

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: P644424

Luminaire Tested: CRQ4DIP-SR4F0-75D25U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644424
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-SR4F0-75D25U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

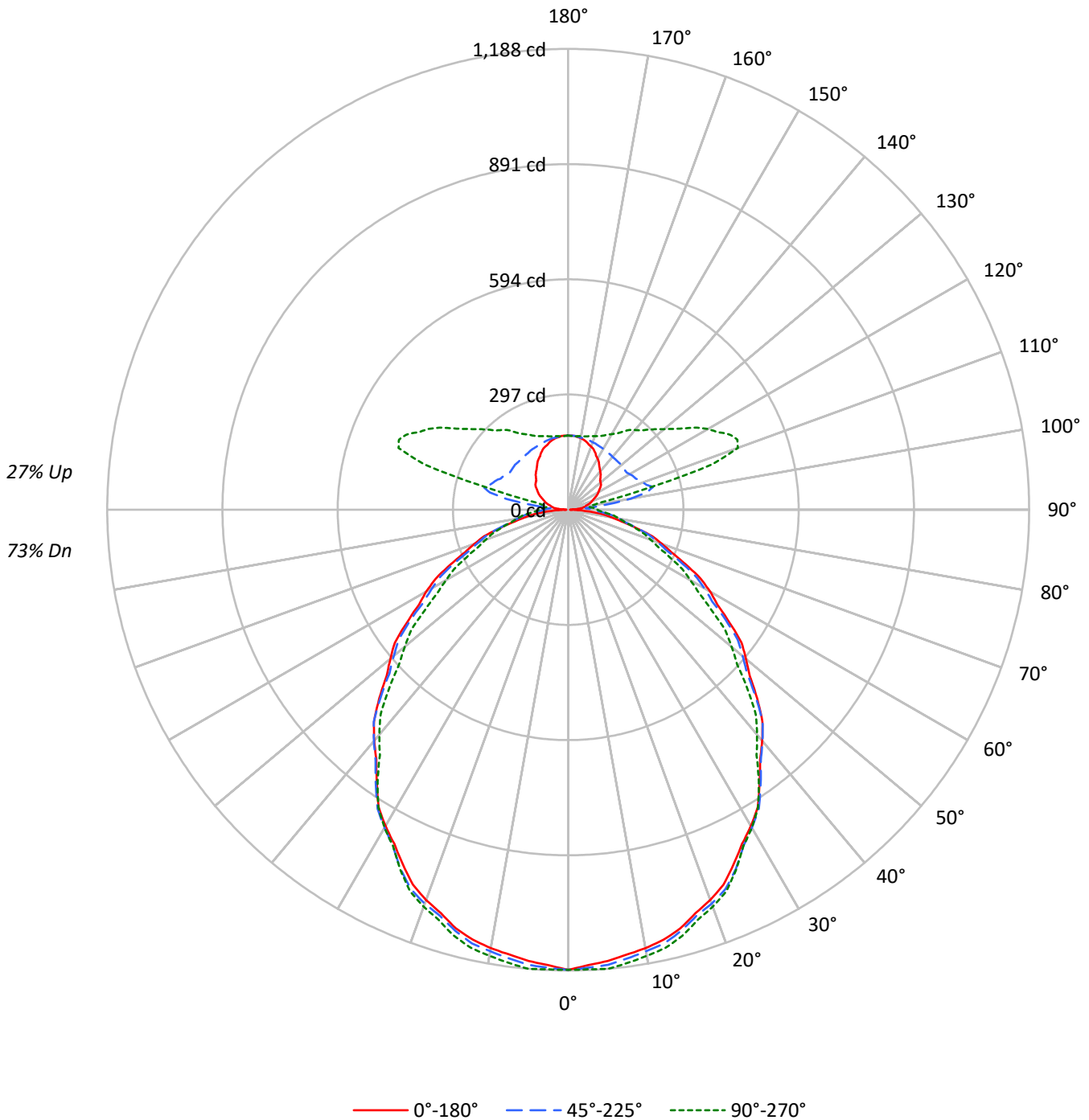
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4085.0 lumens
Efficiency: N/A
Efficacy: 135.7 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: 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

TEST NUMBER: P644424
CATALOG NUMBER: CRQ4DIP-SR4F0-75D25U830-FLLOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644424

