

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: P930071

Luminaire Tested: DFN2DS-HX2F0-030DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930071
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-HX2F0-030DS940-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

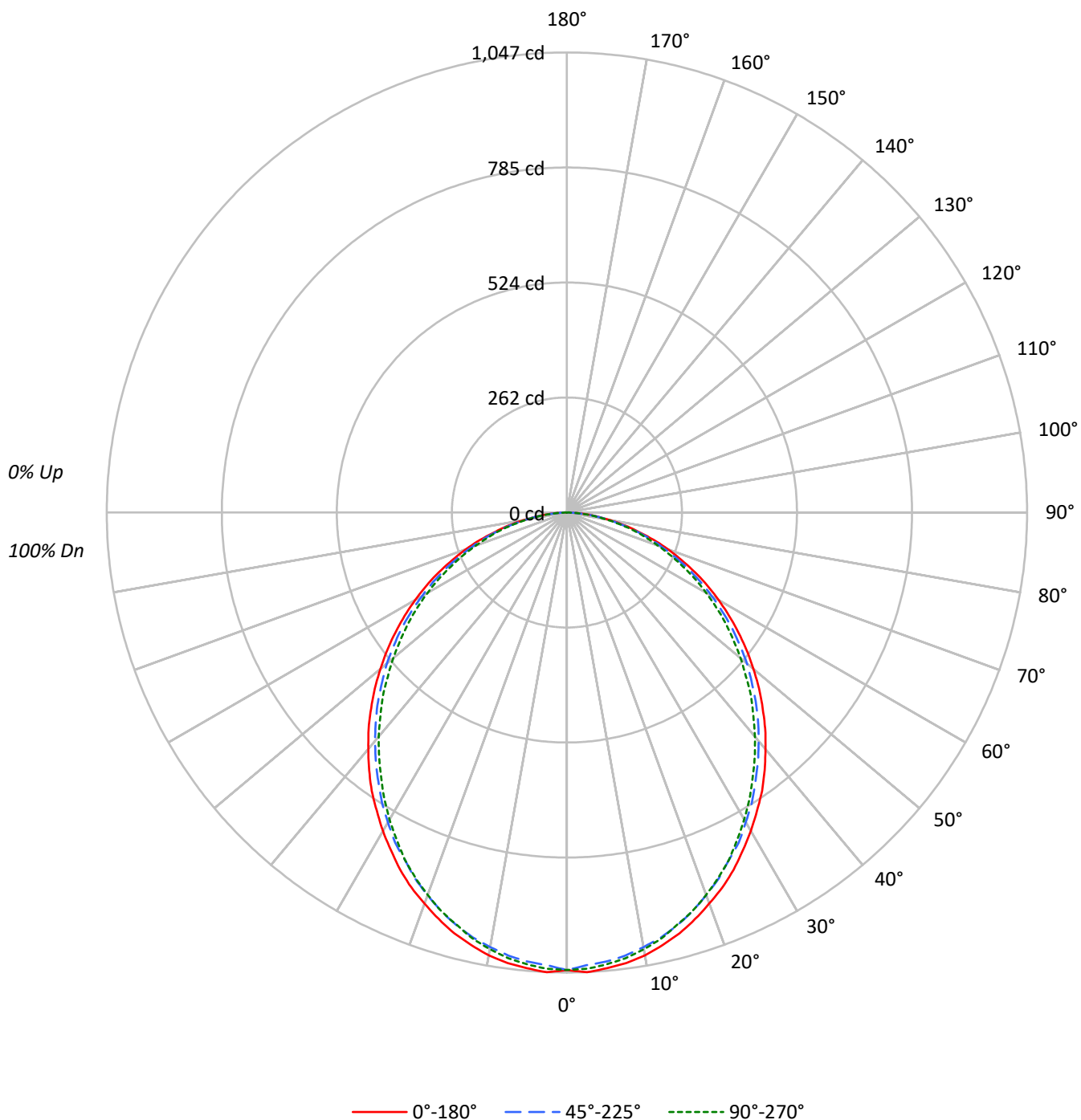
Lumens per Lamp: N/A
Luminaire Lumens: 2649.3 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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°	2453	2453	2453
5°	2463	2427	2442
10°	2448	2403	2415
15°	2418	2371	2369
20°	2375	2325	2322
25°	2332	2267	2267
30°	2277	2215	2196
35°	2226	2151	2120
40°	2162	2088	2048
45°	2099	2025	1975
50°	2030	1960	1890
55°	1958	1884	1814
60°	1878	1793	1727
65°	1792	1703	1625
70°	1683	1593	1518
75°	1530	1467	1432
80°	1360	1316	1250
85°	1108	1057	949

