

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: P644433

Luminaire Tested: CRQ4DIP-SR4F0-75D25U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644433
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-75D25U940-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 250 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

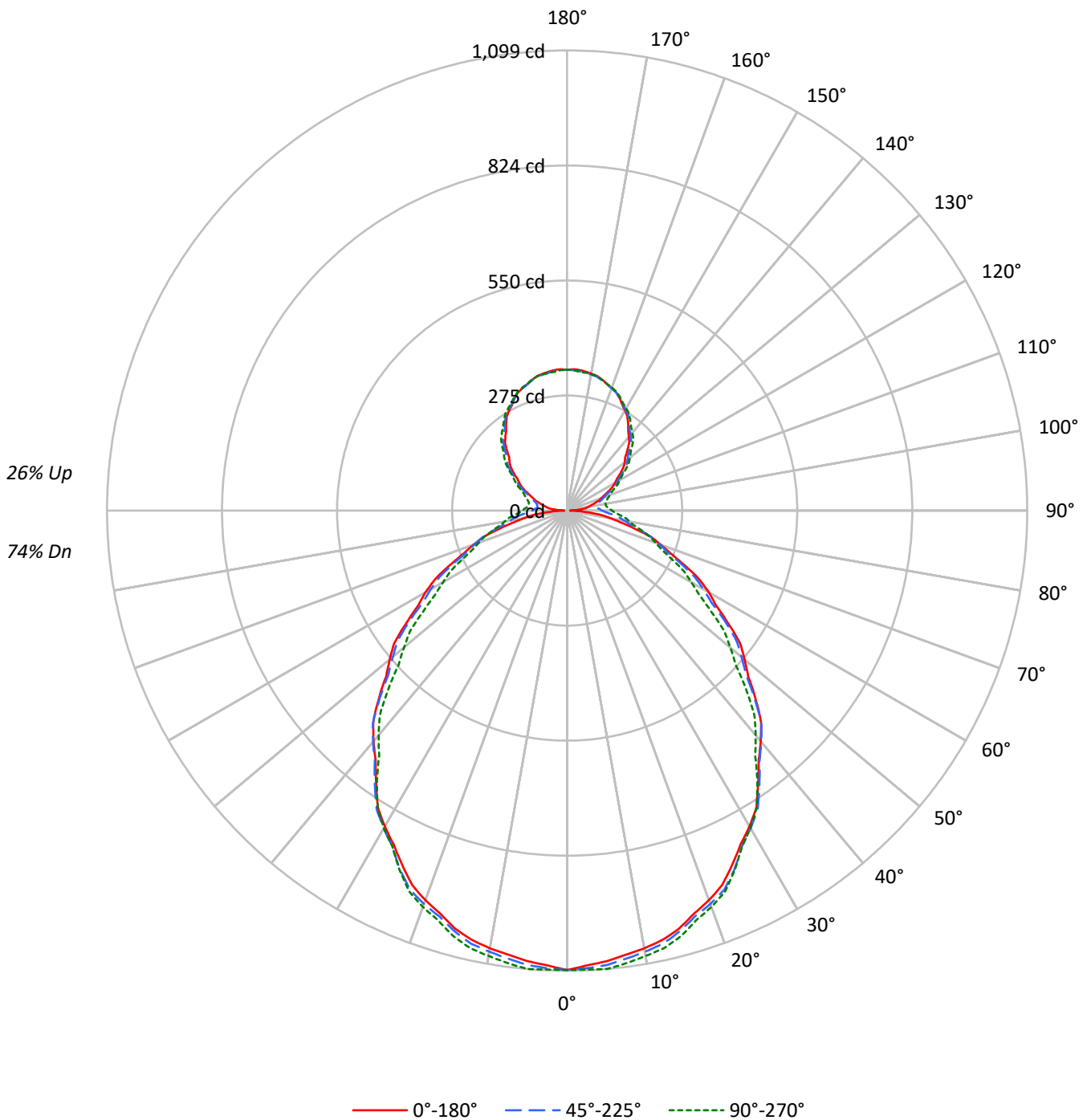
Lumens per Lamp: N/A
Luminaire Lumens: 3822.0 lumens
Efficiency: N/A
Efficacy: 127.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 30.1
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	113	113	113	113	107	107	107	107	96	96	96	87	87	87	78	78	78	74
1	103	98	94	90	97	93	89	86	84	81	78	76	73	71	68	66	65	61
2	93	85	79	73	88	81	76	71	74	69	65	66	63	60	60	57	55	51
3	85	75	68	61	81	72	65	59	65	59	55	59	54	51	53	50	47	43
4	78	67	59	52	74	64	56	50	58	52	47	53	48	44	48	44	40	37
5	72	60	51	45	68	57	49	44	52	46	41	47	42	38	43	39	35	33
6	66	54	45	39	63	52	44	38	47	41	36	43	38	33	39	35	31	29
7	62	49	41	35	58	47	39	34	43	36	32	39	34	30	36	31	28	25
8	57	45	36	31	54	43	35	30	39	33	28	36	31	27	33	28	25	23
9	54	41	33	28	51	39	32	27	36	30	26	33	28	24	31	26	23	21
10	50	38	30	25	48	36	29	24	33	27	23	31	26	22	28	24	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17715	17715	17715
5°	17379	15641	15155
10°	17151	13920	13091
15°	16900	12467	11451
20°	16513	11184	10016
25°	15998	9983	8729
30°	15491	8829	7576
35°	14806	7769	6503
40°	14166	6796	5513
45°	13424	5841	4600
50°	12640	4954	3774
55°	11813	4166	3061
60°	11019	3423	2474
65°	10044	2752	1997
70°	9108	2188	1630
75°	7966	1736	1355
80°	6655	1377	1144
85°	4848	1123	987

