

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: P644687

Luminaire Tested: OMN4DIP-SR4F0-125D100U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644687
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-23)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-125D100U940-BBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

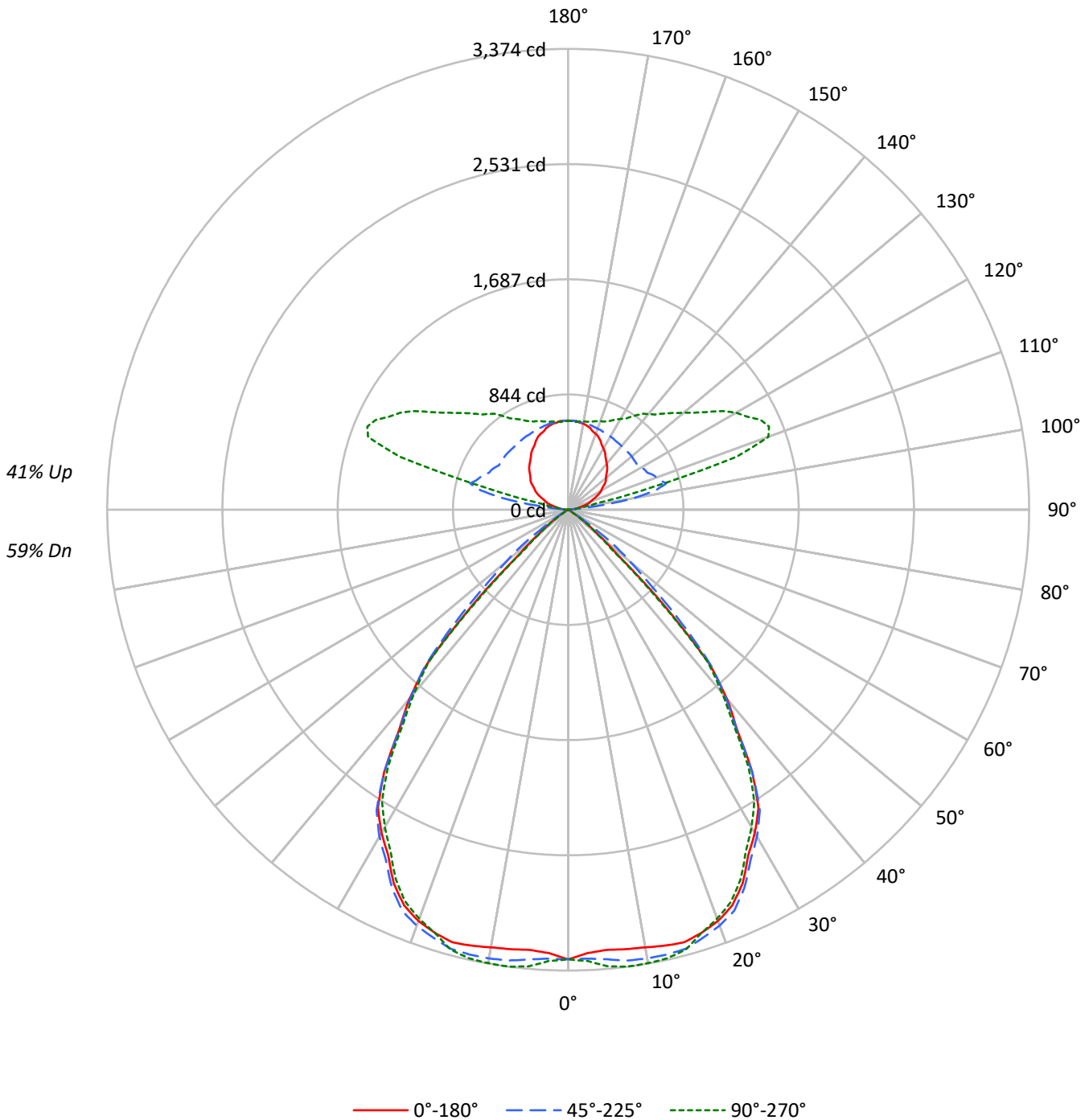
Lumens per Lamp: N/A
Luminaire Lumens: 8560.7 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 78.5
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										
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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59																				
1	102	99	96	93	95	92	90	87	81	79	77	70	69	68	61	60	59	54																				
2	95	89	84	80	89	84	79	76	74	71	68	65	63	61	56	55	53	50																				
3	88	81	75	70	83	76	71	67	67	64	60	60	57	54	52	50	49	45																				
4	82	73	66	61	77	69	63	59	62	57	54	55	52	49	48	46	44	41																				
5	77	67	60	54	72	63	57	52	57	52	48	51	47	44	45	42	40	37																				
6	71	61	54	49	67	58	51	47	52	47	43	47	43	40	42	39	37	34																				
7	67	56	49	44	63	53	47	42	48	43	39	43	39	36	39	36	33	31																				
8	62	51	44	40	59	49	43	38	44	39	36	40	36	33	36	33	31	29																				
9	58	47	41	36	55	45	39	35	41	36	33	37	33	30	34	31	28	26																				
10	55	44	37	33	52	42	36	32	38	33	30	35	31	28	32	28	26	24																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	42519	42519	42519
5°	41949	42848	43514
10°	42669	43748	44219
15°	43847	44501	44569
20°	44047	44542	43799
25°	43033	43509	42557
30°	40742	41201	40014
35°	37035	37035	36266
40°	30460	30157	29508
45°	18212	21405	17368
50°	5886	11928	5526
55°	2083	3993	2083
60°	132	1129	67
65°	79	79	0
70°	98	0	0
75°	0	0	0
80°	0	0	0
85°	385	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 21405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.7	3.7
