

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: P930439

Luminaire Tested: DFN2DS-PN2F0-030DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930439
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN2F0-030DS840-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

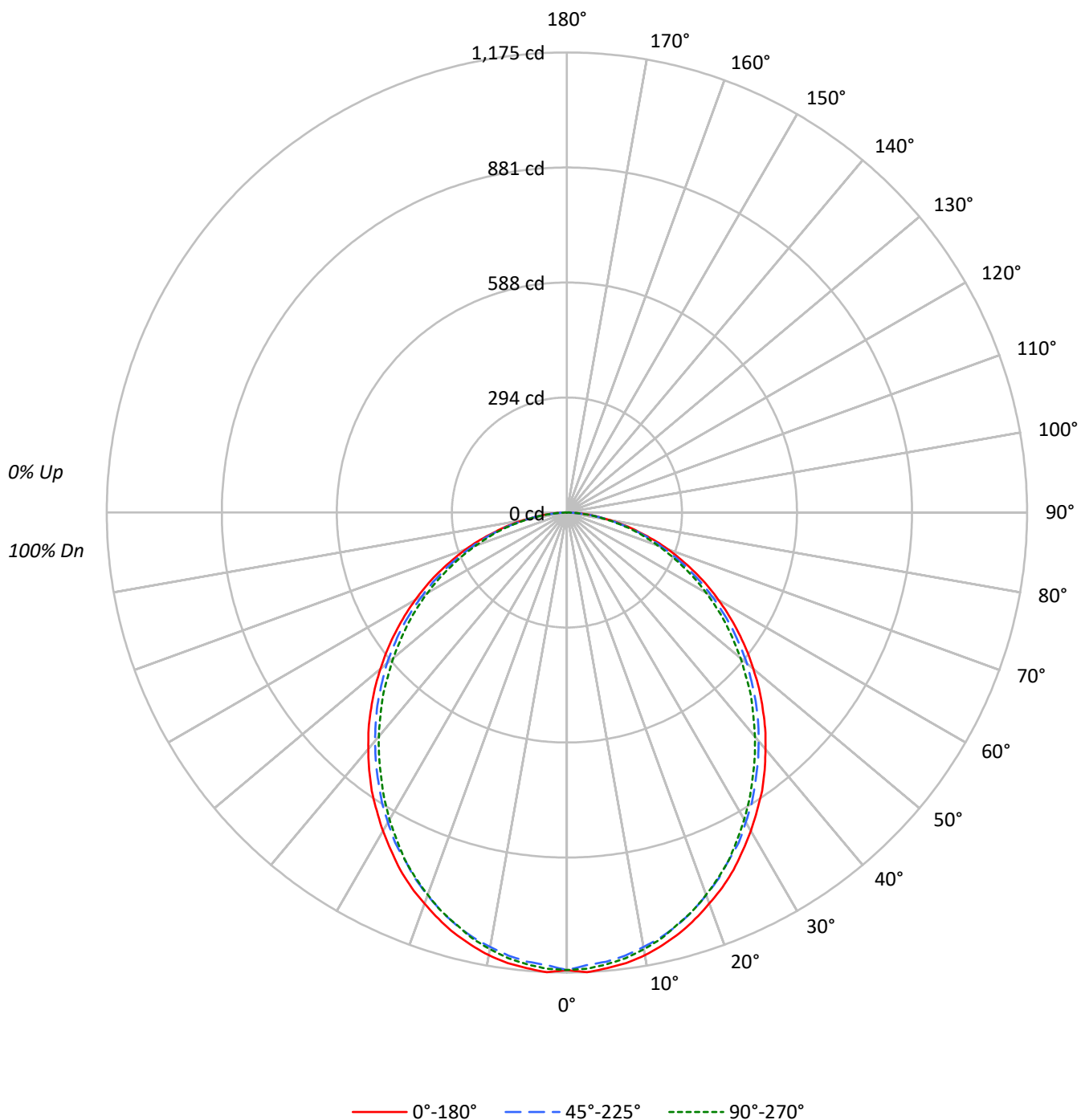
Lumens per Lamp: N/A
Luminaire Lumens: 2973.0 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2531	2531	2531
5°	2540	2504	2519
10°	2525	2479	2491
15°	2494	2446	2444
20°	2450	2398	2395
25°	2406	2339	2339
30°	2349	2285	2265
35°	2297	2219	2186
40°	2230	2154	2113
45°	2165	2089	2038
50°	2093	2022	1950
55°	2020	1943	1871
60°	1937	1850	1782
65°	1849	1756	1676
70°	1736	1644	1565
75°	1579	1514	1477
80°	1402	1358	1290
85°	1143	1088	977

