

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: P644444

Luminaire Tested: CRQ4DIP-SR4F0-75D50U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644444
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-SR4F0-75D50U935-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

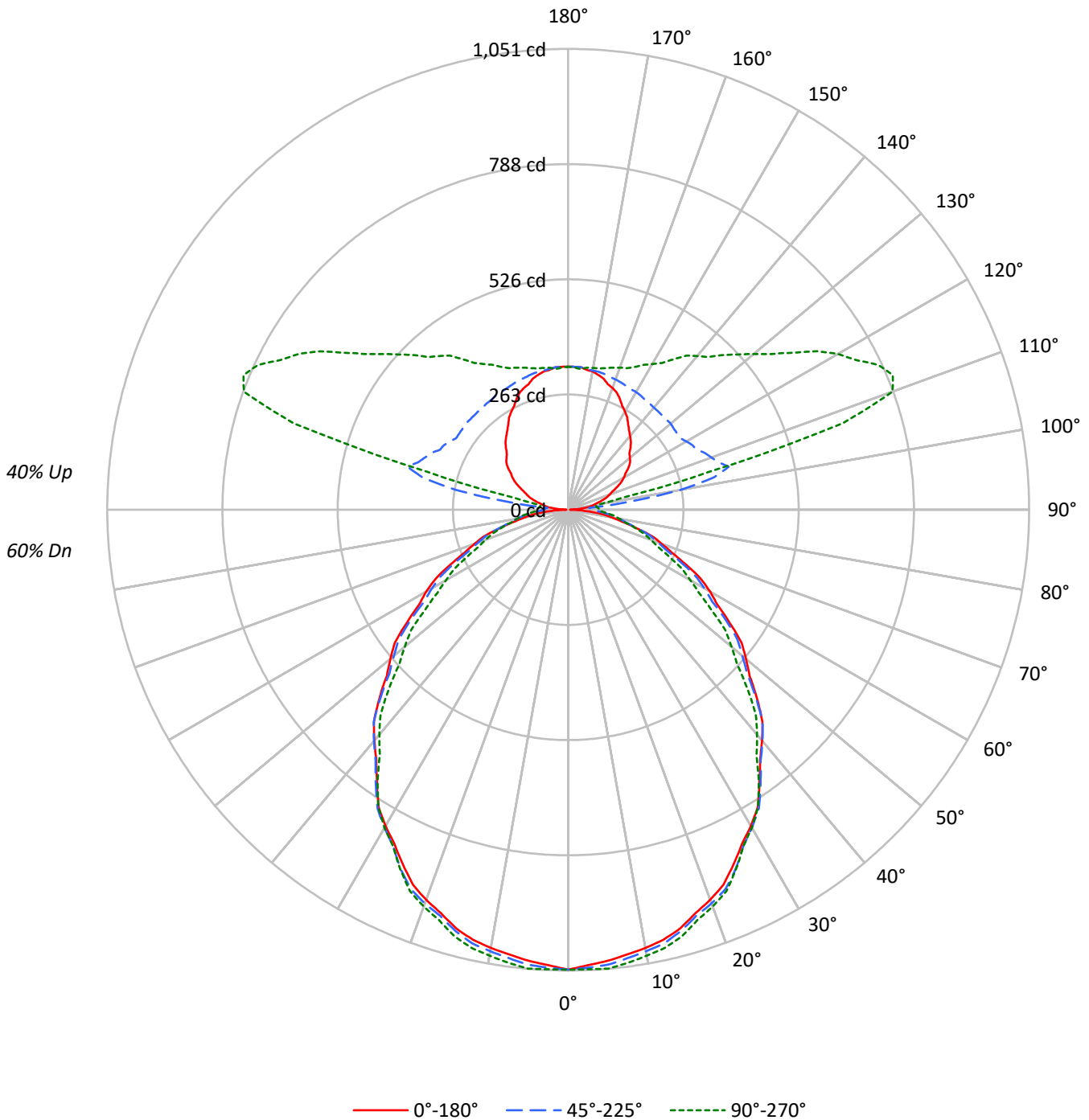
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4457.8 lumens
Efficiency: N/A
Efficacy: 122.5 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): 36.4
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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60																				
1	100	95	91	88	93	89	86	82	77	75	72	67	65	63	57	56	54	50																				
2	91	83	77	72	85	78	72	68	68	64	60	59	56	53	50	48	46	42																				
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	39	35																				
4	76	65	57	51	71	61	54	48	53	48	43	47	42	39	40	37	34	31																				
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30	27																				
6	64	52	44	38	60	49	42	36	43	37	33	38	33	29	33	29	26	23																				
7	60	47	39	33	56	45	37	32	39	33	29	35	30	26	30	26	23	21																				
8	55	43	35	30	52	41	33	28	36	30	26	32	27	23	28	24	21	19																				
9	52	39	32	27	48	37	30	25	33	27	23	29	24	21	26	22	19	17																				
10	48	36	29	24	45	34	27	23	31	25	21	27	22	19	24	20	17	15																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16939	16939	16939
5°	16618	14956	14492
10°	16400	13306	12518
15°	16159	11916	10950
20°	15789	10689	9577
25°	15297	9546	8345
30°	14812	8435	7244
35°	14156	7418	6218
40°	13543	6494	5270
45°	12836	5582	4399
50°	12087	4727	3608
55°	11295	3978	2910
60°	10537	3260	2326
65°	9604	2600	1841
70°	8708	2037	1454
75°	7613	1565	1147
80°	6364	1164	893
85°	4640	846	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	2.2
10°-20°	281.0	6.3
