

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P930590

Luminaire Tested: DFN2DS-PN3F0-070DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930590
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN3F0-070DS930-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

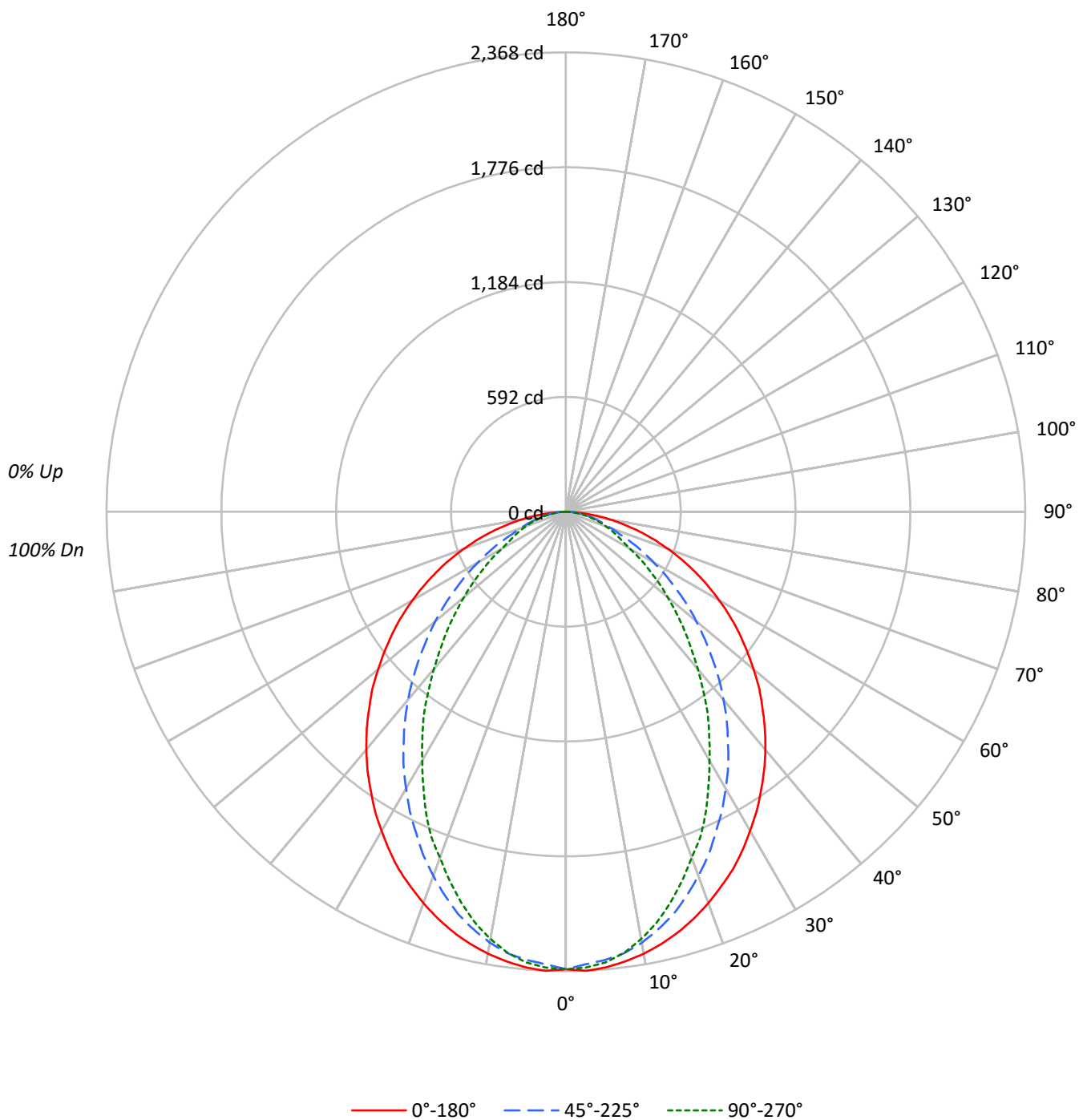
Lumens per Lamp: N/A
Luminaire Lumens: 4849.2 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 73.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2756	2756	2756
5°	2767	2722	2737
10°	2746	2677	2655
15°	2714	2598	2523
20°	2670	2485	2360
25°	2626	2356	2202
30°	2564	2223	1999
35°	2503	2080	1821
40°	2442	1931	1615
45°	2371	1764	1429
50°	2297	1595	1246
55°	2222	1413	1070
60°	2135	1222	888
65°	2036	1027	809
70°	1918	846	743
75°	1773	771	694
80°	1565	689	633
85°	1230	543	543

