

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: P930371

Luminaire Tested: DFN2DS-HX4F0-100DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930371
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-HX4F0-100DS927-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

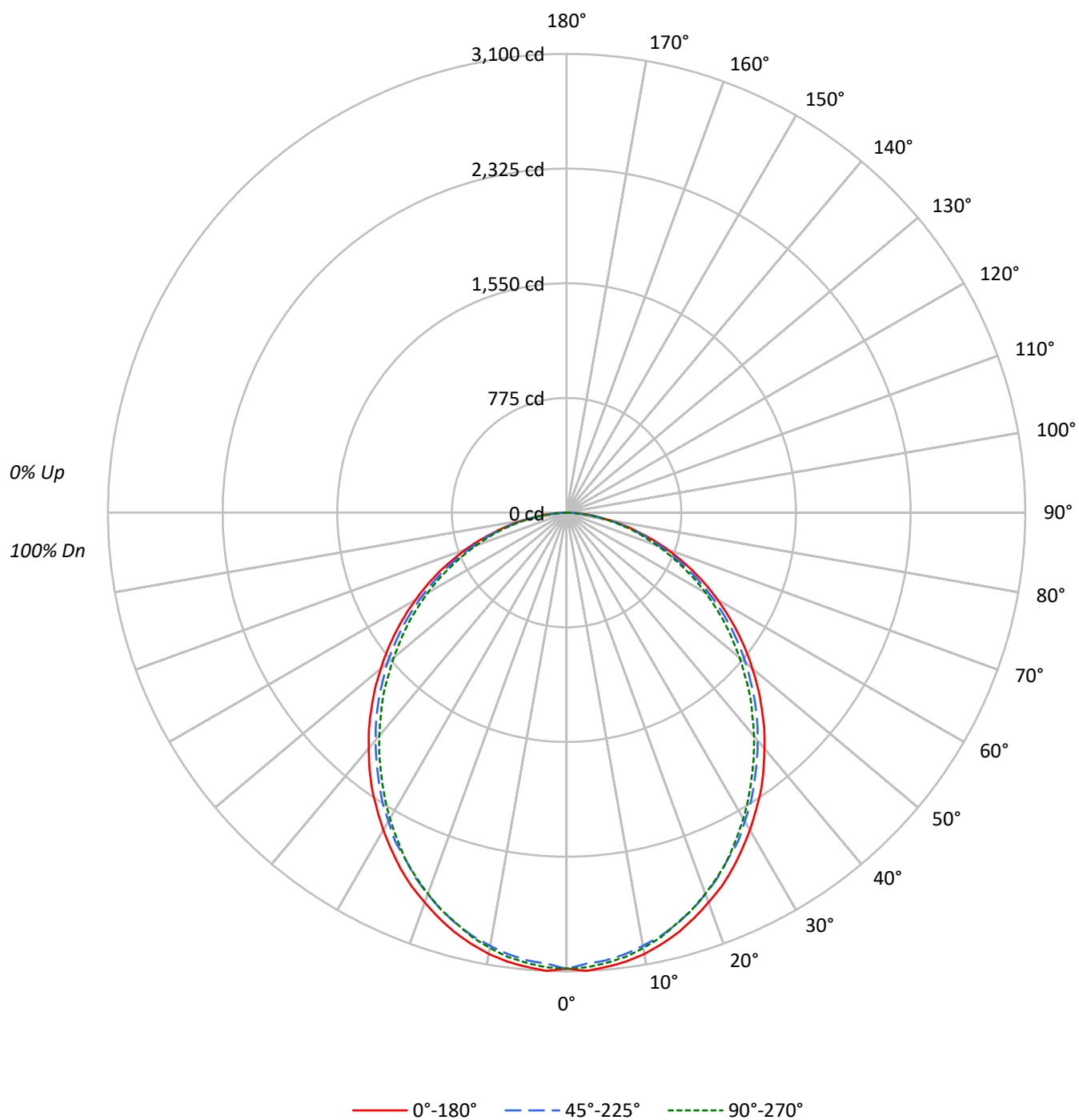
Lumens per Lamp: N/A
Luminaire Lumens: 7840.8 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 104.2
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

TEST NUMBER: P930371

CATALOG NUMBER: DFN2DS-HX4F0-100DS927-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°	2292	2292	2292
5°	2300	2267	2280
10°	2287	2244	2255
15°	2258	2215	2213
20°	2218	2171	2169
25°	2178	2118	2118
30°	2127	2069	2051
35°	2079	2009	1980
40°	2019	1950	1913
45°	1960	1891	1845
50°	1896	1830	1765
55°	1829	1760	1694
60°	1754	1675	1613
65°	1674	1590	1517
70°	1572	1488	1418
75°	1430	1370	1337
80°	1269	1230	1167
85°	1035	987	886

