

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: P644337

Luminaire Tested: CRQ4DIP-SR4F0-50D125U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644337
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-SR4F0-50D125U940-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

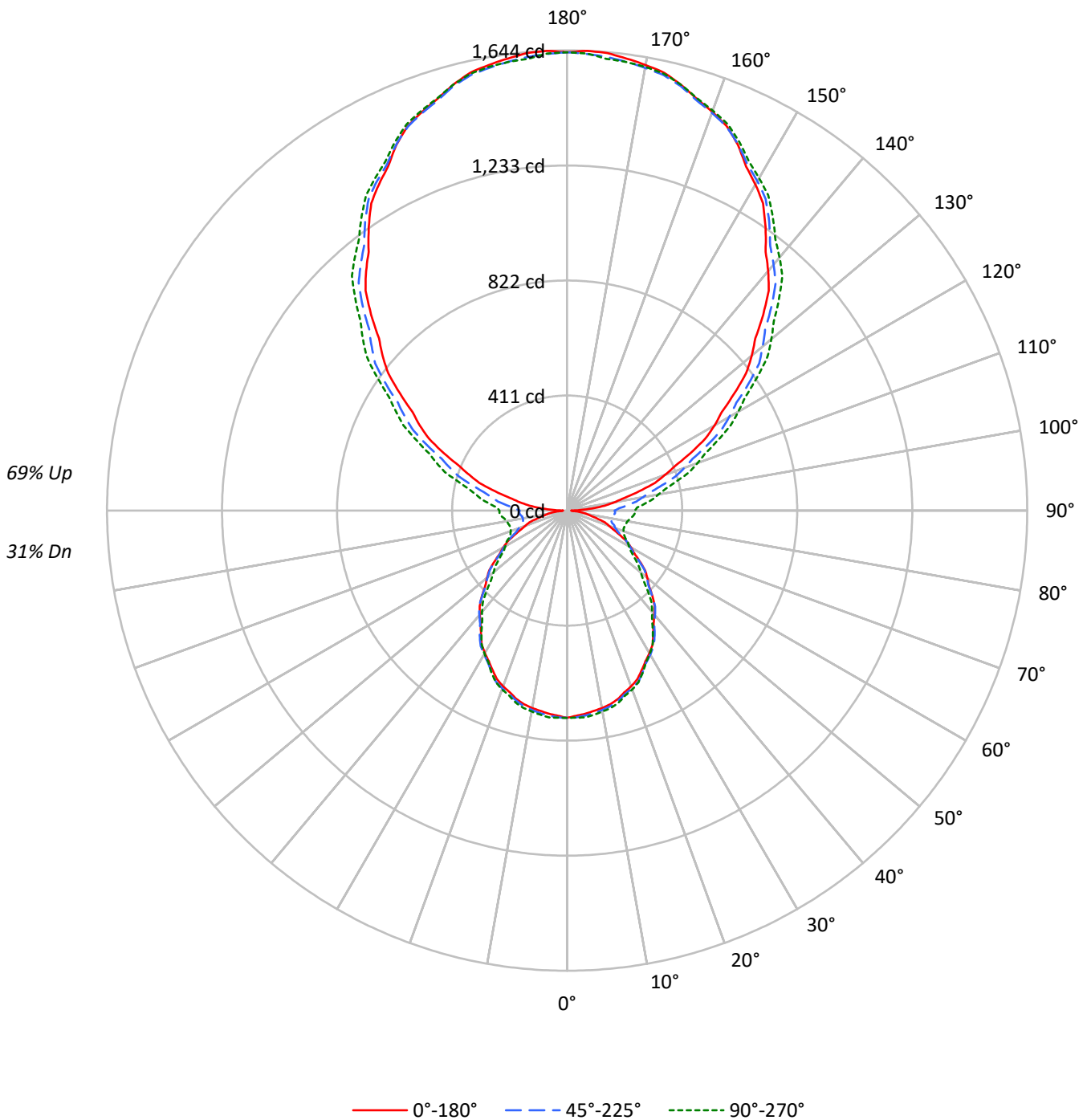
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6744.1 lumens
Efficiency: N/A
Efficacy: 128.5 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: Semi-Indirect