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2099 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	3.7
10°-20°	275.7	10.4
20°-30°	405.2	15.3
30°-40°	470.6	17.8
40°-50°	470.1	17.7
50°-60°	409.9	15.5
60°-70°	303.0	11.4
70°-80°	171.4	6.5
80°-90°	45.3	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°	779.0	29.4
0°-40°	1249.6	47.2
0°-60°	2129.6	80.4
0°-90°	2649.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2649.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1041	1037	1026	1034	1032	99
15°	991	985	972	976	971	279
25°	897	889	872	874	872	413
35°	774	764	748	742	737	483
45°	630	623	608	597	593	486
55°	477	471	459	447	442	426
65°	322	315	305	296	291	318
75°	168	166	161	155	157	180
85°	41	40	39	36	35	48
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1041.2	1041.2	1041.2	1041.2	1041.2
2.5°	1047.3	1042.3	1031.2	1041.2	1039.4
5°	1041.2	1037.3	1026.2	1034.3	1032.3
7.5°	1034.3	1028.3	1017.2	1025.4	1023.3
10°	1023.3	1016.3	1004.3	1012.2	1009.3
12.5°	1008.2	1002.3	990.3	995.2	993.2
15°	991.2	985.3	972.2	976.2	971.2
17.5°	970.1	964.3	951.1	956.1	951.1
20°	947.1	941.1	927.1	930.1	926.2
22.5°	924.2	915.2	902.1	902.1	900.0
25°	897.1	889.1	872.1	874.1	872.1
27.5°	867.0	860.0	847.0	844.1	839.1
30°	837.1	829.0	814.0	811.0	807.0
32.5°	805.0	799.1	783.0	776.9	772.9
35°	774.0	764.0	747.9	741.9	736.9
37.5°	738.9	729.9	713.9	706.8	701.8
40°	702.9	694.9	678.8	669.9	665.9
42.5°	667.8	659.8	643.8	633.8	627.8
45°	629.8	622.8	607.7	596.7	592.7
47.5°	592.7	585.8	569.7	558.7	552.7
50°	553.7	548.7	534.7	520.7	515.7
52.5°	515.7	508.6	495.7	484.6	477.6
55°	476.7	470.6	458.6	446.6	441.6
57.5°	437.5	432.5	419.5	407.5	403.5
60°	398.5	394.5	380.5	369.5	366.5
62.5°	360.5	353.4	343.4	333.4	329.4
65°	321.5	315.4	305.4	296.4	291.4
67.5°	281.4	276.3	267.3	260.4	256.4
70°	244.3	240.3	231.3	224.2	220.3
72.5°	206.3	202.2	197.2	190.3	187.3
75°	168.1	166.3	161.2	155.2	157.3
77.5°	134.2	130.1	128.1	125.1	122.2
80°	100.2	99.1	97.0	94.1	92.1
82.5°	68.1	68.1	67.2	63.1	63.1
85°	41.0	40.1	39.1	36.0	35.1
87.5°	18.0	16.1	14.0	11.1	10.0
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	14.40	16.01	14.76	16.32	16.64	13.96	15.57	14.32	15.88	16.20
	3H	16.15	17.60	16.53	17.93	18.29	15.66	17.11	16.04	17.44	17.80
	4H	16.80	18.17	17.19	18.51	18.89	16.30	17.67	16.70	18.02	18.40
	6H	17.27	18.53	17.68	18.90	19.29	16.77	18.03	17.18	18.40	18.79
	8H	17.41	18.62	17.83	19.01	19.41	16.91	18.12	17.33	18.51	18.91
	12H	17.50	18.66	17.93	19.04	19.47	16.99	18.15	17.42	18.53	18.96
4H	2H	14.96	16.33	15.36	16.68	17.05	14.61	15.98	15.01	16.33	16.70
	3H	16.94	18.08	17.35	18.48	18.88	16.53	17.68	16.94	18.07	18.47
	4H	17.71	18.75	18.14	19.16	19.60	17.29	18.33	17.72	18.74	19.18
	6H	18.31	19.21	18.76	19.65	20.11	17.88	18.78	18.33	19.22	19.68
	8H	18.50	19.34	18.96	19.79	20.25	18.06	18.91	18.52	19.35	19.82
	12H	18.63	19.39	19.11	19.87	20.34	18.18	18.94	18.66	19.41	19.88
8H	4H	17.99	18.83	18.45	19.27	19.74	17.61	18.46	18.07	18.90	19.37
	6H	18.70	19.40	19.19	19.89	20.37	18.32	19.02	18.81	19.51	19.99
	8H	18.96	19.59	19.47	20.10	20.58	18.57	19.20	19.08	19.71	20.19
	12H	19.16	19.72	19.67	20.21	20.77	18.75	19.30	19.25	19.79	20.36
12H	4H	18.01	18.77	18.49	19.25	19.72	17.65	18.41	18.13	18.88	19.35
	6H	18.75	19.38	19.25	19.88	20.37	18.38	19.01	18.89	19.52	20.00
	8H	19.06	19.62	19.57	20.11	20.67	18.68	19.24	19.19	19.73	20.29