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1960 cd/sqm

TEST NUMBER: P930371

CATALOG NUMBER: DFN2DS-HX4F0-100DS927-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.1	3.7
10°-20°	816.1	10.4
20°-30°	1199.3	15.3
30°-40°	1392.9	17.8
40°-50°	1391.2	17.7
50°-60°	1213.1	15.5
60°-70°	896.8	11.4
70°-80°	507.4	6.5
80°-90°	133.9	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°	2305.5	29.4
0°-40°	3698.4	47.2
0°-60°	6302.7	80.4
0°-90°	7840.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7840.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3082	3082	3082	3082	3082	
5°	3082	3070	3037	3061	3055	293
15°	2934	2916	2877	2889	2875	826
25°	2655	2632	2581	2587	2581	1222
35°	2291	2261	2214	2196	2181	1430
45°	1864	1843	1799	1766	1754	1439
55°	1411	1393	1357	1322	1307	1261
65°	951	934	904	877	862	941
75°	498	492	477	459	465	531
85°	121	119	116	107	104	143
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3081.8	3081.8	3081.8	3081.8	3081.8
2.5°	3099.7	3084.8	3052.1	3081.8	3076.0
5°	3081.8	3070.1	3037.4	3061.0	3055.3
7.5°	3061.0	3043.3	3010.6	3034.5	3028.6
10°	3028.6	3007.9	2972.3	2995.9	2987.1
12.5°	2983.9	2966.4	2930.8	2945.6	2939.6
15°	2933.6	2916.1	2877.3	2889.3	2874.6
17.5°	2871.4	2853.8	2815.1	2829.9	2815.1
20°	2803.1	2785.5	2744.0	2752.8	2741.2
22.5°	2735.3	2708.6	2669.8	2669.8	2663.9
25°	2655.1	2631.5	2581.2	2586.8	2581.2
27.5°	2566.1	2545.3	2507.0	2498.2	2483.4
30°	2477.5	2453.5	2409.2	2400.4	2388.4
32.5°	2382.5	2364.9	2317.4	2299.5	2287.5
35°	2290.7	2261.2	2213.6	2195.7	2180.9
37.5°	2186.9	2160.2	2112.7	2092.0	2077.2
40°	2080.3	2056.4	2009.0	1982.6	1970.7
42.5°	1976.6	1952.7	1905.6	1875.7	1858.1
45°	1864.1	1843.3	1798.6	1766.2	1754.4
47.5°	1754.4	1733.6	1686.1	1653.4	1635.8
50°	1638.6	1623.8	1582.3	1540.8	1526.1
52.5°	1526.1	1505.4	1466.9	1434.3	1413.6
55°	1410.7	1392.8	1357.3	1321.7	1307.0
57.5°	1295.0	1280.2	1241.5	1206.1	1194.1
60°	1179.3	1167.6	1126.1	1093.4	1084.6
62.5°	1066.7	1046.0	1016.5	986.9	975.0
65°	951.4	933.5	903.9	877.1	862.4
67.5°	832.9	817.7	791.4	770.6	758.7
70°	723.1	711.1	684.4	663.7	652.1
72.5°	610.6	598.6	583.9	563.1	554.2
75°	497.7	492.1	476.9	459.4	465.3
77.5°	397.1	385.1	379.1	370.3	361.5
80°	296.4	293.4	287.3	278.5	272.6
82.5°	201.6	201.6	198.7	186.8	186.8
85°	121.3	118.6	115.7	106.6	103.8
87.5°	53.5	47.4	41.5	32.7	29.5
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	14.16	15.77	14.53	16.09	16.40	13.72	15.33	14.08	15.64	15.96
	3H	15.91	17.37	16.29	17.69	18.06	15.42	16.88	15.80	17.20	17.56
	4H	16.56	17.93	16.96	18.28	18.65	16.07	17.43	16.46	17.78	18.16
	6H	17.03	18.30	17.44	18.66	19.05	16.53	17.80	16.94	18.16	18.55
	8H	17.17	18.38	17.60	18.77	19.17	16.67	17.88	17.09	18.27	18.67
	12H	17.26	18.42	17.69	18.80	19.23	16.75	17.91	17.18	18.29	18.72
4H	2H	14.72	16.09	15.12	16.44	16.82	14.37	15.74	14.77	16.09	16.46
	3H	16.70	17.85	17.11	18.24	18.64	16.29	17.44	16.70	17.84	18.24
	4H	17.48	18.51	17.91	18.93	19.36	17.05	18.09	17.48	18.50	18.94
	6H	18.07	18.98	18.53	19.42	19.87	17.64	18.54	18.09	18.99	19.44
	8H	18.26	19.11	18.72	19.55	20.02	17.82	18.67	18.28	19.11	19.58
	12H	18.39	19.15	18.87	19.63	20.10	17.94	18.70	18.42	19.18	19.65
8H	4H	17.75	18.60	18.21	19.04	19.50	17.37	18.22	17.84	18.66	19.13
	6H	18.46	19.17	18.96	19.65	20.13	18.08	18.78	18.58	19.27	19.75
	8H	18.72	19.35	19.23	19.86	20.35	18.33	18.96	18.84	19.47	19.95
	12H	18.92	19.48	19.43	19.97	20.53	18.51	19.07	19.02	19.56	20.12
12H	4H	17.77	18.53	18.26	19.01	19.48	17.41	18.17	17.89	18.65	19.12
	6H	18.51	19.14	19.02	19.65	20.13	18.14	18.77	18.65	19.28	19.76
	8H	18.82	19.38	19.33	19.87	20.43	18.44	19.00	18.95	19.49	20.05