

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: P930750

Luminaire Tested: DFN2DS-PN4F0-100DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930750
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-PN4F0-100DS927-RLL
Description: 4 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

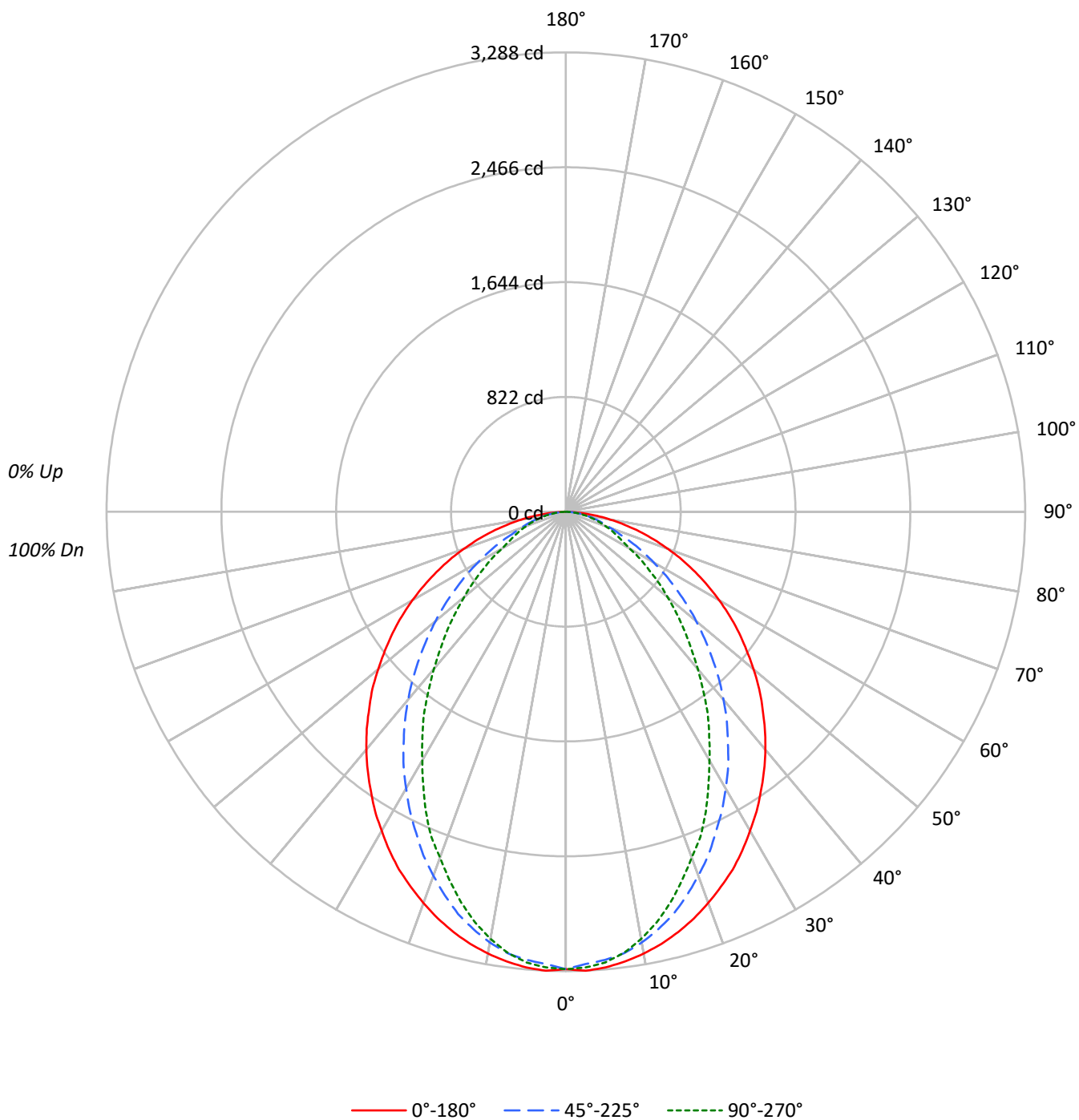
Lumens per Lamp: N/A
Luminaire Lumens: 6732.0 lumens
Efficiency: N/A
Efficacy: 63.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 105.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2389	2389	2389
5°	2398	2359	2372
10°	2380	2321	2301
15°	2353	2252	2187
20°	2315	2154	2046
25°	2276	2042	1909
30°	2222	1927	1733
35°	2170	1803	1578
40°	2117	1674	1400
45°	2055	1529	1238
50°	1992	1383	1080
55°	1926	1225	928
60°	1851	1059	770
65°	1765	890	701
70°	1663	733	645
75°	1537	668	602
80°	1357	597	548
85°	1066	471	471

