

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: P644338

Luminaire Tested: CRQ4DIP-SR4F0-50D125U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644338
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-SR4F0-50D125U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

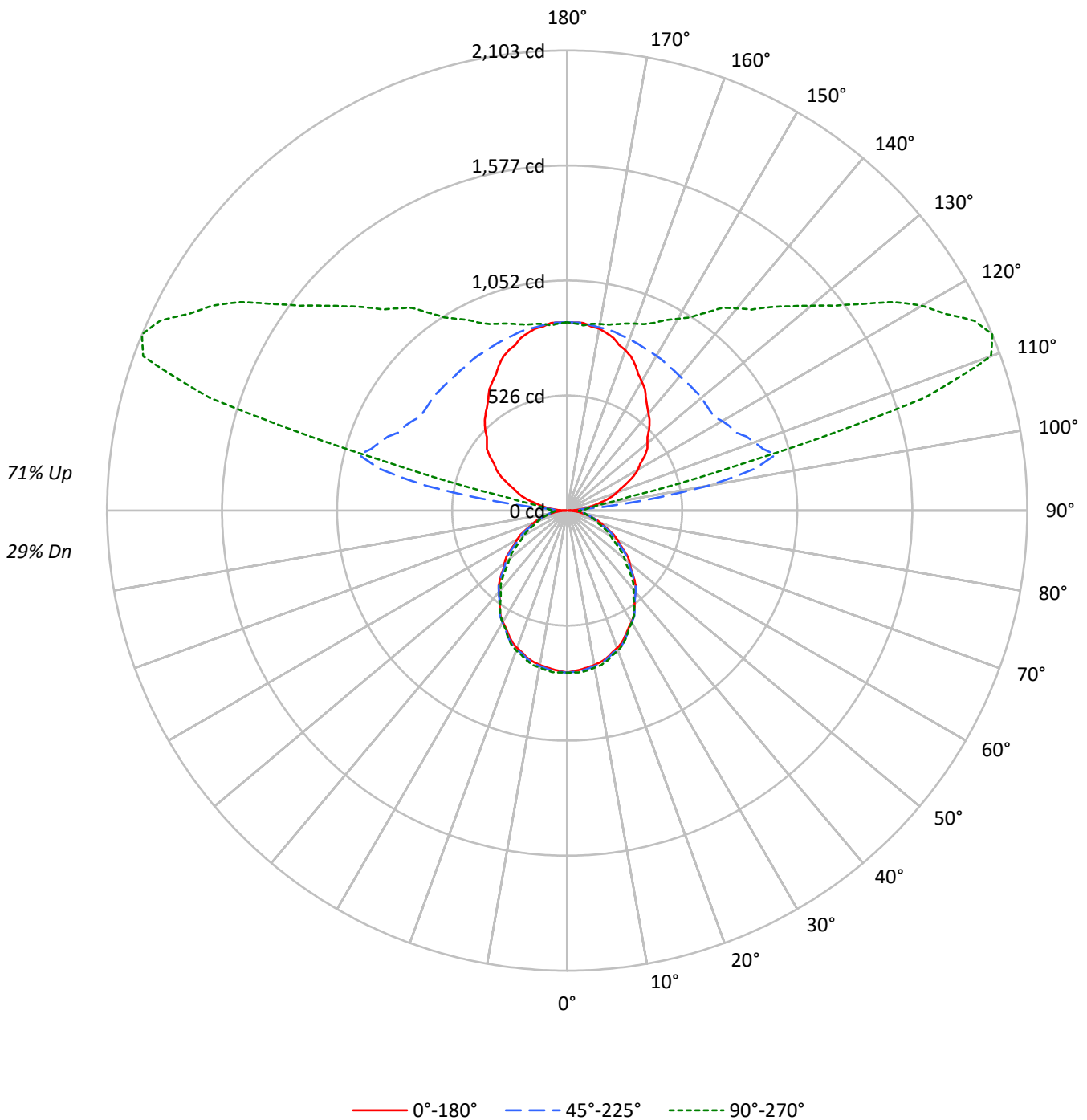
Lumens per Lamp: N/A
Luminaire Lumens: 6533.0 lumens
Efficiency: N/A
Efficacy: 124.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 52.5
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	102	102	102	102	91	91	91	91	72	72	72	53	53	53	37	37	37	29																				
1	93	89	85	81	83	80	76	73	62	60	58	47	45	44	32	31	31	24																				
2	85	77	71	66	75	69	64	60	55	51	48	41	39	37	28	27	26	20																				
3	77	68	61	55	69	61	55	50	48	44	41	36	33	31	25	23	22	17																				
4	71	60	53	47	63	54	48	43	43	38	34	32	29	27	22	21	19	15																				
5	65	53	46	40	58	48	41	36	38	33	30	29	26	23	20	18	17	13																				
6	59	48	40	34	53	43	36	32	34	29	26	26	23	20	18	16	15	11																				
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10																				
8	51	39	32	26	45	35	29	24	28	23	20	22	18	16	15	13	12	9																				
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8																				
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9391	8836
15°	11406	8411	7728
20°	11145	7545	6760
25°	10797	6738	5890
30°	10456	5953	5113
35°	9992	5236	4388
40°	9560	4584	3720
45°	9059	3940	3105
50°	8532	3336	2546
55°	7972	2808	2053
60°	7438	2301	1641
65°	6781	1835	1299
70°	6146	1438	1026
75°	5377	1104	809
80°	4489	821	631
85°	3273	597	479

