

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: P930375

Luminaire Tested: DFN2DS-HX4F0-100DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930375
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-HX4F0-100DS935-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

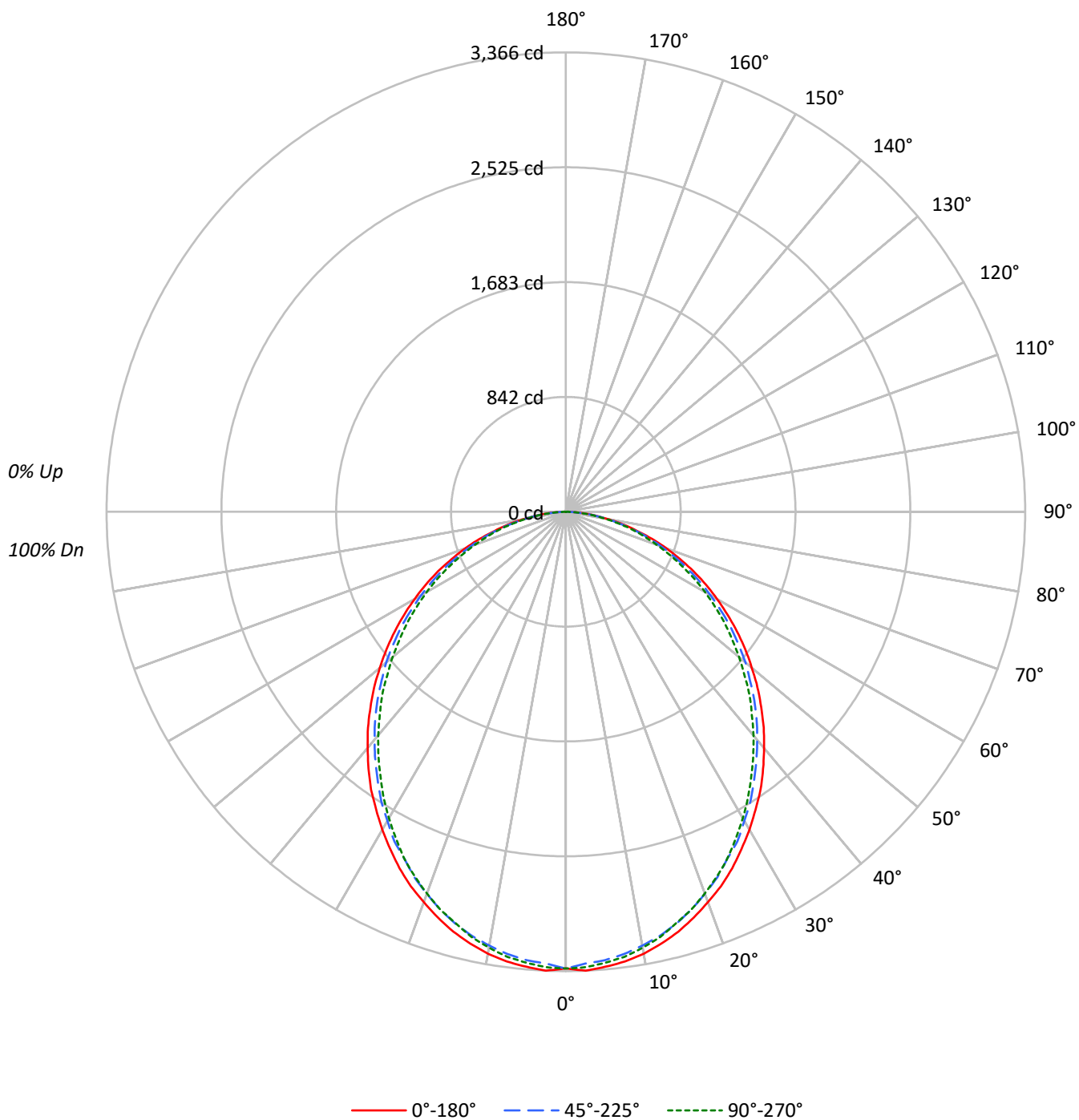
Lumens per Lamp: N/A
Luminaire Lumens: 8514.0 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

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

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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°	2488	2488	2488
5°	2498	2462	2476
10°	2483	2437	2449
15°	2452	2405	2403
20°	2409	2358	2355
25°	2365	2300	2300
30°	2310	2246	2227
35°	2258	2182	2150
40°	2193	2117	2077
45°	2128	2054	2003
50°	2058	1988	1917
55°	1986	1911	1840
60°	1904	1818	1752
65°	1817	1727	1648
70°	1707	1616	1539
75°	1553	1488	1451
80°	1378	1336	1267
85°	1124	1072	961

