

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: P930243

Luminaire Tested: DFN2DS-HX3F0-090DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930243
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-HX3F0-090DS850-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

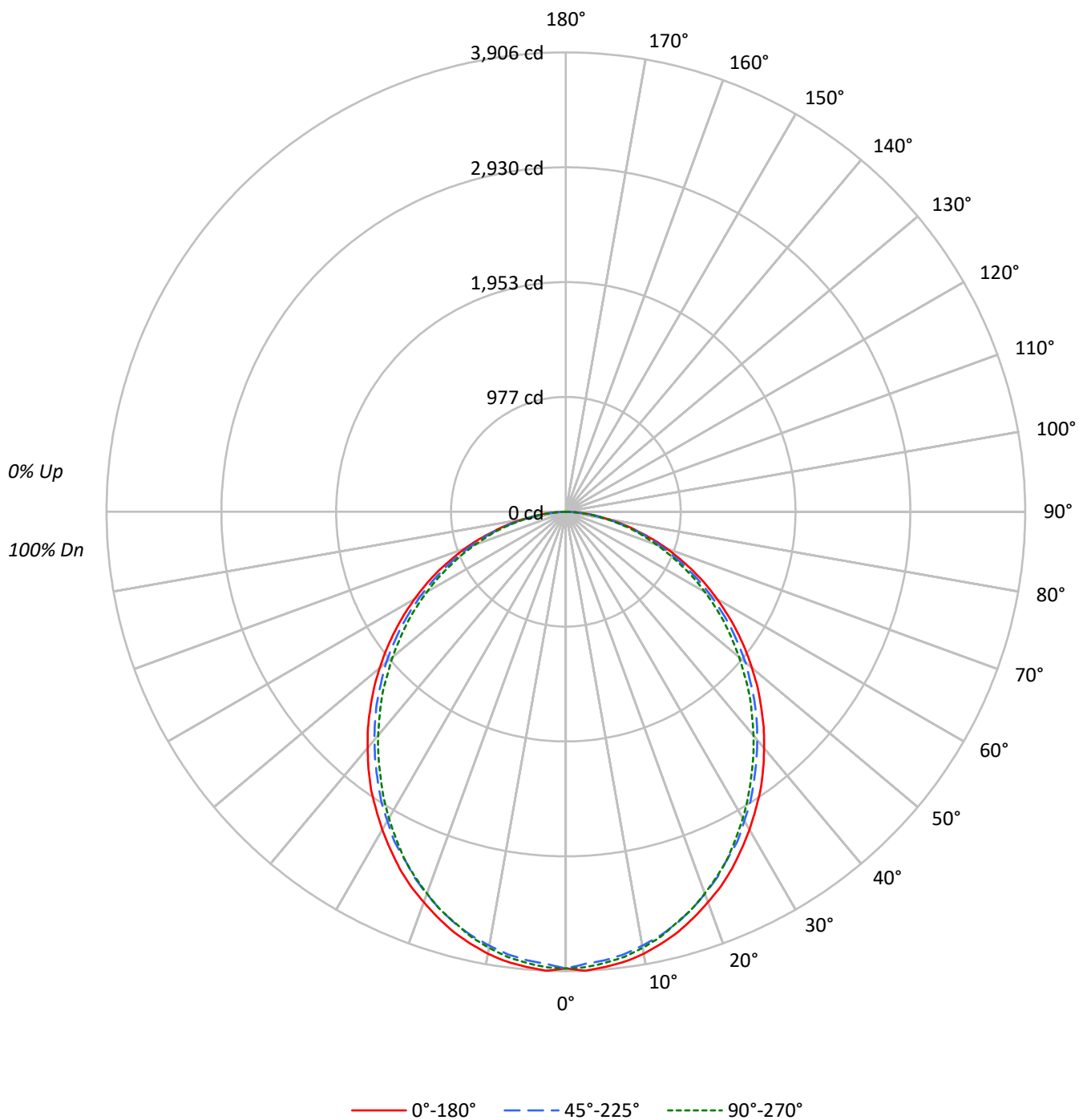
Lumens per Lamp: N/A
Luminaire Lumens: 9881.2 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930243

CATALOG NUMBER: DFN2DS-HX3F0-090DS850-FLL

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°	4499	4499	4499
5°	4516	4451	4477
10°	4489	4406	4428
15°	4434	4348	4344
20°	4355	4263	4258
25°	4277	4158	4158
30°	4176	4061	4026
35°	4082	3945	3887
40°	3964	3828	3755
45°	3848	3713	3622
50°	3721	3594	3466
55°	3590	3454	3326
60°	3443	3288	3167
65°	3286	3122	2979
70°	3086	2921	2783
75°	2807	2690	2624
80°	2492	2415	2292
85°	2032	1938	1738