10°-20°	937.1	10.9
20°-30°	1386.8	16.2
30°-40°	1433.4	16.7
40°-50°	834.0	9.7
50°-60°	141.3	1.7
60°-70°	5.6	0.1
70°-80°	0.8	0.0
80°-90°	2.2	0.0
90°-100°	80.2	0.9
100°-110°	571.3	6.7
110°-120°	775.6	9.1
120°-130°	631.3	7.4
130°-140°	507.7	5.9
140°-150°	400.3	4.7
150°-160°	292.7	3.4
160°-170°	181.8	2.1
170°-180°	62.0	0.7
0°-30°	2640.5	30.8
0°-40°	4073.9	47.6
0°-60°	5049.2	59.0
0°-90°	5057.8	59.1
90°-120°	1427.1	16.7
90°-150°	2966.4	34.7
90°-180°	3503.0	40.9
0°-180°	8560.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3292	3292	3292	3292	3292	
5°	3235	3321	3305	3313	3356	310
15°	3279	3394	3328	3310	3333	922
25°	3019	3120	3053	2961	2986	1379
35°	2349	2386	2349	2290	2300	1439
45°	997	1160	1172	1132	951	771
55°	92	108	177	100	92	102
65°	3	3	3	0	0	3
75°	0	2	0	0	0	1
85°	3	3	0	0	0	1
90°	0	4	8	12	12	2
95°	33	61	33	37	45	37
105°	127	195	742	948	628	134
115°	226	274	640	1330	1554	224
125°	324	368	603	1054	1247	288
135°	402	446	607	868	997	309
145°	476	516	611	756	837	299
155°	558	578	623	686	718	256
165°	619	627	640	656	668	174
175°	652	656	652	648	644	62
180°	652	652	652	652	652	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3291.8	3291.8	3291.8	3291.8	3291.8
2.5°	3248.6	3312.9	3289.7	3292.2	3308.2
5°	3235.3	3320.7	3304.6	3313.3	3356.0
7.5°	3245.0	3331.5	3329.3	3331.8	3373.5
10°	3253.2	3343.7	3335.5	3333.8	3371.4
12.5°	3269.7	3368.2	3335.5	3331.6	3363.2
15°	3278.9	3394.5	3327.8	3310.3	3332.9
17.5°	3247.6	3376.2	3285.6	3239.1	3248.1
20°	3204.4	3335.1	3240.4	3171.4	3186.4
22.5°	3136.6	3261.2	3176.7	3091.3	3110.4
25°	3019.4	3119.9	3052.8	2960.9	2986.0
27.5°	2852.9	2932.3	2889.9	2800.8	2816.4
30°	2731.6	2796.9	2762.4	2675.2	2682.8
32.5°	2591.8	2647.1	2610.3	2535.3	2534.8
35°	2348.7	2386.4	2348.7	2289.8	2299.9
37.5°	2030.6	2059.2	2020.8	1985.5	1990.5
40°	1806.5	1829.1	1788.5	1755.0	1750.0
42.5°	1526.9	1589.7	1550.0	1504.5	1511.5