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	1.1
10°-20°	198.3	3.0
20°-30°	292.8	4.5
30°-40°	336.6	5.2
40°-50°	326.5	5.0
50°-60°	273.3	4.2
60°-70°	196.9	3.0
70°-80°	120.3	1.8
80°-90°	60.4	0.9
90°-100°	129.0	2.0
100°-110°	762.2	11.7
110°-120°	1026.4	15.7
120°-130°	834.2	12.8
130°-140°	670.1	10.3
140°-150°	528.2	8.1
150°-160°	386.2	5.9
160°-170°	239.9	3.7
170°-180°	81.8	1.3
0°-30°	561.0	8.6
0°-40°	897.6	13.7
0°-60°	1497.4	22.9
0°-90°	1875.1	28.7
90°-120°	1917.6	29.4
90°-150°	3950.1	60.5
90°-180°	4658.0	71.3
0°-180°	6533.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	729	742	735	736	742	69
15°	698	708	702	705	710	196
25°	630	640	638	635	639	290
35°	536	545	540	534	534	336
45°	430	434	427	414	408	331
55°	317	321	310	290	281	284
65°	209	210	200	185	180	208
75°	113	113	115	112	110	121
85°	34	42	58	62	62	36
90°	3	26	48	60	61	6
95°	54	90	65	78	90	57
105°	178	262	985	1261	840	188
115°	305	364	846	1757	2053	303
125°	432	488	797	1391	1645	383
135°	530	588	801	1146	1315	408
145°	628	681	806	998	1104	394
155°	736	762	823	905	947	338
165°	817	828	844	866	882	229
175°	860	866	860	855	850	81
180°	860	860	860	860	860	

