

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: P930317

Luminaire Tested: DFN2DS-HX4F0-070DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930317
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-HX4F0-070DS927-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

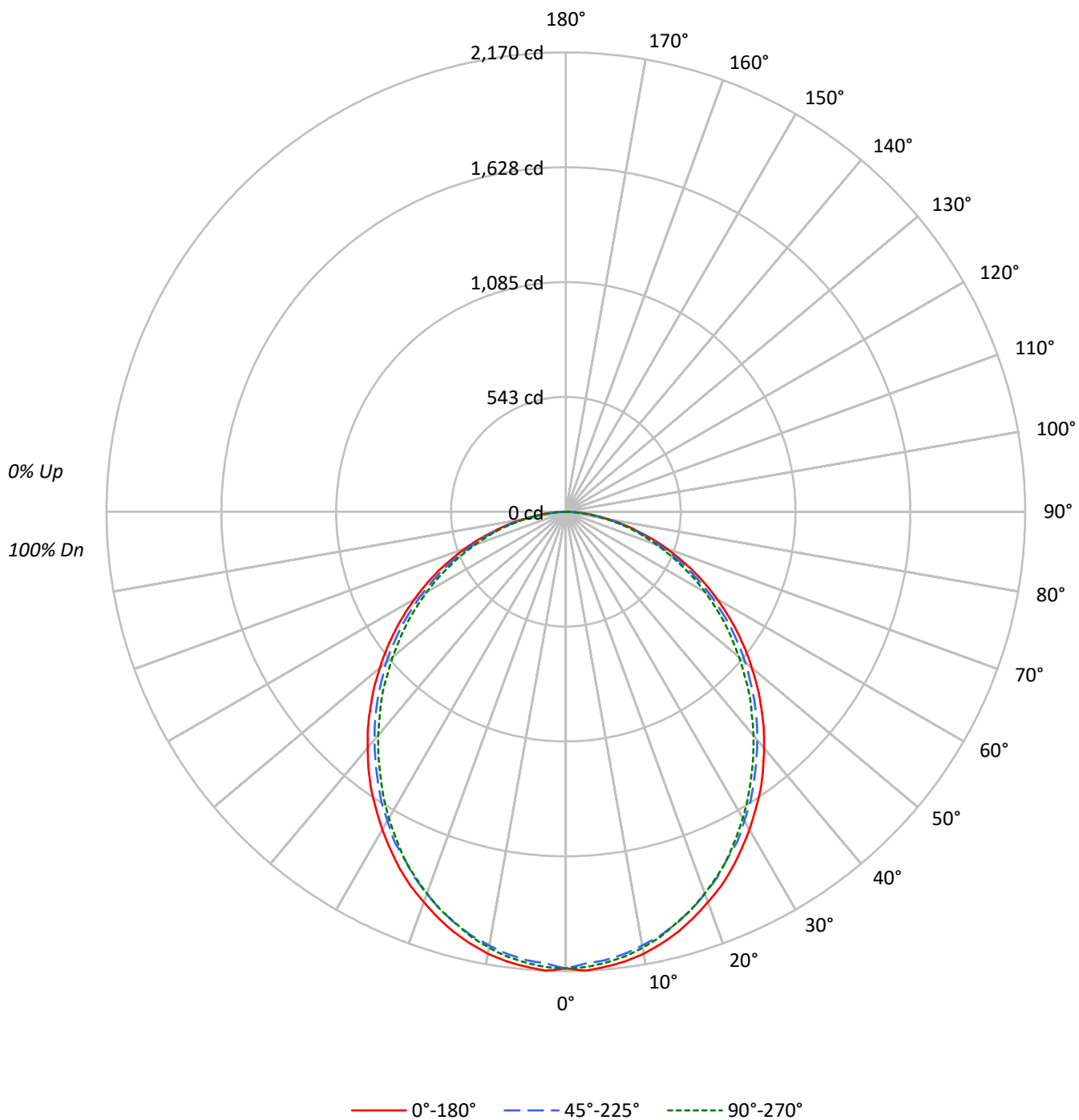
Lumens per Lamp: N/A
Luminaire Lumens: 5488.6 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 71.1
Input Voltage (V):
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

TEST NUMBER: P930317

CATALOG NUMBER: DFN2DS-HX4F0-070DS927-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°	1604	1604	1604
5°	1610	1587	1596
10°	1601	1571	1579
15°	1581	1550	1549
20°	1553	1520	1518
25°	1525	1482	1482
30°	1489	1448	1435
35°	1456	1407	1386
40°	1414	1365	1339
45°	1372	1324	1291
50°	1327	1281	1236
55°	1280	1232	1186
60°	1228	1172	1129
65°	1172	1113	1062
70°	1100	1042	992
75°	1001	959	936
80°	889	862	817
85°	725	691	619