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2371 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.0	4.6
10°-20°	606.6	12.5
20°-30°	851.7	17.6
30°-40°	928.4	19.1
40°-50°	853.3	17.6
50°-60°	670.1	13.8
60°-70°	436.2	9.0
70°-80°	224.5	4.6
80°-90°	57.3	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1679.3	34.6
0°-40°	2607.7	53.8
0°-60°	4131.2	85.2
0°-90°	4849.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4849.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2358	2358	2358	2358	2358	
5°	2358	2347	2319	2339	2332	224
15°	2243	2219	2147	2106	2085	632
25°	2036	1967	1826	1739	1707	936
35°	1754	1645	1458	1323	1276	1098
45°	1434	1291	1067	915	864	1107
55°	1090	924	693	566	525	974
65°	736	563	371	299	292	730
75°	393	243	171	156	154	415
85°	92	47	40	40	40	110
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2357.9	2357.9	2357.9	2357.9	2357.9
2.5°	2368.5	2357.9	2334.3	2355.8	2351.5
5°	2357.9	2347.2	2319.4	2338.6	2332.3
7.5°	2338.6	2325.9	2296.1	2304.4	2293.8
10°	2313.1	2298.1	2255.5	2249.0	2236.3
12.5°	2281.1	2261.9	2204.2	2191.5	2167.9
15°	2242.6	2219.1	2146.6	2106.1	2084.9
17.5°	2197.8	2163.7	2074.0	2027.1	1992.9
20°	2146.6	2103.8	1997.2	1944.0	1896.9
22.5°	2091.2	2042.1	1918.2	1845.7	1813.9
25°	2035.7	1967.3	1826.5	1739.1	1707.0
27.5°	1969.6	1896.9	1741.2	1640.9	1591.8
30°	1899.2	1817.9	1647.2	1538.6	1480.9
32.5°	1830.8	1732.6	1557.8	1429.7	1376.2
35°	1754.0	1645.2	1457.5	1323.1	1276.0
37.5°	1679.4	1561.9	1363.6	1216.1	1163.0
40°	1600.3	1472.5	1265.3	1113.9	1058.4
42.5°	1519.3	1382.8	1167.2	1009.2	956.1
45°	1434.0	1290.9	1067.0	915.3	864.1
47.5°	1352.9	1201.5	971.0	819.3	772.5
50°	1263.2	1111.8	877.0	729.7	685.1
52.5°	1175.6	1015.6	787.4	646.5	606.0
55°	1090.3	923.9	693.4	565.5	525.0
57.5°	1002.9	832.2	610.4	490.8	456.6
60°	913.3	742.5	522.7	414.1	379.9
62.5°	825.8	655.2	448.0	345.7	328.7
65°	736.2	563.2	371.3	298.9	292.3
67.5°	650.9	477.9	298.9	262.3	256.1
70°	561.2	394.8	247.4	226.2	217.5
72.5°	475.9	317.8	206.9	190.0	185.7
75°	392.6	243.1	170.7	155.7	153.7
77.5°	309.5	172.7	134.5	125.8	121.6
80°	232.5	123.8	102.4	94.0	94.0
82.5°	162.1	83.3	70.4	66.1	66.1
85°	91.7	46.9	40.5	40.5	40.5
87.5°	34.1	17.0	17.0	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.76	16.28	15.12	16.59	16.91	10.72	12.24	11.08	12.55	12.87
	3H	16.52	17.89	16.90	18.22	18.58	11.98	13.35	12.36	13.68	14.04
	4H	17.19	18.47	17.59	18.82	19.20	12.48	13.77	12.88	14.11	14.49
	6H	17.68	18.86	18.09	19.23	19.62	12.87	14.05	13.28	14.42	14.81
	8H	17.84	18.97	18.27	19.36	19.76	12.99	14.12	13.42	14.51	14.91
	12H	17.95	19.02	18.38	19.41	19.84	13.07	14.15	13.50	14.53	14.96
4H	2H	14.86	16.14	15.26	16.49	16.87	11.41	12.69	11.81	13.04	13.42
	3H	16.79	17.86	17.21	18.26	18.66	12.86	13.92	13.27	14.32	14.72
	4H	17.54	18.50	17.98	18.92	19.35	13.46	14.41	13.89	14.83	15.27
	6H	18.14	18.97	18.59	19.41	19.87	13.94	14.78	14.40	15.22	15.68
	8H	18.35	19.13	18.81	19.57	20.04	14.11	14.88	14.57	15.33	15.79
	12H	18.50	19.20	18.99	19.68	20.15	14.22	14.92	14.71	15.40	15.87
8H	4H	17.57	18.35	18.03	18.79	19.26	13.81	14.59	14.27	15.03	15.50
	6H	18.21	18.85	18.70	19.34	19.82	14.40	15.04	14.89	15.53	16.01
	8H	18.46	19.03	18.97	19.54	20.03	14.62	15.19	15.13	15.70	16.19
	12H	18.66	19.17	19.17	19.66	20.23	14.80	15.31	15.31	15.80	16.36
12H	4H	17.55	18.25	18.03	18.73	19.20	13.85	14.55	14.33	15.03	15.50
	6H	18.19	18.76	18.70	19.27	19.76	14.46	15.04	14.97	15.55	16.04
	8H	18.47	18.98	18.98	19.47	20.04	14.73	15.24	15.24	15.73	16.30