20°-30°	414.8	9.3
30°-40°	476.9	10.7
40°-50°	462.6	10.4
50°-60°	387.3	8.7
60°-70°	279.0	6.3
70°-80°	170.5	3.8
80°-90°	83.5	1.9
90°-100°	72.9	1.6
100°-110°	297.7	6.7
110°-120°	392.2	8.8
120°-130°	317.5	7.1
130°-140°	254.2	5.7
140°-150°	200.3	4.5
150°-160°	146.4	3.3
160°-170°	90.9	2.0
170°-180°	31.0	0.7
0°-30°	794.8	17.8
0°-40°	1271.7	28.5
0°-60°	2121.6	47.6
0°-90°	2654.6	59.5
90°-120°	762.8	17.1
90°-150°	1534.8	34.4
90°-180°	1803.0	40.4
0°-180°	4457.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1033	1052	1042	1043	1051	98
15°	988	1003	994	999	1006	278
25°	892	906	904	900	905	411
35°	760	772	765	757	757	476
45°	609	615	605	587	578	469
55°	449	455	439	412	399	403
65°	296	298	283	262	255	295
75°	160	160	163	158	156	171
85°	49	59	82	87	87	52
90°	4	31	57	68	70	6
95°	31	44	48	60	66	31
105°	78	104	379	488	330	83
115°	123	142	323	668	781	122
125°	168	187	303	528	624	149
135°	201	223	304	434	499	155
145°	238	258	306	378	419	149
155°	279	289	312	343	359	128
165°	310	314	320	328	334	87
175°	326	328	326	324	322	31
180°	326	326	326	326	326	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1049.1	1049.1	1049.1	1049.1	1049.1
2.5°	1039.6	1054.7	1045.5	1047.9	1049.1
5°	1032.8	1051.6	1041.7	1043.3	1050.6
7.5°	1023.3	1040.7	1031.9	1033.9	1042.3
10°	1015.0	1032.4	1022.4	1025.5	1032.8
12.5°	1004.3	1020.6	1012.9	1016.0	1023.3
15°	988.3	1002.8	994.3	998.9	1006.1
17.5°	964.6	980.3	971.1	973.7	980.9
20°	946.8	961.3	955.7	955.9	963.1
22.5°	925.5	941.1	936.8	933.4	941.8
25°	892.0	906.5	903.9	899.6	905.3
27.5°	858.8	869.5	864.5	860.1	864.5
30°	832.7	845.8	837.2	832.8	837.2
32.5°	804.3	817.3	808.7	803.2	805.2
35°	760.1	771.7	764.6	757.2	757.2
37.5°	718.4	725.9	721.0	708.5	705.3
40°	687.5	696.2	689.0	674.1	669.7
42.5°	655.5	664.2	655.8	639.7	633.0
45°	609.0	614.8	604.6	586.6	577.9
47.5°	561.0	567.1	553.0	533.2	522.8
50°	529.0	536.2	518.6	497.6	486.0