Input Watts (W): 52.5
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	50	30	10	0	
RCR																						
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	38	38	38	31				
1	93	88	84	80	83	79	76	73	62	60	58	47	45	44	33	32	31	24				
2	84	77	70	65	75	69	64	59	54	51	47	41	38	36	28	27	26	20				
3	77	67	60	54	68	61	54	49	48	43	40	36	33	31	25	23	22	17				
4	70	59	52	46	63	54	47	42	42	38	34	32	29	26	22	20	19	14				
5	64	53	45	39	57	48	41	36	38	33	29	29	25	23	20	18	16	13				
6	59	47	39	34	53	43	36	31	34	29	25	26	22	20	18	16	14	11				
7	55	43	35	29	49	38	32	27	31	26	22	24	20	17	17	14	13	10				
8	51	39	31	26	45	35	28	24	28	23	19	22	18	15	15	13	11	9				
9	47	35	28	23	42	32	25	21	26	21	17	20	16	14	14	12	10	8				
10	44	32	25	20	39	29	23	19	23	19	16	18	15	12	13	11	9	7				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9415	8836
15°	11406	8431	7728
20°	11145	7564	6760
25°	10797	6738	5890
30°	10456	5988	5113
35°	9992	5287	4388
40°	9560	4601	3720
45°	9059	3955	3105
50°	8532	3385	2546
55°	7972	2839	2142
60°	7438	2364	1843
65°	6781	1994	1651
70°	6146	1714	1557
75°	5377	1588	1565
80°	4489	1598	1651
85°	3273	1753	1828

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	1.0
10°-20°	198.6	2.9
20°-30°	293.4	4.4
30°-40°	338.0	5.0
40°-50°	328.2	4.9
50°-60°	279.2	4.1
60°-70°	220.1	3.3
70°-80°	175.7	2.6
80°-90°	164.8	2.4
90°-100°	218.0	3.2
100°-110°	364.8	5.4
110°-120°	542.7	8.0
120°-130°	703.5	10.4
130°-140°	796.4	11.8
140°-150°	787.0	11.7
150°-160°	665.6	9.9
160°-170°	443.2	6.6
170°-180°	155.0	2.3
0°-30°	561.9	8.3
0°-40°	899.8	13.3
0°-60°	1507.3	22.3
0°-90°	2067.9	30.7
90°-120°	1125.5	16.7
90°-150°	3412.4	50.6
90°-180°	4676.0	69.3
0°-180°	6744.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	729	742	735	736	742	69
15°	698	711	704	705	710	196
25°	630	643	638	635	639	290
35°	536	550	545	534	534	336
45°	430	439	428	414	408	331
55°	317	328	313	296	294	284
65°	209	220	217	225	228	208
75°	113	126	165	201	212	121
85°	34	82	169	220	236	37
90°	15	79	170	223	241	12
95°	89	123	215	266	277	90
105°	266	284	351	397	404	284
115°	485	508	551	584	593	482
125°	729	756	792	820	827	653
135°	991	1013	1032	1059	1071	763
145°	1236	1251	1258	1267	1281	772
155°	1442	1451	1444	1446	1455	662
165°	1575	1581	1569	1564	1575	444
175°	1641	1647	1627	1620	1620	156
180°	1637	1637	1637	1637	1637	

