	79	71	64	59	63	58	53	56	52	48	49	46	44	40
4	78	66	58	52	73	63	56	50	56	50	46	50	45	42	44	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	38	46	39	35	41	36	32	36	32	29	27
7	61	48	40	35	57	46	39	33	42	35	31	37	32	28	33	29	26	24
8	57	44	36	31	53	42	35	30	38	32	28	34	29	25	31	27	23	21
9	53	40	33	28	50	39	31	27	35	29	25	32	27	23	28	24	21	19
10	50	37	30	25	47	36	29	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26305	26305	26305
5°	26010	26190	26370
10°	25802	25911	26093
15°	25454	25454	25603
20°	25098	24909	24831
25°	24444	24246	23931
30°	23720	23390	22935
35°	22980	22413	21888
40°	22099	21444	20698
45°	21359	20548	19536
50°	20434	19542	18540
55°	19654	18657	17534
60°	18755	17751	16249
65°	17784	16512	15244
70°	16848	15276	14233
75°	15764	13967	13275
80°	14431	12775	12162
85°	13542	11912	11078

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21359 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.3	2.6
10°-20°	430.1	7.2
20°-30°	625.3	10.5
30°-40°	711.3	11.9
40°-50°	693.5	11.6
50°-60°	592.0	9.9
60°-70°	430.2	7.2
70°-80°	243.3	4.1
80°-90°	75.7	1.3
90°-100°	54.8	0.9
100°-110°	328.4	5.5
110°-120°	442.0	7.4
120°-130°	358.9	6.0
130°-140°	287.4	4.8
140°-150°	226.4	3.8
150°-160°	165.6	2.8
160°-170°	102.8	1.7
170°-180°	35.1	0.6
0°-30°	1208.7	20.3
0°-40°	1920.0	32.2
0°-60°	3205.5	53.8
0°-90°	3954.8	66.4
90°-120°	825.2	13.9
90°-150°	1698.0	28.5
90°-180°	2001.0	33.6
0°-180°	5956.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1629	1629	1629	1629	1629	
5°	1605	1629	1616	1614	1627	152
15°	1523	1542	1523	1521	1532	429
25°	1372	1385	1361	1337	1343	631
35°	1166	1170	1137	1110	1110	728
45°	935	931	900	869	856	720
55°	698	696	663	632	623	623
65°	466	461	432	406	399	462
75°	253	244	224	215	213	268
85°	73	64	64	62	60	78
90°	9	13	18	18	18	10
95°	36	44	25	28	30	34
105°	83	117	424	539	355	88
115°	134	159	364	752	879	134
125°	188	213	343	596	705	166
135°	227	252	343	491	564	175
145°	269	292	346	428	473	169
155°	316	327	353	388	406	145
165°	350	355	362	371	378	98
175°	369	371	369	366	364	35
180°	369	369	369	369	369	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1629.2	1629.2	1629.2	1629.2	1629.2
2.5°	1615.0	1635.8	1623.9	1624.0	1631.0
5°	1604.8	1628.7	1615.9	1614.0	1627.0
7.5°	1588.0	1611.4	1596.4	1594.1	1611.0
10°	1573.8	1595.5	1580.4	1576.4	1591.5
12.5°	1554.3	1576.0	1560.9	1555.1	1570.2
15°	1522.8	1542.3	1522.8	1520.8	1531.7
17.5°	1487.3	1504.2	1481.6	1474.2	1482.5
20°	1460.7	1475.9	1449.7	1438.7	1445.2
22.5°	1427.1	1442.2	1414.2	1398.0	1406.2
25°	1372.1	1385.1	1361.0	1336.8	1343.3
27.5°	1313.1	1323.1	1298.9	1274.2	1276.3
30°	1272.3	1278.8	1254.6	1228.1	1230.2
32.5°	1229.8	1234.5	1208.5	1180.1	1180.6
35°	1165.9	1170.3	1137.1	1110.5	1110.5
37.5°	1098.1	1100.7	1065.3	1036.4	1033.4
40°	1048.5	1052.8	1017.4	988.5	982.0
42.5°	1002.4	1003.2	971.3	942.3	934.1
45°	935.4	931.1	899.9	868.6	855.6
47.5°	863.1	863.1	827.7	796.4	784.2
50°	813.5	813.5	778.0	746.8	738.1
52.5°	767.4	765.7	731.9	700.6	688.5
55°	698.2	696.1	662.8	631.5	622.9
57.5°	625.1	625.1	594.1	560.6	551.0
60°	580.8	580.8	549.7	516.2	503.2
62.5°	532.9	531.1	500.1	470.2	462.4
65°	465.5	461.2	432.2	405.5	399.0
67.5°	401.2	396.9	366.2	344.8	340.5
70°	356.9	352.5	323.6	305.8	301.5
72.5°	314.3	308.2	282.8	268.6	264.2
75°	252.7	244.0	223.9	215.0	212.8
77.5°	194.2	179.4	171.1	164.9	162.7
80°	155.2	142.2	137.4	132.9	130.8
82.5°	121.5	108.5	107.3	104.6	102.4
85°	73.1	64.5	64.3	62.0	59.8
87.5°	31.9	27.6	28.4	28.4	28.4
90°	8.9	13.3	17.9	18.0	18.0
92.5°	21.5	19.0	20.0	23.7	23.8
95°	36.3	43.5	25.2	27.6	30.0
97.5°	48.5	75.1	142.6	44.2	37.0
100°	59.6	91.7	278.2	82.8	55.6
102.5°	69.0	102.8	374.7	214.8	116.9
105°	83.0	117.2	424.3	538.6	354.9
107.5°	99.3	124.4	405.3	782.8	731.2
110°	108.6	133.7	394.2	822.5	881.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	119.8	144.8	383.0	799.3	900.1
115°	134.2	159.3	364.1	752.2	879.2
117.5°	151.4	176.0	359.9	703.6	834.2
120°	164.4	187.2	352.5	666.6	802.7
122.5°	171.9	198.2	343.2	634.8	760.0
125°	187.7	212.7	343.2	596.4	705.2
127.5°	198.9	226.1	343.7	551.8	659.3
130°	206.4	233.6	345.6	522.0	624.1
132.5°	213.9	241.1	343.8	508.6	592.5
135°	227.3	252.3	343.3	491.1	563.7
137.5°	238.9	265.7	343.3	471.9	534.0
140°	248.2	273.2	343.3	460.6	517.3
142.5°	257.5	280.6	345.2	447.6	500.6
145°	269.1	291.8	345.7	427.9	473.3
147.5°	283.0	303.0	348.4	413.7	448.7
150°	292.3	310.5	350.3	404.3	433.8
152.5°	301.6	317.9	350.3	396.8	420.8
155°	315.5	326.8	352.6	387.8	406.0
157.5°	326.6	337.5	355.4	382.2	395.3
160°	334.1	343.1	357.3	378.4	389.7
162.5°	339.6	348.7	359.1	376.5	384.2
165°	350.3	354.8	361.9	371.3	378.1
167.5°	356.3	360.4	364.2	369.0	373.0
170°	361.9	364.2	364.2	368.9	371.2
172.5°	363.8	367.8	366.1	367.1	369.3
175°	368.9	371.1	368.9	366.5	364.2
177.5°	368.9	370.7	368.9	368.8	367.0
180°	368.9	368.9	368.9	368.9	368.9

(END OF REPORT)