

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: P644390

Luminaire Tested: CRQ4DIP-SR4F0-75D100U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644390
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-SR4F0-75D100U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

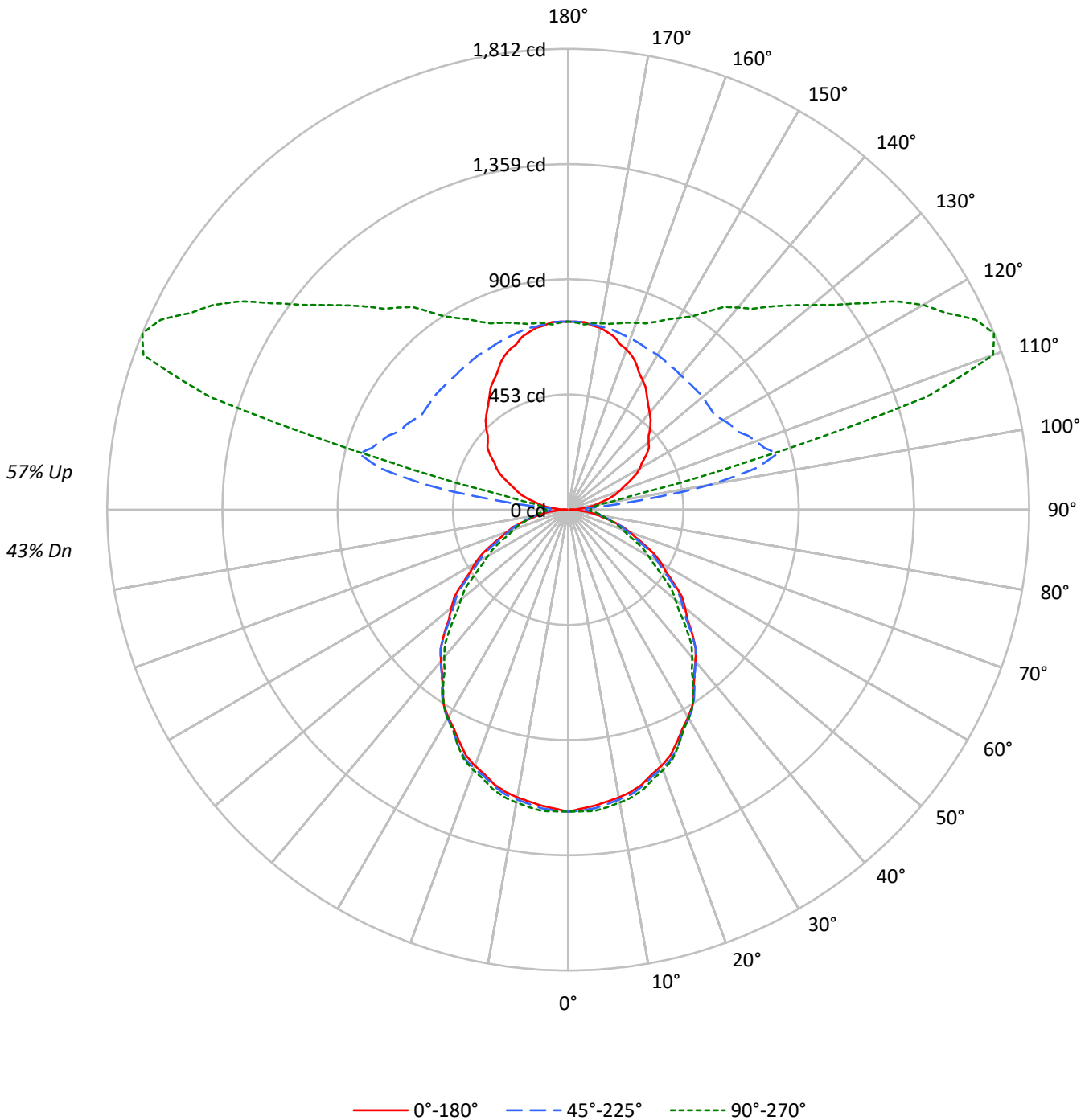
Lumens per Lamp: N/A
Luminaire Lumens: 7037.4 lumens
Efficiency: N/A
Efficacy: 138.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 50.8
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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43																				
1	96	92	88	84	88	84	80	77	69	67	65	56	54	53	43	42	41	36																				
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30																				
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25																				
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	30	28	26	22																				
5	67	56	48	42	61	51	44	39	43	37	33	35	31	28	27	25	22	19																				
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17																				
7	57	45	37	32	52	41	34	30	35	29	26	29	25	22	23	20	18	15																				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13																				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12																				
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	18	15	13	11																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19168	19168	19168
5°	18806	16924	16400
10°	18559	15058	14167
15°	18288	13485	12392
20°	17869	12098	10838
25°	17311	10802	9444
30°	16763	9545	8197
35°	16020	8395	7036
40°	15328	7349	5965
45°	14526	6317	4978
50°	13678	5350	4083
55°	12782	4501	3293
60°	11925	3690	2632
65°	10871	2942	2083
70°	9857	2305	1646
75°	8617	1771	1298
80°	7198	1317	1010
85°	5247	958	768

