

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: P930339

Luminaire Tested: DFN2DS-HX4F0-080DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930339
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-HX4F0-080DS935-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

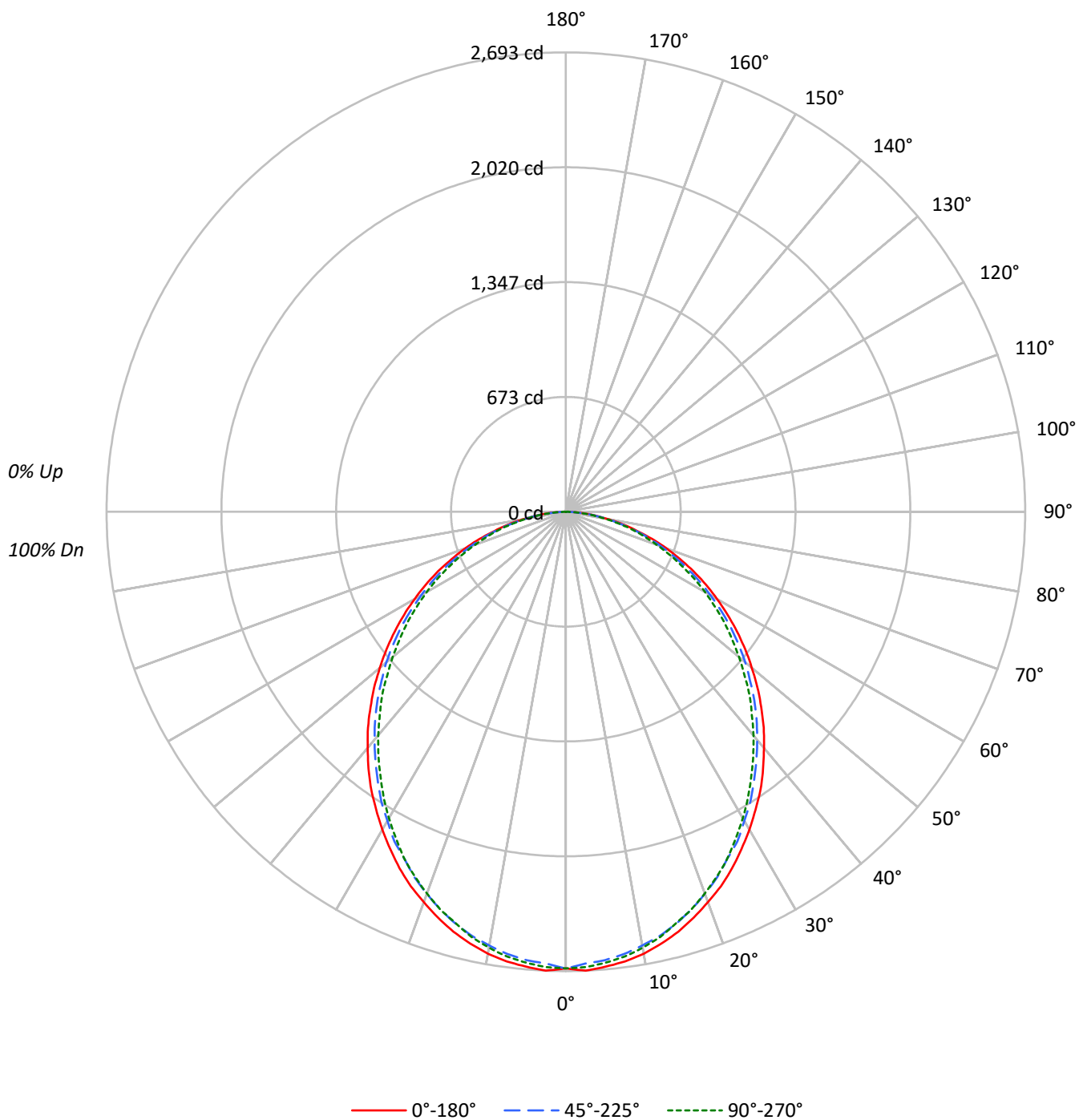
Lumens per Lamp: N/A
Luminaire Lumens: 6811.2 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 81.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
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°	1991	1991	1991
5°	1998	1969	1981
10°	1986	1950	1959
15°	1962	1924	1922
20°	1927	1886	1884
25°	1892	1840	1840
30°	1848	1797	1781
35°	1806	1746	1720
40°	1754	1694	1662
45°	1703	1643	1603
50°	1647	1590	1534
55°	1589	1529	1472
60°	1523	1455	1401
65°	1454	1381	1318
70°	1366	1293	1231
75°	1242	1190	1161
80°	1103	1069	1014
85°	899	857	769

