

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: P644458

Luminaire Tested: CRQ4DIP-SR4F0-75D75U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644458
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-SR4F0-75D75U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

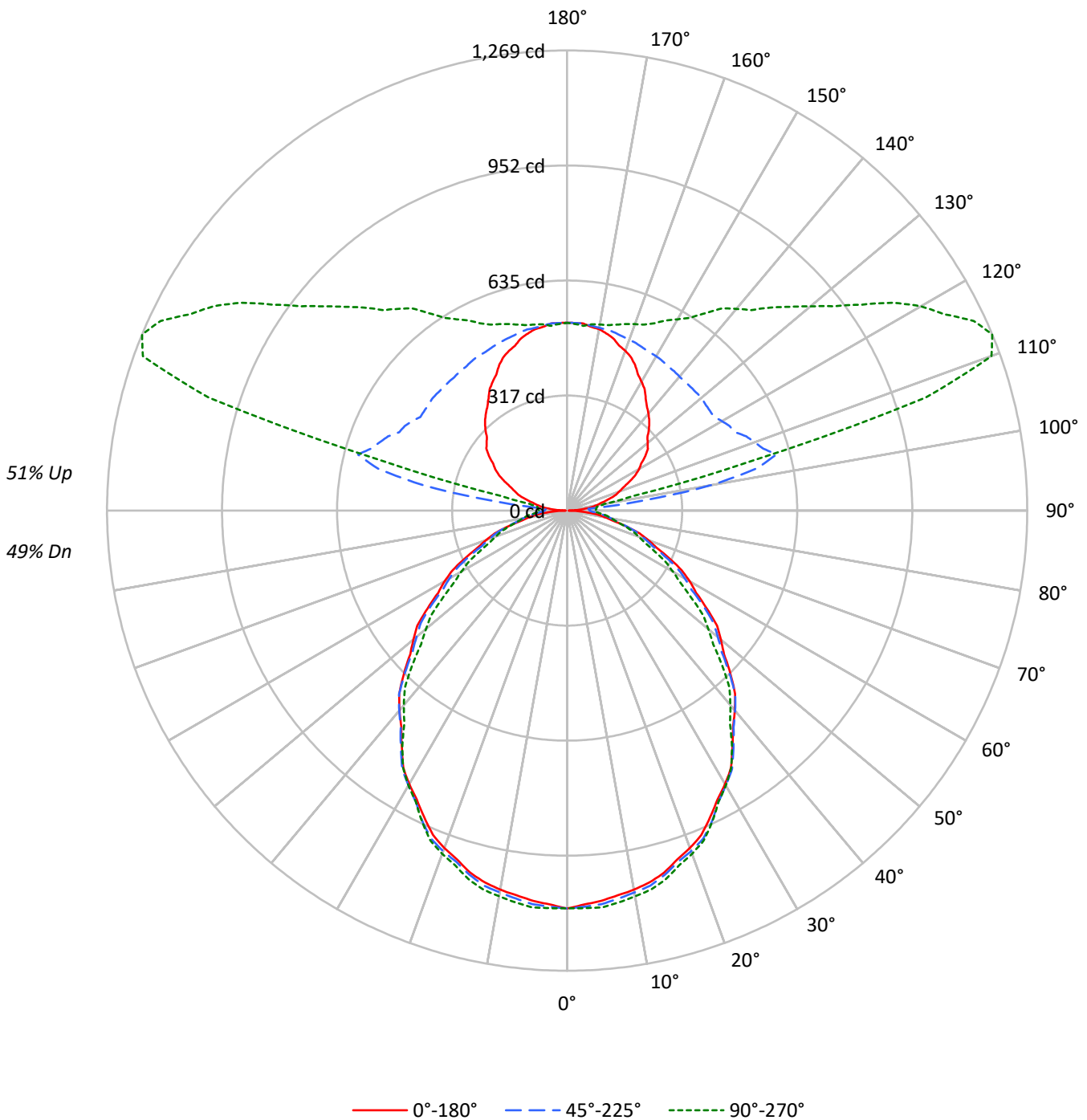
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5611.2 lumens
Efficiency: N/A
Efficacy: 131.7 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): 42.6
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				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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	97	93	89	86	90	86	83	79	73	70	68	60	58	57	49	48	47	41
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	29
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25
5	68	57	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19
7	58	46	38	32	53	43	36	31	37	31	27	31	27	23	26	22	20	17
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	24	20	18	16
9	50	38	31	26	46	36	29	24	31	25	21	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17715	17715	17715
5°	17379	15641	15155
10°	17151	13916	13091
15°	16900	12462	11451
20°	16513	11179	10016
25°	15998	9983	8729
30°	15491	8822	7576
35°	14806	7758	6503
40°	14166	6792	5513
45°	13424	5838	4600
50°	12640	4944	3774
55°	11813	4160	3043
60°	11019	3410	2433
65°	10044	2719	1925
70°	9108	2131	1521
75°	7966	1637	1199
80°	6655	1217	934
85°	4848	885	710