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14526 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	1.6
10°-20°	318.0	4.5
20°-30°	469.4	6.7
30°-40°	539.7	7.7
40°-50°	523.5	7.4
50°-60°	438.3	6.2
60°-70°	315.8	4.5
70°-80°	192.9	2.7
80°-90°	95.4	1.4
90°-100°	128.1	1.8
100°-110°	661.8	9.4
110°-120°	884.9	12.6
120°-130°	718.3	10.2
130°-140°	576.4	8.2
140°-150°	454.2	6.5
150°-160°	332.1	4.7
160°-170°	206.3	2.9
170°-180°	70.3	1.0
0°-30°	899.4	12.8
0°-40°	1439.1	20.4
0°-60°	2400.9	34.1
0°-90°	3005.0	42.7
90°-120°	1674.7	23.8
90°-150°	3423.6	48.6
90°-180°	4032.0	57.3
0°-180°	7037.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1169	1190	1179	1181	1189	111
15°	1118	1135	1125	1130	1139	315
25°	1010	1026	1023	1018	1024	465
35°	860	873	865	857	857	539
45°	689	696	684	664	654	531
55°	508	515	496	466	451	456
65°	335	337	320	297	288	334
75°	181	181	184	179	176	194
85°	55	67	92	99	99	58
90°	5	38	70	84	86	8
95°	54	84	72	89	100	56
105°	161	229	851	1091	730	170
115°	268	316	729	1512	1767	265
125°	374	421	686	1196	1415	333
135°	456	506	689	985	1131	351
145°	540	585	693	858	949	339
155°	633	656	707	778	814	291
165°	703	712	726	745	759	197
175°	740	744	740	735	731	70
180°	740	740	740	740	740	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.2	1187.2	1187.2	1187.2	1187.2
2.5°	1176.5	1193.5	1183.2	1185.9	1187.2
5°	1168.8	1190.1	1178.8	1180.7	1188.9
7.5°	1158.0	1177.7	1167.8	1170.0	1179.5
10°	1148.6	1168.3	1157.0	1160.6	1168.8
12.5°	1136.6	1154.9	1146.3	1149.8	1158.0
15°	1118.5	1134.8	1125.2	1130.4	1138.6
17.5°	1091.6	1109.3	1099.0	1101.9	1110.1
20°	1071.5	1087.9	1081.6	1081.7	1089.9
22.5°	1047.4	1065.1	1060.1	1056.3	1065.8
25°	1009.5	1025.9	1022.9	1018.0	1024.5
27.5°	971.9	984.0	978.3	973.3	978.3
30°	942.4	957.1	947.4	942.5	947.4
32.5°	910.2	924.9	915.2	908.9	911.2
35°	860.2	873.3	865.2	856.9	856.9
37.5°	812.9	821.5	815.9	801.8	798.2
40°	778.1	787.9	779.7	762.8	757.9
42.5°	741.8	751.7	742.2	723.9	716.3
45°	689.2	695.7	684.2	663.8	654.0
47.5°	634.9	641.7	625.8	603.4	591.6
50°	598.6	606.8	586.9	563.1	550.0
52.5°	563.8	569.3	550.7	522.9	511.1
55°	508.1	514.6	496.3	465.8	451.1
57.5°	456.1	462.3	440.7	411.6	400.1
60°	422.6	427.5	405.8	375.4	363.9
62.5°	385.0	389.9	369.6	343.2	331.7
65°	335.4	337.0	320.3	296.6	288.4
67.5°	288.8	288.8	274.7	257.1	250.5
70°	256.6	256.6	246.5	232.9	226.4
72.5°	227.0	225.7	219.7	210.2	204.9
75°	181.1	181.1	184.5	179.3	176.1
77.5°	140.9	138.2	152.6	151.9	150.2
80°	114.0	114.0	132.5	135.8	134.1
82.5°	89.9	92.5	116.4	121.0	119.4
85°	55.3	66.8	92.2	98.9	98.9
87.5°	25.2	46.1	74.3	84.0	84.3
90°	5.0	37.5	69.7	84.4	86.1
92.5°	21.6	40.9	70.1	88.7	95.3
95°	54.0	84.2	72.4	89.1	99.8
97.5°	86.2	142.5	299.1	116.0	107.0
100°	108.5	174.4	569.3	190.2	138.9
102.5°	129.5	199.1	757.5	449.8	258.8
105°	161.0	228.6	850.8	1091.3	730.5
107.5°	192.5	241.3	808.9	1575.6	1478.0
110°	213.5	259.9	785.2	1652.4	1776.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	235.9	282.3	762.9	1603.2	1811.5
115°	267.7	315.8	729.4	1512.4	1767.2
117.5°	300.1	349.2	720.7	1412.8	1674.9
120°	324.9	371.6	704.4	1337.3	1610.3
122.5°	343.5	392.6	685.8	1273.5	1524.7
125°	374.4	421.2	685.8	1196.4	1414.8
127.5°	399.4	449.0	686.7	1107.0	1322.7
130°	412.9	467.5	690.5	1047.2	1251.9
132.5°	428.8	483.4	689.1	1020.3	1188.6
135°	456.1	506.2	688.8	985.3	1130.9
137.5°	479.4	533.1	688.8	946.7	1071.4
140°	498.0	548.0	688.8	924.1	1037.8
142.5°	516.6	563.0	692.5	897.9	1004.3
145°	539.9	585.4	693.4	858.4	949.4
147.5°	567.8	607.8	699.0	830.0	900.1
150°	586.4	622.8	702.8	811.1	870.3
152.5°	605.0	637.8	702.8	796.0	844.2
155°	632.9	655.7	707.4	778.0	814.5
157.5°	655.3	677.1	713.0	766.7	793.0
160°	670.2	688.4	716.7	759.1	781.9
162.5°	681.3	699.6	720.4	755.2	770.7
165°	702.8	711.9	726.0	745.0	758.6
167.5°	714.9	723.0	730.7	740.2	748.4
170°	726.0	730.6	730.7	740.1	744.6
172.5°	729.8	737.9	734.4	736.4	740.9
175°	740.0	744.5	740.0	735.2	730.7
177.5°	740.0	743.6	740.0	739.9	736.3
180°	740.0	740.0	740.0	740.0	740.0

(END OF REPORT)