45°	997.0	1160.4	1171.8	1131.7	950.8
47.5°	502.6	681.0	815.6	618.9	443.5
50°	292.9	401.0	593.6	327.7	275.0
52.5°	192.2	237.9	414.7	207.1	182.4
55°	92.5	107.6	177.3	100.0	92.5
57.5°	31.9	48.9	78.6	50.0	35.5
60°	5.1	20.2	43.7	15.1	2.6
62.5°	3.1	6.1	27.2	3.0	0.5
65°	2.6	2.6	2.6	0.0	0.0
67.5°	2.6	2.6	0.0	0.0	0.0
70°	2.6	2.6	0.0	0.0	0.0
72.5°	2.6	2.6	0.0	0.0	0.0
75°	0.0	2.5	0.0	0.0	0.0
77.5°	0.0	2.5	0.0	0.0	0.0
80°	0.0	2.5	0.0	0.0	0.0
82.5°	0.0	2.5	0.0	0.0	0.0
85°	2.6	2.6	0.0	0.0	0.0
87.5°	2.1	2.9	1.6	2.5	2.5
90°	0.0	4.0	8.2	12.3	12.3
92.5°	9.8	13.9	18.0	25.5	28.7
95°	32.8	60.9	32.8	37.1	45.1
97.5°	58.2	116.8	241.2	71.1	61.5
100°	77.9	146.1	483.9	142.5	94.3
102.5°	97.6	169.0	654.6	375.9	205.9
105°	127.1	195.3	742.3	948.3	627.5
107.5°	156.7	208.0	708.7	1380.1	1292.7
110°	176.4	224.5	689.0	1450.2	1558.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	196.0	244.2	669.3	1409.2	1591.3
115°	225.6	273.7	639.8	1329.8	1554.4
117.5°	255.9	303.2	632.4	1243.8	1474.8
120°	278.9	323.0	619.3	1178.4	1419.0
122.5°	295.3	342.6	602.9	1122.2	1343.6
125°	324.0	368.1	602.9	1054.3	1246.8
127.5°	347.8	392.7	603.7	975.5	1165.6
130°	360.9	409.0	607.0	922.8	1103.2
132.5°	377.3	425.4	607.0	899.1	1047.5
135°	401.9	446.0	607.0	868.3	996.6
137.5°	422.4	469.7	607.0	834.2	944.1
140°	438.8	482.9	607.0	814.3	914.6
142.5°	455.2	496.1	610.3	791.2	885.1
145°	475.7	515.8	611.1	756.5	836.7
147.5°	500.4	535.6	616.0	731.4	793.2
150°	516.8	548.8	619.3	714.8	766.9
152.5°	533.2	562.0	619.3	701.5	744.0
155°	557.8	577.8	623.4	685.6	717.7
157.5°	577.5	596.7	628.3	675.6	698.9
160°	590.6	606.6	631.6	669.0	689.0
162.5°	600.4	616.5	634.9	665.5	679.2
165°	619.3	627.3	639.8	656.5	668.5
167.5°	630.0	637.2	643.9	652.3	659.5
170°	639.8	643.8	643.9	652.2	656.2
172.5°	643.1	650.3	647.2	648.9	652.9
175°	652.1	656.1	652.1	647.9	643.9
177.5°	652.1	655.3	652.1	652.0	648.8
180°	652.1	652.1	652.1	652.1	652.1

(END OF REPORT)