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	1.8
10°-20°	293.9	5.2
20°-30°	433.8	7.7
30°-40°	498.8	8.9
40°-50°	483.8	8.6
50°-60°	405.0	7.2
60°-70°	291.8	5.2
70°-80°	178.3	3.2
80°-90°	87.8	1.6
90°-100°	97.9	1.7
100°-110°	466.1	8.3
110°-120°	620.2	11.1
120°-130°	503.1	9.0
130°-140°	403.4	7.2
140°-150°	317.8	5.7
150°-160°	232.4	4.1
160°-170°	144.4	2.6
170°-180°	49.2	0.9
0°-30°	831.2	14.8
0°-40°	1330.0	23.7
0°-60°	2218.8	39.5
0°-90°	2776.7	49.5
90°-120°	1184.2	21.1
90°-150°	2408.5	42.9
90°-180°	2834.0	50.5
0°-180°	5611.2	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	1049	1040	1045	1052	291
25°	933	948	945	941	947	430
35°	795	807	800	792	792	498
45°	637	643	632	614	604	491
55°	470	476	459	430	417	421
65°	310	312	296	274	266	308
75°	167	167	170	166	163	179
85°	51	62	85	91	91	54
90°	5	34	62	75	76	7
95°	42	62	59	73	81	42
105°	116	162	597	767	515	123
115°	190	222	511	1059	1237	188
125°	264	296	480	837	990	234
135°	319	354	482	689	791	246
145°	378	410	485	601	664	237
155°	443	459	495	544	570	203
165°	492	498	508	521	531	138
175°	518	521	518	514	511	49
180°	518	518	518	518	518	

TEST NUMBER: P644458

CATALOG NUMBER: CRQ4DIP-SR4F0-75D75U940-FLLOOB-1DUDD-WW

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	1093.5	1096.0	1097.2
5°	1080.1	1099.8	1089.4	1091.1	1098.7
7.5°	1070.2	1088.4	1079.2	1081.3	1090.0
10°	1061.5	1079.7	1069.3	1072.6	1080.1
12.5°	1050.4	1067.3	1059.4	1062.6	1070.2
15°	1033.6	1048.8	1039.8	1044.7	1052.2
17.5°	1008.8	1025.2	1015.7	1018.3	1025.9
20°	990.2	1005.4	999.5	999.7	1007.3
22.5°	967.9	984.3	979.7	976.2	985.0
25°	932.9	948.1	945.3	940.8	946.9
27.5°	898.2	909.4	904.1	899.5	904.1
30°	870.9	884.6	875.6	871.0	875.6
32.5°	841.2	854.8	845.8	840.0	842.1
35°	795.0	807.1	799.6	791.9	791.9
37.5°	751.3	759.2	754.1	741.0	737.6
40°	719.1	728.1	720.6	705.0	700.5
42.5°	685.6	694.7	685.9	669.0	662.0
45°	636.9	643.0	632.3	613.5	604.4
47.5°	586.7	593.1	578.3	557.6	546.7
50°	553.2	560.8	542.4	520.4	508.3
52.5°	521.0	526.2	508.9	483.3	472.3
55°	469.6	475.6	458.7	430.5	416.9
57.5°	421.5	427.3	407.3	380.4	369.8
60°	390.5	395.1	375.0	346.9	336.3
62.5°	355.8	360.4	341.6	317.1	306.5
65°	309.9	311.5	296.0	274.1	266.5
67.5°	266.9	266.9	253.8	237.6	231.5
70°	237.1	237.1	227.8	215.3	209.2
72.5°	209.8	208.6	203.0	194.2	189.4
75°	167.4	167.4	170.5	165.7	162.7
77.5°	130.2	127.7	141.0	140.4	138.9
80°	105.4	105.4	122.4	125.5	124.0
82.5°	83.1	85.5	107.5	111.9	110.3
85°	51.1	61.7	85.2	91.4	91.4
87.5°	23.2	42.4	68.2	77.0	77.3
90°	4.6	33.6	62.3	74.9	76.4
92.5°	17.4	34.2	60.2	75.5	80.8
95°	41.5	62.3	58.6	72.9	80.8
97.5°	64.8	101.9	215.0	89.1	83.3
100°	80.5	124.0	402.9	139.5	104.3
102.5°	94.9	140.9	533.4	319.9	186.7
105°	116.4	161.5	597.2	767.0	515.3
107.5°	138.0	170.0	567.1	1104.6	1036.7
110°	152.4	183.1	550.2	1157.7	1245.2



TEST NUMBER: P644458

CATALOG NUMBER: CRQ4DIP-SR4F0-75D75U940-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	168.1	198.7	534.6	1122.7	1268.8
115°	190.0	222.1	511.1	1059.0	1237.3
117.5°	212.2	245.5	504.9	988.9	1172.3
120°	229.2	261.2	493.3	935.7	1126.8
122.5°	242.2	275.6	480.3	891.1	1066.8
125°	263.5	295.5	480.3	837.2	990.0
127.5°	280.5	314.9	480.9	774.6	925.5
130°	289.7	327.9	483.5	732.7	876.0
132.5°	300.2	338.4	482.3	713.9	831.7
135°	319.1	354.2	482.0	689.4	791.3
137.5°	335.4	373.0	482.0	662.4	749.7
140°	348.5	383.5	482.0	646.6	726.2
142.5°	361.5	394.0	484.6	628.3	702.8
145°	377.8	409.6	485.2	600.7	664.3
147.5°	397.3	425.3	489.1	580.8	629.8
150°	410.3	435.8	491.7	567.6	609.0
152.5°	423.4	446.3	491.7	557.0	590.7
155°	442.9	458.8	495.0	544.4	569.9
157.5°	458.5	473.8	498.9	536.4	554.9
160°	468.9	481.7	501.5	531.2	547.1
162.5°	476.8	489.5	504.1	528.5	539.3
165°	491.7	498.1	508.0	521.3	530.8
167.5°	500.2	505.9	511.3	517.9	523.7
170°	508.0	511.2	511.3	517.9	521.0
172.5°	510.6	516.4	513.9	515.3	518.4
175°	517.8	521.0	517.8	514.5	511.3
177.5°	517.8	520.3	517.8	517.7	515.2
180°	517.8	517.8	517.8	517.8	517.8

(END OF REPORT)