CATALOG NUMBER: CRQ4DIP-SR4F0-75D25U830-FLLOOB-1DUDD-WW

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	113	113	113	113	107	107	107	107	96	96	96	87	87	87	78	78	78	73																				
1	103	98	94	90	97	93	90	86	84	81	79	76	74	72	68	67	65	61																				
2	94	86	79	74	89	82	76	71	74	69	65	67	63	60	60	57	55	51																				
3	86	76	68	62	81	72	65	60	65	60	55	59	55	51	53	50	47	44																				
4	78	67	59	53	74	64	57	51	58	52	47	53	48	44	48	44	41	38																				
5	72	60	52	45	68	57	50	44	52	46	41	48	42	38	43	39	36	33																				
6	67	54	46	40	63	52	44	38	47	41	36	43	38	34	39	35	31	29																				
7	62	49	41	35	59	47	39	34	43	37	32	39	34	30	36	32	28	26																				
8	58	45	37	31	55	43	35	30	39	33	29	36	31	27	33	29	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	25	34	28	23	31	26	22	29	24	21	19																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19151	19151	19151
5°	18789	16910	16384
10°	18542	15045	14153
15°	18270	13472	12380
20°	17852	12086	10829
25°	17294	10792	9436
30°	16747	9537	8190
35°	16005	8388	7030
40°	15314	7343	5959
45°	14514	6311	4973
50°	13666	5345	4079
55°	12769	4497	3290
60°	11914	3686	2629
65°	10861	2939	2082
70°	9845	2304	1644
75°	8608	1769	1296
80°	7192	1316	1009
85°	5247	956	767

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14514 cd/sqm



TEST NUMBER: P644424

CATALOG NUMBER: CRQ4DIP-SR4F0-75D25U830-FLLOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	2.7
10°-20°	317.7	7.8
20°-30°	469.0	11.5
30°-40°	539.2	13.2
40°-50°	523.0	12.8
50°-60°	437.9	10.7
60°-70°	315.5	7.7
70°-80°	192.7	4.7
80°-90°	94.1	2.3
90°-100°	60.6	1.5
100°-110°	180.9	4.4
110°-120°	232.0	5.7
120°-130°	187.0	4.6
130°-140°	149.1	3.6
140°-150°	117.3	2.9
150°-160°	85.8	2.1
160°-170°	53.3	1.3
170°-180°	18.2	0.4
0°-30°	898.6	22.0
0°-40°	1437.8	35.2
0°-60°	2398.7	58.7
0°-90°	3001.0	73.5
90°-120°	473.5	11.6
90°-150°	926.8	22.7
90°-180°	1084.0	26.5
0°-180°	4085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1168	1189	1178	1180	1188	111
15°	1117	1134	1124	1129	1138	314
25°	1008	1025	1022	1017	1024	465
35°	859	872	864	856	856	538
45°	689	695	684	663	653	531
55°	508	514	496	465	451	455
65°	335	337	320	296	288	333
75°	181	181	184	179	176	193
85°	55	67	92	99	99	58
90°	5	34	63	74	76	7
95°	26	33	45	58	62	25
105°	54	64	226	293	202	57
115°	78	85	191	393	459	77
125°	102	111	178	309	365	90
135°	118	131	178	254	292	91
145°	139	151	179	222	245	88
155°	164	169	183	201	210	75
165°	182	184	188	192	196	51
175°	191	192	191	190	189	18
180°	191	191	191	191	191	