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2128 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.0	3.7
10°-20°	886.2	10.4
20°-30°	1302.3	15.3
30°-40°	1512.5	17.8
40°-50°	1510.7	17.7
50°-60°	1317.3	15.5
60°-70°	973.7	11.4
70°-80°	550.9	6.5
80°-90°	145.4	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°	2503.4	29.4
0°-40°	4016.0	47.2
0°-60°	6843.9	80.4
0°-90°	8514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3346	3346	3346	3346	3346	
5°	3346	3334	3298	3324	3318	318
15°	3186	3166	3124	3137	3121	897
25°	2883	2857	2803	2809	2803	1327
35°	2487	2455	2404	2384	2368	1553
45°	2024	2002	1953	1918	1905	1562
55°	1532	1512	1474	1435	1419	1369
65°	1033	1014	982	952	936	1021
75°	540	534	518	499	505	577
85°	132	129	126	116	113	155
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3346.3	3346.3	3346.3	3346.3	3346.3
2.5°	3365.8	3349.7	3314.2	3346.3	3340.2
5°	3346.3	3333.7	3298.2	3323.8	3317.6
7.5°	3323.8	3304.6	3269.1	3295.1	3288.6
10°	3288.6	3266.1	3227.5	3253.1	3243.6
12.5°	3240.1	3221.0	3182.4	3198.5	3192.0
15°	3185.5	3166.4	3124.4	3137.4	3121.4
17.5°	3117.9	3098.8	3056.8	3072.9	3056.8
20°	3043.8	3024.7	2979.6	2989.2	2976.5
22.5°	2970.1	2941.1	2899.1	2899.1	2892.6
25°	2883.1	2857.4	2802.8	2808.9	2802.8
27.5°	2786.4	2763.9	2722.2	2712.7	2696.6
30°	2690.2	2664.2	2616.0	2606.5	2593.5
32.5°	2587.1	2568.0	2516.4	2496.9	2483.9
35°	2487.4	2455.3	2403.7	2384.3	2368.2
37.5°	2374.7	2345.6	2294.1	2271.6	2255.5
40°	2259.0	2233.0	2181.5	2152.8	2139.9
42.5°	2146.3	2120.3	2069.2	2036.7	2017.6
45°	2024.1	2001.6	1953.1	1917.9	1905.0
47.5°	1905.0	1882.5	1830.9	1795.3	1776.2
50°	1779.3	1763.3	1718.2	1673.1	1657.1
52.5°	1657.1	1634.6	1592.9	1557.5	1534.9
55°	1531.8	1512.4	1473.8	1435.2	1419.2
57.5°	1406.2	1390.1	1348.1	1309.6	1296.6
60°	1280.5	1267.9	1222.8	1187.3	1177.8
62.5°	1158.3	1135.8	1103.7	1071.6	1058.7
65°	1033.0	1013.6	981.5	952.4	936.5
67.5°	904.4	888.0	859.3	836.8	823.8
70°	785.2	772.2	743.2	720.7	708.0
72.5°	663.0	650.0	634.0	611.5	601.8
75°	540.4	534.3	517.9	498.8	505.2
77.5°	431.2	418.2	411.7	402.1	392.6
80°	321.9	318.5	312.0	302.5	296.0
82.5°	218.9	218.9	215.8	202.8	202.8
85°	131.8	128.7	125.6	115.8	112.7
87.5°	58.0	51.5	45.1	35.5	32.1
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	14.45	16.06	14.81	16.37	16.69	14.01	15.62	14.37	15.93	16.24
	3H	16.20	17.65	16.58	17.98	18.34	15.71	17.16	16.09	17.49	17.85
	4H	16.85	18.22	17.24	18.56	18.94	16.35	17.72	16.75	18.07	18.44
	6H	17.32	18.58	17.73	18.95	19.34	16.81	18.08	17.22	18.45	18.84
	8H	17.46	18.67	17.88	19.06	19.46	16.96	18.17	17.38	18.56	18.95
	12H	17.55	18.71	17.98	19.09	19.52	17.04	18.20	17.47	18.58	19.01
4H	2H	15.01	16.38	15.41	16.73	17.10	14.66	16.03	15.06	16.37	16.75
	3H	16.99	18.13	17.39	18.53	18.93	16.58	17.72	16.99	18.12	18.52
	4H	17.76	18.80	18.19	19.21	19.65	17.34	18.37	17.77	18.79	19.22
	6H	18.36	19.26	18.81	19.70	20.16	17.93	18.83	18.38	19.27	19.73
	8H	18.55	19.39	19.01	19.84	20.30	18.11	18.96	18.57	19.40	19.86
	12H	18.68	19.44	19.16	19.92	20.38	18.23	18.99	18.71	19.46	19.93
8H	4H	18.04	18.88	18.50	19.32	19.79	17.66	18.51	18.12	18.95	19.42
	6H	18.75	19.45	19.24	19.94	20.42	18.37	19.07	18.86	19.56	20.03
	8H	19.01	19.64	19.52	20.15	20.63	18.62	19.25	19.13	19.75	20.24
	12H	19.21	19.77	19.72	20.26	20.82	18.80	19.35	19.30	19.84	20.41
12H	4H	18.06	18.82	18.54	19.30	19.77	17.70	18.46	18.18	18.93	19.40
	6H	18.79	19.43	19.30	19.93	20.42	18.43	19.06	18.94	19.56	20.05
	8H	19.11	19.67	19.62	20.16	20.72	18.73	19.29	19.24	19.78	20.34