

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: P930624

Luminaire Tested: DFN2DS-PN3F0-090DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930624
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-PN3F0-090DS927-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

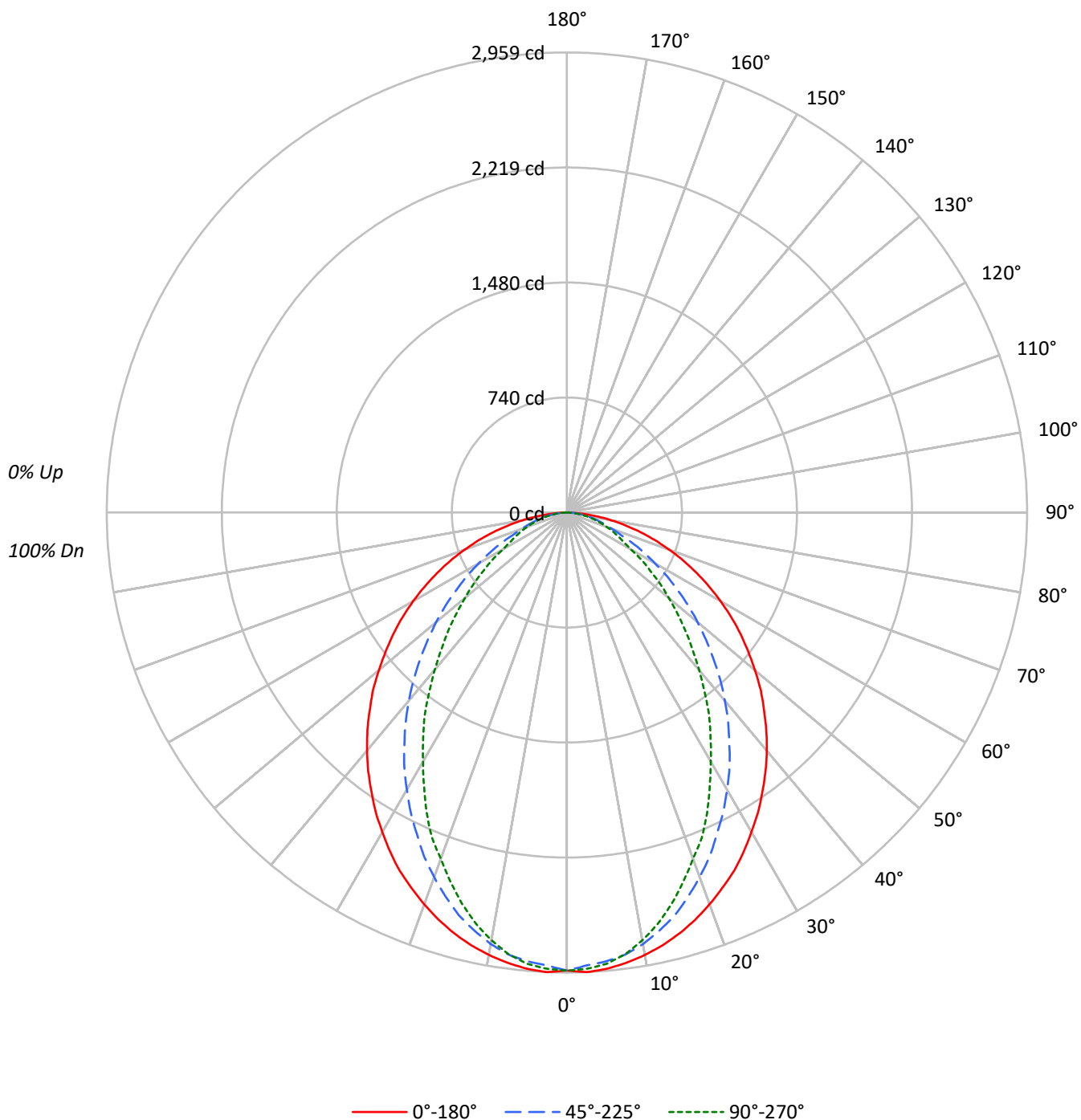
Lumens per Lamp: N/A
Luminaire Lumens: 6058.8 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	3444	3444	3444
5°	3457	3401	3419
10°	3430	3345	3317
15°	3391	3246	3152
20°	3337	3104	2948
25°	3281	2944	2751
30°	3203	2778	2497
35°	3128	2599	2275
40°	3051	2412	2018
45°	2962	2204	1785
50°	2870	1993	1557
55°	2776	1766	1337
60°	2668	1527	1110
65°	2544	1283	1010
70°	2397	1057	929
75°	2215	963	868
80°	1956	860	790
85°	1536	679	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2962 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.1	4.6
10°-20°	758.0	12.5
20°-30°	1064.1	17.6
30°-40°	1160.0	19.1
40°-50°	1066.2	17.6
50°-60°	837.3	13.8
60°-70°	545.0	9.0
70°-80°	280.5	4.6
80°-90°	71.6	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°	2098.2	34.6
0°-40°	3258.2	53.8
0°-60°	5161.6	85.2
0°-90°	6058.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6058.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2946	2946	2946	2946	2946	
5°	2946	2933	2898	2922	2914	279
15°	2802	2773	2682	2631	2605	790
25°	2544	2458	2282	2173	2133	1170
35°	2192	2056	1821	1653	1594	1372
45°	1792	1613	1333	1144	1080	1384
55°	1362	1154	866	707	656	1217
65°	920	704	464	373	365	912
75°	490	304	213	195	192	519
85°	114	58	51	51	51	137
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2946.0	2946.0	2946.0	2946.0	2946.0
2.5°	2959.3	2946.0	2916.5	2943.5	2938.1
5°	2946.0	2932.7	2897.9	2921.9	2914.0
7.5°	2921.9	2906.1	2868.8	2879.2	2865.9
10°	2890.0	2871.3	2818.2	2809.9	2794.1
12.5°	2850.1	2826.1	2753.9	2738.1	2708.6
15°	2802.0	2772.6	2682.1	2631.4	2604.9
17.5°	2746.0	2703.3	2591.3	2532.7	2490.0
20°	2682.1	2628.6	2495.4	2428.9	2370.1
22.5°	2612.8	2551.4	2396.7	2306.1	2266.3
25°	2543.5	2458.1	2282.1	2172.9	2132.8
27.5°	2460.9	2370.1	2175.5	2050.2	1988.8
30°	2372.9	2271.4	2058.1	1922.3	1850.2