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3848 cd/sqm

TEST NUMBER: P930243

CATALOG NUMBER: DFN2DS-HX3F0-090DS850-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.5	3.7
10°-20°	1028.5	10.4
20°-30°	1511.4	15.3
30°-40°	1755.4	17.8
40°-50°	1753.3	17.7
50°-60°	1528.8	15.5
60°-70°	1130.1	11.4
70°-80°	639.4	6.5
80°-90°	168.8	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°	2905.4	29.4
0°-40°	4660.9	47.2
0°-60°	7942.9	80.4
0°-90°	9881.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9881.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3884	3884	3884	3884	3884	
5°	3884	3869	3828	3858	3850	369
15°	3697	3675	3626	3641	3622	1041
25°	3346	3316	3253	3260	3253	1540
35°	2887	2850	2790	2767	2748	1803
45°	2349	2323	2267	2226	2211	1813
55°	1778	1755	1710	1666	1647	1589
65°	1199	1176	1139	1106	1087	1185
75°	627	620	601	579	586	670
85°	153	149	146	134	131	180
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-HX3F0-090DS850-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3883.6	3883.6	3883.6	3883.6	3883.6
2.5°	3906.2	3887.6	3846.5	3883.6	3876.5
5°	3883.6	3869.0	3827.8	3857.5	3850.3
7.5°	3857.5	3835.4	3794.1	3824.3	3816.7
10°	3816.7	3790.6	3745.8	3775.5	3764.4
12.5°	3760.4	3738.2	3693.5	3712.0	3704.6
15°	3697.1	3674.9	3626.1	3641.2	3622.5
17.5°	3618.6	3596.4	3547.7	3566.3	3547.7
20°	3532.6	3510.4	3458.1	3469.2	3454.5
22.5°	3447.0	3413.4	3364.6	3364.6	3357.1
25°	3346.0	3316.2	3252.9	3260.0	3252.9
27.5°	3233.8	3207.7	3159.4	3148.3	3129.7
30°	3122.2	3092.0	3036.1	3025.0	3010.0
32.5°	3002.5	2980.3	2920.4	2897.9	2882.8
35°	2886.8	2849.6	2789.7	2767.2	2748.5
37.5°	2756.1	2722.4	2662.5	2636.4	2617.8
40°	2621.7	2591.6	2531.7	2498.5	2483.5
42.5°	2490.9	2460.9	2401.4	2363.8	2341.7
45°	2349.1	2323.0	2266.7	2225.9	2210.9
47.5°	2210.9	2184.7	2124.8	2083.7	2061.5
50°	2065.1	2046.4	1994.1	1941.9	1923.2
52.5°	1923.2	1897.1	1848.7	1807.6	1781.4
55°	1777.8	1755.2	1710.4	1665.7	1647.1
57.5°	1632.0	1613.4	1564.7	1519.9	1504.8
60°	1486.2	1471.5	1419.2	1378.0	1367.0
62.5°	1344.3	1318.2	1280.9	1243.7	1228.7
65°	1198.9	1176.3	1139.1	1105.5	1086.8
67.5°	1049.6	1030.6	997.2	971.2	956.1
70°	911.3	896.2	862.6	836.4	821.8
72.5°	769.4	754.3	735.7	709.6	698.6
75°	627.3	620.0	601.1	578.9	586.4
77.5°	500.4	485.4	477.9	466.8	455.7
80°	373.6	369.6	362.1	351.0	343.6
82.5°	254.0	254.0	250.4	235.3	235.3
85°	152.9	149.4	145.8	134.3	130.8
87.5°	67.3	59.8	52.3	41.3	37.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930243

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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	16.51	18.12	16.87	18.43	18.75	16.06	17.67	16.43	17.99	18.30
	3H	18.26	19.71	18.63	20.04	20.40	17.77	19.22	18.14	19.55	19.91
	4H	18.90	20.27	19.30	20.62	21.00	18.41	19.78	18.81	20.13	20.50
	6H	19.37	20.64	19.78	21.01	21.40	18.87	20.14	19.28	20.50	20.90
	8H	19.52	20.73	19.94	21.12	21.51	19.01	20.22	19.44	20.61	21.01
	12H	19.61	20.77	20.04	21.15	21.58	19.09	20.25	19.52	20.64	21.06
4H	2H	17.07	18.44	17.47	18.78	19.16	16.71	18.08	17.11	18.43	18.81
	3H	19.04	20.19	19.45	20.59	20.99	18.64	19.78	19.05	20.18	20.58
	4H	19.82	20.86	20.25	21.27	21.71	19.40	20.43	19.83	20.85	21.28
	6H	20.42	21.32	20.87	21.76	22.22	19.98	20.89	20.44	21.33	21.79
	8H	20.61	21.45	21.07	21.89	22.36	20.17	21.01	20.63	21.46	21.92
	12H	20.74	21.50	21.22	21.97	22.44	20.29	21.05	20.77	21.52	21.99
8H	4H	20.09	20.94	20.55	21.38	21.85	19.72	20.57	20.18	21.01	21.47
	6H	20.81	21.51	21.30	22.00	22.47	20.43	21.13	20.92	21.62	22.09
	8H	21.07	21.70	21.58	22.20	22.69	20.67	21.31	21.18	21.81	22.30
	12H	21.27	21.82	21.77	22.31	22.88	20.85	21.41	21.36	21.90	22.46
12H	4H	20.12	20.88	20.60	21.35	21.82	19.75	20.51	20.23	20.99	21.46
	6H	20.85	21.48	21.36	21.99	22.48	20.48	21.12	20.99	21.62	22.11
	8H	21.17	21.72	21.67	22.21	22.78	20.79	21.35	21.30	21.84	22.40