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1703 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.0	3.7
10°-20°	708.9	10.4
20°-30°	1041.8	15.3
30°-40°	1210.0	17.8
40°-50°	1208.5	17.7
50°-60°	1053.8	15.5
60°-70°	779.0	11.4
70°-80°	440.7	6.5
80°-90°	116.3	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°	2002.7	29.4
0°-40°	3212.8	47.2
0°-60°	5475.1	80.4
0°-90°	6811.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6811.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2677	2677	2677	2677	2677	
5°	2677	2667	2639	2659	2654	254
15°	2548	2533	2500	2510	2497	718
25°	2306	2286	2242	2247	2242	1061
35°	1990	1964	1923	1907	1895	1243
45°	1619	1601	1562	1534	1524	1250
55°	1225	1210	1179	1148	1135	1096
65°	826	811	785	762	749	817
75°	432	427	414	399	404	462
85°	105	103	100	93	90	124
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2677.0	2677.0	2677.0	2677.0	2677.0
2.5°	2692.6	2679.8	2651.4	2677.0	2672.1
5°	2677.0	2666.9	2638.6	2659.0	2654.1
7.5°	2659.0	2643.7	2615.3	2636.1	2630.9
10°	2630.9	2612.9	2582.0	2602.4	2594.9
12.5°	2592.1	2576.8	2545.9	2558.8	2553.6
15°	2548.4	2533.1	2499.5	2509.9	2497.1
17.5°	2494.3	2479.0	2445.4	2458.3	2445.4
20°	2435.1	2419.8	2383.7	2391.4	2381.3
22.5°	2376.1	2352.9	2319.2	2319.2	2314.1
25°	2306.4	2286.0	2242.3	2247.2	2242.3
27.5°	2229.1	2211.1	2177.8	2170.1	2157.3
30°	2152.2	2131.3	2092.9	2085.2	2074.8
32.5°	2069.7	2054.4	2013.1	1997.5	1987.2
35°	1989.9	1964.2	1923.0	1907.4	1894.6
37.5°	1899.7	1876.5	1835.3	1817.3	1804.5
40°	1807.2	1786.4	1745.2	1722.2	1711.8
42.5°	1717.1	1696.3	1655.3	1629.4	1614.1
45°	1619.3	1601.2	1562.4	1534.3	1524.0
47.5°	1524.0	1505.9	1464.7	1436.3	1421.0
50°	1423.5	1410.7	1374.5	1338.5	1325.7
52.5°	1325.7	1307.6	1274.3	1246.0	1227.9
55°	1225.4	1209.8	1179.1	1148.2	1135.3
57.5°	1125.0	1112.2	1078.5	1047.7	1037.2
60°	1024.4	1014.4	978.2	949.9	942.2
62.5°	926.6	908.7	883.0	857.3	846.9
65°	826.5	810.9	785.2	762.0	749.1
67.5°	723.4	710.4	687.4	669.4	659.0
70°	628.1	617.7	594.6	576.5	566.4
72.5°	530.4	520.0	507.1	489.2	481.5
75°	432.3	427.4	414.3	399.0	404.2
77.5°	344.9	334.5	329.4	321.7	314.1
80°	257.6	254.8	249.7	242.0	236.8
82.5°	175.1	175.1	172.6	162.2	162.2
85°	105.4	102.9	100.5	92.6	90.1
87.5°	46.4	41.3	36.0	28.4	25.7
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	13.67	15.29	14.04	15.60	15.91	13.23	14.84	13.60	15.15	15.47
	3H	15.42	16.88	15.80	17.21	17.57	14.93	16.39	15.31	16.71	17.07
	4H	16.07	17.44	16.47	17.79	18.16	15.58	16.94	15.97	17.29	17.67
	6H	16.54	17.81	16.95	18.17	18.56	16.04	17.31	16.45	17.67	18.06
	8H	16.68	17.89	17.11	18.28	18.68	16.18	17.39	16.60	17.78	18.18
	12H	16.77	17.93	17.20	18.31	18.74	16.26	17.42	16.69	17.80	18.23
4H	2H	14.24	15.60	14.63	15.95	16.33	13.88	15.25	14.28	15.60	15.97
	3H	16.21	17.36	16.62	17.75	18.15	15.80	16.95	16.21	17.35	17.75
	4H	16.99	18.02	17.42	18.44	18.87	16.56	17.60	16.99	18.01	18.45
	6H	17.58	18.49	18.04	18.93	19.38	17.15	18.06	17.60	18.50	18.95
	8H	17.77	18.62	18.23	19.06	19.53	17.33	18.18	17.79	18.62	19.09
	12H	17.90	18.66	18.38	19.14	19.61	17.45	18.21	17.93	18.69	19.16
8H	4H	17.26	18.11	17.72	18.55	19.01	16.89	17.73	17.35	18.17	18.64
	6H	17.97	18.68	18.47	19.17	19.64	17.59	18.30	18.09	18.78	19.26
	8H	18.23	18.86	18.74	19.37	19.86	17.84	18.47	18.35	18.98	19.47
	12H	18.43	18.99	18.94	19.48	20.04	18.02	18.58	18.53	19.07	19.63
12H	4H	17.29	18.05	17.77	18.52	18.99	16.92	17.68	17.40	18.16	18.63
	6H	18.02	18.65	18.53	19.16	19.64	17.65	18.28	18.16	18.79	19.28
	8H	18.33	18.89	18.84	19.38	19.94	17.96	18.51	18.46	19.00	19.56