32.5°	2287.5	2164.7	1946.3	1786.3	1719.5
35°	2191.6	2055.6	1821.0	1653.1	1594.2
37.5°	2098.2	1951.5	1703.7	1519.5	1453.1
40°	1999.6	1839.7	1580.9	1391.7	1322.4
42.5°	1898.3	1727.7	1458.4	1261.0	1194.5
45°	1791.7	1612.9	1333.1	1143.6	1079.7
47.5°	1690.4	1501.2	1213.2	1023.7	965.1
50°	1578.4	1389.1	1095.8	911.7	855.9
52.5°	1468.9	1268.9	983.8	807.8	757.2
55°	1362.2	1154.3	866.4	706.6	655.9
57.5°	1253.1	1039.8	762.6	613.2	570.6
60°	1141.0	927.7	653.2	517.3	474.6
62.5°	1031.9	818.6	559.8	432.0	410.7
65°	919.8	703.8	463.9	373.3	365.2
67.5°	813.2	597.1	373.3	327.8	319.9
70°	701.2	493.3	309.2	282.6	271.8
72.5°	594.6	397.1	258.5	237.3	232.0
75°	490.5	303.8	213.3	194.6	192.1
77.5°	386.7	215.8	168.0	157.3	151.9
80°	290.5	154.8	127.8	117.4	117.4
82.5°	202.5	104.1	88.0	82.6	82.6
85°	114.5	58.5	50.6	50.6	50.6
87.5°	42.7	21.2	21.2	18.7	18.7
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	15.53	17.05	15.90	17.37	17.68	11.49	13.01	11.86	13.33	13.64
	3H	17.30	18.66	17.67	18.99	19.35	12.76	14.12	13.13	14.45	14.81
	4H	17.96	19.24	18.36	19.59	19.97	13.26	14.54	13.66	14.89	15.27
	6H	18.45	19.63	18.86	20.00	20.39	13.64	14.82	14.05	15.19	15.58
	8H	18.62	19.74	19.04	20.13	20.53	13.76	14.89	14.19	15.28	15.68
	12H	18.72	19.80	19.15	20.18	20.61	13.85	14.92	14.28	15.31	15.73
4H	2H	15.64	16.92	16.03	17.26	17.64	12.19	13.47	12.59	13.82	14.19
	3H	17.57	18.63	17.98	19.03	19.43	13.63	14.69	14.04	15.09	15.49
	4H	18.32	19.27	18.75	19.69	20.13	14.23	15.19	14.66	15.60	16.04
	6H	18.91	19.74	19.37	20.18	20.64	14.72	15.55	15.18	15.99	16.45
	8H	19.12	19.90	19.59	20.35	20.81	14.88	15.66	15.34	16.10	16.57
	12H	19.28	19.97	19.76	20.45	20.92	15.00	15.69	15.48	16.17	16.64
8H	4H	18.34	19.12	18.81	19.56	20.03	14.58	15.36	15.05	15.80	16.27
	6H	18.98	19.62	19.48	20.11	20.59	15.17	15.81	15.67	16.30	16.78
	8H	19.23	19.81	19.74	20.32	20.80	15.39	15.97	15.91	16.48	16.97
	12H	19.43	19.94	19.94	20.44	21.00	15.57	16.08	16.08	16.57	17.14
12H	4H	18.33	19.02	18.81	19.50	19.97	14.63	15.32	15.11	15.80	16.27
	6H	18.96	19.54	19.47	20.05	20.54	15.23	15.81	15.75	16.32	16.81
	8H	19.24	19.75	19.75	20.25	20.81	15.51	16.02	16.02	16.51	17.07