TEST NUMBER: P644424

CATALOG NUMBER: CRQ4DIP-SR4F0-75D25U830-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1186.1	<i>1186.1</i>	1186.1	1186.1	1186.1
2.5°	<i>1175.4</i>	<i>1192.4</i>	<i>1182.1</i>	<i>1184.8</i>	<i>1186.1</i>
5°	1167.7	<i>1189.0</i>	1177.8	1179.6	1187.8
7.5°	1157.0	<i>1176.6</i>	1166.7	1168.9	1178.4
10°	1147.6	<i>1167.3</i>	1156.0	1159.5	1167.7
12.5°	1135.5	<i>1153.9</i>	1145.3	1148.8	1157.0
15°	1117.4	<i>1133.8</i>	1124.1	1129.4	1137.5
17.5°	1090.6	<i>1108.3</i>	1098.0	1100.9	1109.1
20°	1070.5	<i>1086.9</i>	1080.6	1080.8	1089.0
22.5°	1046.4	<i>1064.1</i>	1059.1	1055.3	1064.8
25°	1008.5	<i>1024.9</i>	1021.9	1017.1	1023.6
27.5°	971.0	<i>983.1</i>	977.4	972.5	977.4
30°	941.5	<i>956.3</i>	946.6	941.6	946.6
32.5°	909.4	<i>924.1</i>	914.4	908.1	910.4
35°	859.4	<i>872.5</i>	864.5	856.1	856.1
37.5°	812.2	<i>820.7</i>	815.2	801.1	797.5
40°	777.4	<i>787.2</i>	779.0	762.2	757.2
42.5°	741.2	<i>751.0</i>	741.5	723.2	715.7
45°	688.6	<i>695.1</i>	683.5	663.2	653.4
47.5°	634.3	<i>641.2</i>	625.2	602.8	591.1
50°	598.1	<i>606.3</i>	586.4	562.6	549.5
52.5°	563.2	<i>568.8</i>	550.2	522.4	510.6
55°	507.6	<i>514.2</i>	495.9	465.4	450.7
57.5°	455.7	<i>461.9</i>	440.3	411.2	399.7
60°	422.2	<i>427.1</i>	405.4	375.0	363.5
62.5°	384.7	<i>389.6</i>	369.2	342.8	331.4
65°	335.1	<i>336.7</i>	320.0	296.3	288.2
67.5°	288.5	<i>288.5</i>	274.4	256.8	250.3
70°	256.3	<i>256.3</i>	246.3	232.7	226.2
72.5°	226.8	<i>225.5</i>	219.5	210.0	204.7
75°	180.9	<i>180.9</i>	184.3	179.2	175.9
77.5°	140.7	<i>138.1</i>	152.5	151.7	150.1
80°	113.9	<i>113.9</i>	132.4	135.7	134.0
82.5°	89.8	<i>92.4</i>	116.3	120.9	119.3
85°	55.3	<i>66.8</i>	92.1	98.8	98.8
87.5°	25.1	<i>45.3</i>	72.9	81.8	82.1
90°	5.0	<i>34.0</i>	62.7	74.0	75.6
92.5°	13.3	<i>29.2</i>	54.9	67.2	71.1
95°	26.4	<i>33.0</i>	44.8	57.8	61.8
97.5°	37.2	<i>44.2</i>	96.1	56.1	55.2
100°	42.9	<i>51.5</i>	161.9	70.3	59.5
102.5°	47.4	<i>56.8</i>	206.6	133.3	85.5
105°	54.0	<i>64.2</i>	226.0	293.1	202.3
107.5°	60.7	<i>66.2</i>	212.4	413.9	390.0
110°	65.1	<i>71.0</i>	205.3	431.8	465.2



TEST NUMBER: P644424

CATALOG NUMBER: CRQ4DIP-SR4F0-75D25U830-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	70.9	76.8	199.5	417.1	472.1
115°	77.8	85.4	190.9	393.1	458.9
117.5°	84.7	94.0	188.4	365.9	433.6
120°	90.1	99.8	183.2	345.4	415.9
122.5°	94.9	104.2	178.4	328.9	393.8
125°	101.7	111.3	178.4	309.0	365.4
127.5°	106.6	118.5	178.6	285.9	341.6
130°	109.1	123.2	179.6	270.5	323.4
132.5°	111.3	125.4	178.2	263.5	307.0
135°	117.8	130.7	177.9	254.5	292.1
137.5°	123.8	137.7	177.9	244.5	276.7
140°	128.6	141.6	177.9	238.7	268.1
142.5°	133.4	145.4	178.9	231.9	259.4
145°	139.4	151.2	179.1	221.7	245.2
147.5°	146.7	157.0	180.6	214.4	232.5
150°	151.5	160.9	181.5	209.5	224.8
152.5°	156.3	164.7	181.5	205.6	218.1
155°	163.5	169.4	182.7	201.0	210.4
157.5°	169.3	174.9	184.2	198.0	204.8
160°	173.1	177.8	185.1	196.1	201.9
162.5°	176.0	180.7	186.1	195.1	199.1
165°	181.5	183.9	187.5	192.4	195.9
167.5°	184.6	186.8	188.7	191.2	193.3
170°	187.5	188.7	188.7	191.2	192.3
172.5°	188.5	190.6	189.7	190.2	191.4
175°	191.1	192.3	191.1	189.9	188.7
177.5°	191.1	192.1	191.1	191.1	190.2
180°	191.1	191.1	191.1	191.1	191.1

(END OF REPORT)