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13424 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.6	2.7
10°-20°	293.9	7.7
20°-30°	433.9	11.4
30°-40°	499.0	13.1
40°-50°	484.2	12.7
50°-60°	406.2	10.6
60°-70°	296.6	7.8
70°-80°	189.7	5.0
80°-90°	108.5	2.8
90°-100°	74.3	1.9
100°-110°	85.6	2.2
110°-120°	115.2	3.0
120°-130°	146.1	3.8
130°-140°	163.8	4.3
140°-150°	161.7	4.2
150°-160°	136.8	3.6
160°-170°	91.1	2.4
170°-180°	31.8	0.8
0°-30°	831.4	21.8
0°-40°	1330.5	34.8
0°-60°	2220.9	58.1
0°-90°	2815.5	73.7
90°-120°	275.2	7.2
90°-150°	746.8	19.5
90°-180°	1006.0	26.3
0°-180°	3822.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1097	1097	1097	1097	1097	
5°	1080	1100	1089	1091	1099	102
15°	1034	1050	1040	1045	1052	291
25°	933	949	945	941	947	430
35°	795	808	801	792	792	498
45°	637	644	633	614	604	491
55°	470	477	459	432	419	421
65°	310	314	300	282	276	308
75°	167	170	181	184	184	179
85°	51	70	108	124	127	54
90°	7	42	83	102	107	8
95°	32	37	72	92	96	30
105°	68	64	79	94	98	72
115°	109	109	116	123	124	108
125°	155	158	164	169	170	139
135°	204	208	212	218	220	157
145°	254	257	258	260	263	159
155°	296	298	297	297	299	136
165°	324	325	322	321	324	91
175°	337	338	334	333	333	32
180°	336	336	336	336	336	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1097.2	1097.2	1097.2	1097.2	1097.2
2.5°	1087.3	1103.0	1093.7	1096.0	1097.2
5°	1080.1	1099.8	1089.4	1091.1	1098.7
7.5°	1070.2	1088.7	1079.6	1081.3	1090.0
10°	1061.5	1079.7	1069.6	1072.6	1080.1
12.5°	1050.4	1067.9	1059.4	1062.6	1070.2
15°	1033.6	1049.5	1040.2	1044.7	1052.2
17.5°	1008.8	1025.6	1016.0	1018.3	1025.9
20°	990.2	1005.7	999.9	999.7	1007.3
22.5°	967.9	984.6	980.1	976.2	985.0
25°	932.9	948.8	945.3	940.8	946.9
27.5°	898.2	910.7	904.5	899.5	904.1
30°	870.9	885.3	876.3	871.0	875.6
32.5°	841.2	855.8	846.5	840.0	842.1
35°	795.0	808.2	800.7	791.9	791.9
37.5°	751.3	760.6	754.4	741.0	737.6
40°	719.1	729.5	721.0	705.0	700.5
42.5°	685.6	696.1	686.5	669.0	662.0