TEST NUMBER: P644338

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.5	740.5	740.5	740.5	740.5
2.5°	733.8	744.4	737.9	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	734.5	728.3	729.7	735.6
10°	716.4	728.7	721.6	723.8	729.0
12.5°	708.9	720.3	714.9	717.1	722.3
15°	697.6	707.8	701.8	705.0	710.1
17.5°	680.8	691.9	685.4	687.2	692.4
20°	668.3	678.5	674.6	674.7	679.8
22.5°	653.2	664.3	661.2	658.8	664.7
25°	629.6	639.8	638.0	634.9	639.0
27.5°	606.2	613.7	610.1	607.1	610.1
30°	587.8	597.0	590.9	587.8	590.9
32.5°	567.7	576.9	570.8	566.9	568.3
35°	536.5	544.7	539.7	534.4	534.4
37.5°	507.0	512.3	508.9	500.1	497.8
40°	485.3	491.4	486.3	475.8	472.7
42.5°	462.7	468.8	462.9	451.5	446.8
45°	429.8	433.9	426.7	414.0	407.9
47.5°	396.0	400.3	390.3	376.3	369.0
50°	373.4	378.5	366.0	351.2	343.0
52.5°	351.6	355.1	343.5	326.1	318.8
55°	316.9	321.0	309.6	290.5	281.3
57.5°	284.5	288.4	274.8	256.7	249.5
60°	263.6	266.6	253.1	234.1	226.9
62.5°	240.1	243.2	230.5	214.0	206.9
65°	209.2	210.2	199.8	185.0	179.9
67.5°	180.1	180.1	171.3	160.3	156.2
70°	160.0	160.0	153.7	145.3	141.2
72.5°	141.6	140.8	137.0	131.1	127.8
75°	113.0	113.0	115.0	111.9	109.8
77.5°	87.9	86.2	95.2	94.7	93.7
80°	71.1	71.1	82.6	84.7	83.7
82.5°	56.1	57.7	72.6	75.5	74.5
85°	34.5	41.7	57.5	61.7	61.7
87.5°	15.7	29.2	47.3	53.9	54.1
90°	3.1	25.8	48.5	60.2	61.2
92.5°	19.5	34.0	54.8	70.9	77.0
95°	53.8	89.8	65.3	78.3	89.9
97.5°	89.4	160.3	334.1	115.9	104.4
100°	115.4	198.2	651.1	205.8	144.3
102.5°	140.5	227.5	872.9	510.5	287.4
105°	178.2	262.0	984.7	1260.8	839.5
107.5°	215.9	277.7	938.1	1827.0	1712.7
110°	241.1	299.5	911.2	1917.8	2061.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	267.0	325.4	885.3	1862.0	2103.3
115°	305.0	364.4	846.3	1756.8	2053.1
117.5°	343.8	403.3	836.4	1642.1	1946.9
120°	373.2	429.4	818.2	1554.9	1872.4
122.5°	394.9	454.4	796.6	1480.8	1772.9
125°	431.7	487.9	796.6	1391.2	1645.1
127.5°	461.8	520.3	797.6	1287.2	1538.0
130°	478.3	541.8	802.0	1217.6	1455.7
132.5°	498.3	561.8	801.1	1186.4	1382.1
135°	530.3	588.5	800.9	1145.7	1315.0
137.5°	557.4	619.8	800.9	1100.8	1245.8
140°	579.0	637.3	800.9	1074.5	1206.8
142.5°	600.7	654.7	805.3	1044.0	1167.8
145°	627.8	680.7	806.3	998.1	1104.0
147.5°	660.2	706.8	812.8	965.1	1046.6
150°	681.9	724.2	817.2	943.2	1012.0
152.5°	703.5	741.6	817.2	925.6	981.7
155°	736.0	762.4	822.6	904.7	947.0
157.5°	762.0	787.4	829.1	891.5	922.1
160°	779.3	800.4	833.4	882.7	909.2
162.5°	792.3	813.4	837.7	878.2	896.2
165°	817.2	827.7	844.2	866.2	882.1
167.5°	831.2	840.8	849.6	860.7	870.2
170°	844.2	849.5	849.6	860.6	865.9
172.5°	848.5	858.1	854.0	856.2	861.5
175°	860.5	865.7	860.5	854.9	849.6
177.5°	860.5	864.7	860.5	860.4	856.1
180°	860.5	860.5	860.5	860.5	860.5

(END OF REPORT)