52.5°	498.2	503.1	486.6	462.1	451.6
55°	449.0	454.8	438.6	411.6	398.6
57.5°	403.0	408.5	389.4	363.7	353.5
60°	373.4	377.7	358.6	331.7	321.5
62.5°	340.2	344.6	326.6	303.2	293.1
65°	296.3	297.8	283.0	262.1	254.9
67.5°	255.2	255.2	242.7	227.2	221.4
70°	226.7	226.7	217.8	205.8	200.0
72.5°	200.6	199.5	194.1	185.7	181.1
75°	160.0	160.0	163.0	158.5	155.6
77.5°	124.5	122.1	134.8	134.2	132.8
80°	100.8	100.8	117.1	120.0	118.5
82.5°	79.4	81.7	102.8	106.9	105.5
85°	48.9	59.0	81.5	87.4	87.4
87.5°	22.2	40.3	64.8	73.0	73.2
90°	4.4	31.1	57.4	68.4	69.9
92.5°	14.1	29.2	52.9	65.6	69.8
95°	31.2	43.8	47.5	60.1	65.5
97.5°	46.9	67.2	143.2	66.7	63.7
100°	56.8	80.7	259.9	96.5	75.3
102.5°	65.4	91.0	340.5	208.6	125.2
105°	78.4	103.8	378.8	487.8	330.2
107.5°	91.4	108.7	358.7	698.8	656.5
110°	100.1	116.9	347.7	731.5	787.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	109.9	126.8	337.8	708.6	801.1
115°	123.2	141.5	323.0	668.3	780.6
117.5°	136.6	156.2	319.1	623.5	739.0
120°	146.9	166.1	311.3	589.6	709.9
122.5°	155.1	174.8	303.1	561.4	672.2
125°	168.0	187.2	303.1	527.5	623.8
127.5°	178.1	199.5	303.5	488.0	583.1
130°	183.5	207.6	305.2	461.7	551.9
132.5°	189.4	213.4	304.0	449.8	524.0
135°	201.1	223.1	303.7	434.4	498.6
137.5°	211.3	235.0	303.7	417.4	472.3
140°	219.5	241.6	303.7	407.4	457.6
142.5°	227.8	248.2	305.3	395.8	442.8
145°	238.0	258.1	305.7	378.4	418.6
147.5°	250.3	268.0	308.2	365.9	396.8
150°	258.5	274.6	309.8	357.6	383.7
152.5°	266.7	281.2	309.8	350.9	372.2
155°	279.0	289.1	311.9	343.0	359.1
157.5°	288.9	298.5	314.3	338.0	349.6
160°	295.5	303.5	316.0	334.7	344.7
162.5°	300.4	308.4	317.6	333.0	339.8
165°	309.8	313.8	320.1	328.4	334.4
167.5°	315.2	318.8	322.1	326.3	329.9
170°	320.1	322.1	322.1	326.3	328.3
172.5°	321.7	325.3	323.8	324.6	326.7
175°	326.2	328.2	326.2	324.1	322.1
177.5°	326.2	327.8	326.2	326.2	324.6
180°	326.2	326.2	326.2	326.2	326.2

(END OF REPORT)