45°	636.9	644.0	632.6	613.5	604.4
47.5°	586.7	594.4	578.8	557.6	546.7
50°	553.2	561.9	543.5	520.4	508.3
52.5°	521.0	527.5	509.7	483.5	472.9
55°	469.6	477.0	459.4	431.6	419.4
57.5°	421.5	428.7	408.4	383.6	373.8
60°	390.5	396.5	376.5	351.6	342.0
62.5°	355.8	362.0	343.5	323.2	314.2
65°	309.9	313.5	299.6	282.4	276.5
67.5°	266.9	269.0	258.8	248.4	244.5
70°	237.1	239.2	233.9	227.8	224.2
72.5°	209.8	211.0	211.1	209.1	206.7
75°	167.4	170.2	180.8	184.0	183.8
77.5°	130.2	131.5	154.5	162.5	163.8
80°	105.4	110.3	138.5	150.2	151.8
82.5°	83.1	91.5	125.9	139.7	141.3
85°	51.1	70.1	108.1	124.0	127.1
87.5°	23.7	52.5	92.9	110.7	114.5
90°	7.1	42.3	82.9	102.0	107.0
92.5°	17.0	38.9	77.6	96.4	101.5
95°	31.6	37.4	72.2	92.0	95.6
97.5°	44.0	41.3	71.5	89.1	92.9
100°	51.1	46.4	72.5	88.9	93.4
102.5°	57.9	52.3	74.4	90.2	94.0
105°	68.0	63.8	78.8	93.7	97.8
107.5°	79.4	75.7	87.1	99.9	102.9
110°	87.0	85.0	94.2	105.2	108.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	96.5	94.5	102.4	111.0	114.3
115°	109.0	108.6	115.9	122.8	124.5
117.5°	122.0	123.2	129.6	134.8	136.5
120°	131.7	133.5	138.7	143.6	145.0
122.5°	141.1	142.6	148.7	153.6	155.0
125°	155.1	158.0	164.0	168.6	170.0
127.5°	169.3	173.5	179.0	183.6	185.4
130°	179.5	184.0	188.7	193.6	195.7
132.5°	187.9	192.4	197.4	203.3	205.7
135°	203.5	208.1	212.1	217.5	220.0
137.5°	219.0	223.4	226.5	230.8	233.9
140°	229.6	233.5	235.7	239.7	242.5
142.5°	239.3	243.2	244.8	248.2	251.0
145°	253.9	257.0	258.5	260.4	263.2
147.5°	267.5	270.6	271.3	272.9	274.6
150°	276.4	279.2	279.3	280.0	281.8
152.5°	284.7	287.2	286.4	286.9	288.9
155°	296.4	298.1	296.7	297.1	298.9
157.5°	305.7	307.4	305.2	305.9	307.3
160°	311.4	313.1	310.7	311.1	312.5
162.5°	316.8	318.0	315.8	315.4	317.3
165°	323.5	324.9	322.5	321.4	323.5
167.5°	329.2	330.6	327.4	326.3	328.4
170°	332.1	333.5	330.0	328.6	330.7
172.5°	334.7	336.1	332.2	330.6	332.1
175°	337.1	338.5	334.2	332.8	332.8
177.5°	337.8	338.7	335.5	334.1	335.8
180°	336.4	336.4	336.4	336.4	336.4

(END OF REPORT)