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2165 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.7
10°-20°	309.4	10.4
20°-30°	454.7	15.3
30°-40°	528.2	17.8
40°-50°	527.5	17.7
50°-60°	460.0	15.5
60°-70°	340.0	11.4
70°-80°	192.4	6.5
80°-90°	50.8	1.7
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°	874.2	29.4
0°-40°	1402.3	47.2
0°-60°	2389.8	80.4
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1164	1152	1161	1158	111
15°	1112	1106	1091	1096	1090	313
25°	1007	998	979	981	979	463
35°	869	857	839	832	827	542
45°	707	699	682	670	665	545
55°	535	528	515	501	496	478
65°	361	354	343	333	327	357
75°	189	187	181	174	176	201
85°	46	45	44	40	39	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.5	1168.5	1168.5	1168.5	1168.5
2.5°	1175.3	1169.7	1157.3	1168.5	1166.4
5°	1168.5	1164.1	1151.7	1160.7	1158.5
7.5°	1160.7	1154.0	1141.5	1150.6	1148.3
10°	1148.3	1140.4	1127.0	1135.9	1132.6
12.5°	1131.4	1124.7	1111.3	1116.8	1114.6
15°	1112.3	1105.7	1091.0	1095.5	1089.9
17.5°	1088.7	1082.1	1067.4	1073.0	1067.4
20°	1062.9	1056.2	1040.4	1043.7	1039.3
22.5°	1037.1	1027.0	1012.3	1012.3	1010.0
25°	1006.7	997.8	978.7	980.9	978.7
27.5°	973.0	965.1	950.5	947.2	941.6
30°	939.3	930.3	913.5	910.1	905.6
32.5°	903.4	896.7	878.7	871.9	867.4
35°	868.6	857.4	839.3	832.5	826.9
37.5°	829.2	819.1	801.1	793.2	787.6
40°	788.8	779.8	761.8	751.8	747.2
42.5°	749.4	740.4	722.5	711.2	704.5
45°	706.8	698.9	682.0	669.7	665.2
47.5°	665.2	657.4	639.3	626.9	620.2
50°	621.3	615.7	600.0	584.3	578.7
52.5°	578.7	570.8	556.3	543.8	535.9
55°	534.9	528.1	514.6	501.2	495.6
57.5°	491.0	485.4	470.8	457.3	452.8
60°	447.1	442.7	427.0	414.6	411.3
62.5°	404.5	396.6	385.4	374.2	369.7
65°	360.8	354.0	342.7	332.6	327.0
67.5°	315.8	310.1	300.0	292.2	287.7
70°	274.2	269.7	259.6	251.7	247.2
72.5°	231.5	226.9	221.3	213.5	210.2
75°	188.7	186.6	180.9	174.2	176.5
77.5°	150.6	146.0	143.7	140.4	137.1
80°	112.4	111.2	108.9	105.6	103.4
82.5°	76.4	76.4	75.4	70.8	70.8
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
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	14.51	16.12	14.87	16.43	16.75	14.06	15.68	14.43	15.99	16.30
	3H	16.26	17.71	16.64	18.04	18.40	15.77	17.22	16.14	17.55	17.91
	4H	16.91	18.27	17.30	18.62	19.00	16.41	17.78	16.81	18.13	18.50
	6H	17.37	18.64	17.79	19.01	19.40	16.87	18.14	17.28	18.51	18.90
	8H	17.52	18.73	17.94	19.12	19.52	17.01	18.23	17.44	18.61	19.01
	12H	17.61	18.77	18.04	19.15	19.58	17.10	18.26	17.53	18.64	19.07
4H	2H	15.07	16.44	15.47	16.79	17.16	14.72	16.09	15.11	16.43	16.81
	3H	17.04	18.19	17.45	18.59	18.99	16.64	17.78	17.05	18.18	18.58
	4H	17.82	18.86	18.25	19.27	19.71	17.40	18.43	17.83	18.85	19.28
	6H	18.42	19.32	18.87	19.76	20.22	17.99	18.89	18.44	19.33	19.79
	8H	18.61	19.45	19.07	19.90	20.36	18.17	19.02	18.63	19.46	19.92
	12H	18.74	19.50	19.22	19.97	20.44	18.29	19.05	18.77	19.52	19.99
8H	4H	18.09	18.94	18.55	19.38	19.85	17.72	18.57	18.18	19.01	19.47
	6H	18.81	19.51	19.30	20.00	20.48	18.43	19.13	18.92	19.62	20.09
	8H	19.07	19.70	19.58	20.20	20.69	18.68	19.31	19.19	19.81	20.30
	12H	19.27	19.82	19.77	20.32	20.88	18.85	19.41	19.36	19.90	20.46
12H	4H	18.12	18.88	18.60	19.36	19.83	17.76	18.52	18.24	18.99	19.46
	6H	18.85	19.49	19.36	19.99	20.48	18.49	19.12	18.99	19.62	20.11
	8H	19.17	19.73	19.67	20.22	20.78	18.79	19.35	19.30	19.84	20.40