TEST NUMBER: P644337

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.5	740.5	740.5	740.5	740.5
2.5°	733.8	744.4	739.3	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	735.9	730.1	729.7	735.6
10°	716.4	728.7	723.4	723.8	729.0
12.5°	708.9	723.0	715.3	717.1	722.3
15°	697.6	711.2	703.5	705.0	710.1
17.5°	680.8	693.6	687.2	687.2	692.4
20°	668.3	680.2	676.3	674.7	679.8
22.5°	653.2	666.0	662.9	658.8	664.7
25°	629.6	643.2	638.0	634.9	639.0
27.5°	606.2	619.9	612.2	607.1	610.1
30°	587.8	600.4	594.4	587.8	590.9
32.5°	567.7	581.6	574.3	566.9	568.3
35°	536.5	549.8	544.9	534.4	534.4
37.5°	507.0	519.1	510.6	500.1	497.8
40°	485.3	498.2	488.1	475.8	472.7
42.5°	462.7	475.6	466.0	451.5	446.8
45°	429.8	439.0	428.4	414.0	407.9
47.5°	396.0	406.7	392.7	376.3	369.0
50°	373.4	383.6	371.3	351.2	343.0
52.5°	351.6	361.5	347.3	327.6	321.6
55°	316.9	327.8	313.0	295.9	293.5
57.5°	284.5	295.2	280.4	272.4	269.0
60°	263.6	273.4	260.0	256.8	254.8
62.5°	240.1	251.4	240.2	243.7	244.4
65°	209.2	220.4	217.1	225.2	228.5
67.5°	180.1	190.3	195.3	213.1	219.5
70°	160.0	170.2	183.3	206.4	214.2
72.5°	141.6	152.3	176.3	203.3	211.9
75°	113.0	126.5	165.4	200.8	212.4
77.5°	87.9	104.6	160.9	202.5	215.4
80°	71.1	94.9	160.8	205.0	219.2
82.5°	56.1	86.9	161.9	211.0	225.3
85°	34.5	82.5	168.8	220.2	235.5
87.5°	18.1	80.6	171.7	224.5	241.7
90°	15.3	78.6	169.7	223.3	241.4
92.5°	42.3	91.9	185.3	237.4	250.8
95°	88.7	123.3	214.9	265.9	277.1
97.5°	135.9	162.6	249.1	297.2	307.9
100°	170.7	192.4	275.0	322.1	331.0
102.5°	208.8	226.5	305.0	349.4	360.2
105°	265.9	283.6	351.1	397.1	404.3
107.5°	329.3	347.9	405.8	449.9	458.1
110°	371.6	393.7	445.3	485.8	495.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	417.5	439.6	485.6	524.5	534.0
115°	485.3	508.4	551.3	584.5	593.0
117.5°	556.3	580.0	619.2	651.0	659.2
120°	608.3	630.0	668.4	698.8	705.6
122.5°	654.2	679.2	717.1	747.5	754.3
125°	728.9	755.8	791.8	820.5	827.3
127.5°	805.9	831.2	864.5	893.5	902.4
130°	860.6	882.7	911.7	942.2	952.4
132.5°	911.8	933.9	959.6	989.5	1001.1
135°	990.6	1012.7	1032.4	1058.7	1070.6
137.5°	1066.1	1087.5	1102.6	1123.4	1138.4
140°	1117.5	1136.2	1147.1	1166.5	1180.1
142.5°	1164.8	1183.5	1191.5	1208.2	1221.8
145°	1235.7	1251.0	1258.3	1267.3	1280.9
147.5°	1302.1	1317.0	1320.2	1328.0	1336.5
150°	1345.2	1358.8	1359.1	1362.8	1371.3
152.5°	1385.5	1397.7	1393.8	1396.2	1406.0
155°	1442.5	1451.0	1444.2	1446.2	1454.7
157.5°	1487.7	1496.2	1485.6	1488.9	1495.7
160°	1515.5	1524.0	1512.0	1513.9	1520.7
162.5°	1541.9	1547.7	1537.1	1534.8	1544.4
165°	1574.6	1581.4	1569.4	1564.4	1574.6
167.5°	1602.4	1609.2	1593.4	1588.0	1598.2
170°	1616.3	1623.1	1605.9	1599.2	1609.4
172.5°	1628.8	1635.6	1617.0	1608.8	1616.3
175°	1640.6	1647.4	1626.7	1619.8	1619.8
177.5°	1644.1	1648.2	1633.0	1626.2	1634.4
180°	1637.2	1637.2	1637.2	1637.2	1637.2

(END OF REPORT)