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2055 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.8	4.6
10°-20°	842.2	12.5
20°-30°	1182.4	17.6
30°-40°	1288.9	19.1
40°-50°	1184.6	17.6
50°-60°	930.3	13.8
60°-70°	605.5	9.0
70°-80°	311.7	4.6
80°-90°	79.6	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°	2331.3	34.6
0°-40°	3620.2	53.8
0°-60°	5735.1	85.2
0°-90°	6732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3273	3273	3273	3273	3273	
5°	3273	3258	3220	3247	3238	310
15°	3113	3081	2980	2924	2894	877
25°	2826	2731	2536	2414	2370	1300
35°	2435	2284	2023	1837	1771	1524
45°	1991	1792	1481	1271	1200	1537
55°	1514	1283	963	785	729	1353
65°	1022	782	515	415	406	1013
75°	545	338	237	216	213	576
85°	127	65	56	56	56	153
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3273.3	3273.3	3273.3	3273.3	3273.3
2.5°	3288.1	3273.3	3240.6	3270.5	3264.5
5°	3273.3	3258.5	3219.9	3246.6	3237.8
7.5°	3246.6	3229.0	3187.5	3199.1	3184.4
10°	3211.1	3190.3	3131.3	3122.1	3104.6
12.5°	3166.8	3140.0	3059.9	3042.3	3009.6
15°	3113.4	3080.6	2980.1	2923.8	2894.3
17.5°	3051.1	3003.7	2879.2	2814.1	2766.7
20°	2980.1	2920.7	2772.6	2698.8	2633.4
22.5°	2903.1	2834.9	2662.9	2562.4	2518.1
25°	2826.1	2731.2	2535.7	2414.3	2369.7
27.5°	2734.3	2633.4	2417.2	2278.0	2209.8
30°	2636.6	2523.7	2286.7	2135.9	2055.8
32.5°	2541.7	2405.2	2162.6	1984.8	1910.5
35°	2435.1	2284.0	2023.4	1836.7	1771.3
37.5°	2331.4	2168.3	1893.0	1688.4	1614.5
40°	2221.7	2044.2	1756.6	1546.3	1469.3
42.5°	2109.2	1919.6	1620.5	1401.1	1327.2
45°	1990.7	1792.1	1481.3	1270.7	1199.6
47.5°	1878.2	1668.0	1348.0	1137.4	1072.4
50°	1753.7	1543.4	1217.5	1013.0	951.0
52.5°	1632.1	1409.9	1093.1	897.6	841.3
55°	1513.6	1282.6	962.7	785.1	728.8
57.5°	1392.3	1155.3	847.4	681.4	633.9
60°	1267.8	1030.9	725.7	574.8	527.4
62.5°	1146.5	909.5	622.0	480.0	456.4
65°	1022.1	781.9	515.4	414.8	405.7
67.5°	903.6	663.5	414.8	364.2	355.4
70°	779.1	548.1	343.5	313.9	302.1
72.5°	660.6	441.2	287.3	263.7	257.7
75°	545.0	337.6	237.0	216.2	213.4
77.5°	429.7	239.8	186.7	174.7	168.8
80°	322.7	171.9	142.1	130.4	130.4
82.5°	225.0	115.6	97.7	91.8	91.8
85°	127.3	65.0	56.2	56.2	56.2
87.5°	47.4	23.6	23.6	20.8	20.8
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	14.26	15.78	14.63	16.10	16.41	10.22	11.74	10.59	12.06	12.37
	3H	16.03	17.39	16.40	17.72	18.08	11.49	12.85	11.86	13.18	13.54
	4H	16.69	17.97	17.09	18.32	18.70	11.99	13.27	12.39	13.62	14.00
	6H	17.18	18.36	17.59	18.73	19.12	12.37	13.55	12.78	13.92	14.31
	8H	17.35	18.47	17.77	18.86	19.26	12.49	13.62	12.92	14.01	14.41
	12H	17.45	18.53	17.88	18.91	19.34	12.57	13.65	13.01	14.04	14.46
4H	2H	14.36	15.65	14.76	15.99	16.37	10.92	12.20	11.32	12.55	12.92
	3H	16.30	17.36	16.71	17.76	18.16	12.36	13.42	12.77	13.82	14.22
	4H	17.05	18.00	17.48	18.42	18.86	12.96	13.92	13.39	14.33	14.77
	6H	17.64	18.47	18.10	18.91	19.37	13.45	14.28	13.90	14.72	15.18
	8H	17.85	18.63	18.32	19.08	19.54	13.61	14.39	14.07	14.83	15.30
	12H	18.01	18.70	18.49	19.18	19.65	13.73	14.42	14.21	14.90	15.37
8H	4H	17.07	17.85	17.54	18.29	18.76	13.31	14.09	13.78	14.53	15.00
	6H	17.71	18.35	18.21	18.84	19.32	13.90	14.54	14.40	15.03	15.51
	8H	17.96	18.54	18.47	19.05	19.53	14.12	14.70	14.63	15.21	15.70
	12H	18.16	18.67	18.67	19.17	19.73	14.30	14.81	14.81	15.30	15.87
12H	4H	17.06	17.75	17.54	18.23	18.70	13.36	14.05	13.84	14.53	15.00
	6H	17.69	18.27	18.20	18.78	19.27	13.96	14.54	14.48	15.05	15.54
	8H	17.97	18.48	18.48	18.98	19.54	14.24	14.75	14.75	15.24	15.80