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1372 cd/sqm

TEST NUMBER: P930317

CATALOG NUMBER: DFN2DS-HX4F0-070DS927-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.0	3.7
10°-20°	571.3	10.4
20°-30°	839.5	15.3
30°-40°	975.1	17.8
40°-50°	973.8	17.7
50°-60°	849.2	15.5
60°-70°	627.7	11.4
70°-80°	355.2	6.5
80°-90°	93.8	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°	1613.8	29.4
0°-40°	2588.9	47.2
0°-60°	4411.9	80.4
0°-90°	5488.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5488.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2157	2157	2157	2157	2157	
5°	2157	2149	2126	2143	2139	205
15°	2054	2041	2014	2022	2012	578
25°	1859	1842	1807	1811	1807	855
35°	1604	1583	1550	1537	1527	1001
45°	1305	1290	1259	1236	1228	1007
55°	988	975	950	925	915	883
65°	666	653	633	614	604	658
75°	348	344	334	322	326	372
85°	85	83	81	75	73	100
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2157.2	2157.2	2157.2	2157.2	2157.2
2.5°	2169.8	2159.4	2136.5	2157.2	2153.2
5°	2157.2	2149.1	2126.2	2142.7	2138.7
7.5°	2142.7	2130.3	2107.4	2124.2	2120.0
10°	2120.0	2105.5	2080.6	2097.1	2091.0
12.5°	2088.7	2076.5	2051.6	2061.9	2057.7
15°	2053.6	2041.2	2014.1	2022.5	2012.2
17.5°	2009.9	1997.7	1970.6	1981.0	1970.6
20°	1962.2	1949.9	1920.8	1927.0	1918.9
22.5°	1914.7	1896.0	1868.9	1868.9	1864.7
25°	1858.6	1842.0	1806.9	1810.8	1806.9
27.5°	1796.3	1781.8	1754.9	1748.7	1738.4
30°	1734.2	1717.5	1686.5	1680.3	1671.9
32.5°	1667.7	1655.4	1622.2	1609.7	1601.3
35°	1603.5	1582.8	1549.5	1537.0	1526.7
37.5°	1530.9	1512.2	1478.9	1464.4	1454.0
40°	1456.3	1439.5	1406.3	1387.8	1379.4
42.5°	1383.6	1366.9	1333.9	1313.0	1300.6
45°	1304.8	1290.3	1259.0	1236.4	1228.0
47.5°	1228.0	1213.5	1180.2	1157.3	1145.1
50°	1147.1	1136.7	1107.6	1078.6	1068.2
52.5°	1068.2	1053.8	1026.9	1004.0	989.4
55°	987.5	975.0	950.1	925.2	914.8
57.5°	906.5	896.1	869.1	844.2	835.9
60°	825.5	817.3	788.4	765.5	759.3
62.5°	746.7	732.2	711.5	690.9	682.5
65°	666.0	653.4	632.7	614.0	603.7
67.5°	583.0	572.5	553.9	539.4	531.0
70°	506.2	497.9	479.1	464.6	456.4
72.5°	427.4	419.0	408.7	394.2	388.0
75°	348.4	344.4	333.8	321.6	325.7
77.5°	278.0	269.6	265.4	259.2	253.1
80°	207.5	205.4	201.2	195.0	190.8
82.5°	141.1	141.1	139.1	130.8	130.8
85°	85.0	83.0	81.0	74.6	72.6
87.5°	37.4	33.3	29.1	22.9	20.7
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	12.92	14.53	13.29	14.85	15.16	12.48	14.09	12.84	14.40	14.72
	3H	14.67	16.13	15.05	16.46	16.82	14.18	15.64	14.56	15.96	16.32
	4H	15.32	16.69	15.72	17.04	17.41	14.83	16.19	15.22	16.54	16.92
	6H	15.79	17.06	16.20	17.42	17.81	15.29	16.56	15.70	16.92	17.31
	8H	15.93	17.14	16.36	17.53	17.93	15.43	16.64	15.85	17.03	17.43
	12H	16.02	17.18	16.45	17.56	17.99	15.51	16.67	15.94	17.05	17.48
4H	2H	13.48	14.85	13.88	15.20	15.58	13.13	14.50	13.53	14.85	15.22
	3H	15.46	16.61	15.87	17.00	17.40	15.05	16.20	15.46	16.60	17.00
	4H	16.24	17.27	16.67	17.69	18.12	15.81	16.85	16.24	17.26	17.70
	6H	16.83	17.74	17.29	18.18	18.63	16.40	17.31	16.85	17.75	18.20
	8H	17.02	17.87	17.48	18.31	18.78	16.58	17.43	17.04	17.87	18.34
	12H	17.15	17.91	17.63	18.39	18.86	16.70	17.46	17.18	17.94	18.41
8H	4H	16.51	17.36	16.97	17.80	18.26	16.14	16.98	16.60	17.42	17.89
	6H	17.22	17.93	17.72	18.42	18.89	16.84	17.55	17.34	18.03	18.51
	8H	17.48	18.11	17.99	18.62	19.11	17.09	17.72	17.60	18.23	18.72
	12H	17.68	18.24	18.19	18.73	19.29	17.27	17.83	17.78	18.32	18.88
12H	4H	16.54	17.30	17.02	17.77	18.24	16.17	16.93	16.65	17.41	17.88
	6H	17.27	17.90	17.78	18.41	18.89	16.90	17.53	17.41	18.04	18.53
	8H	17.58	18.14	18.09	18.63	19.19	17.21	17.76	17.71	18.25	18.82