

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: P930045

Luminaire Tested: DFN2DS-HX2F0-020DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930045
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-HX2F0-020DS850-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

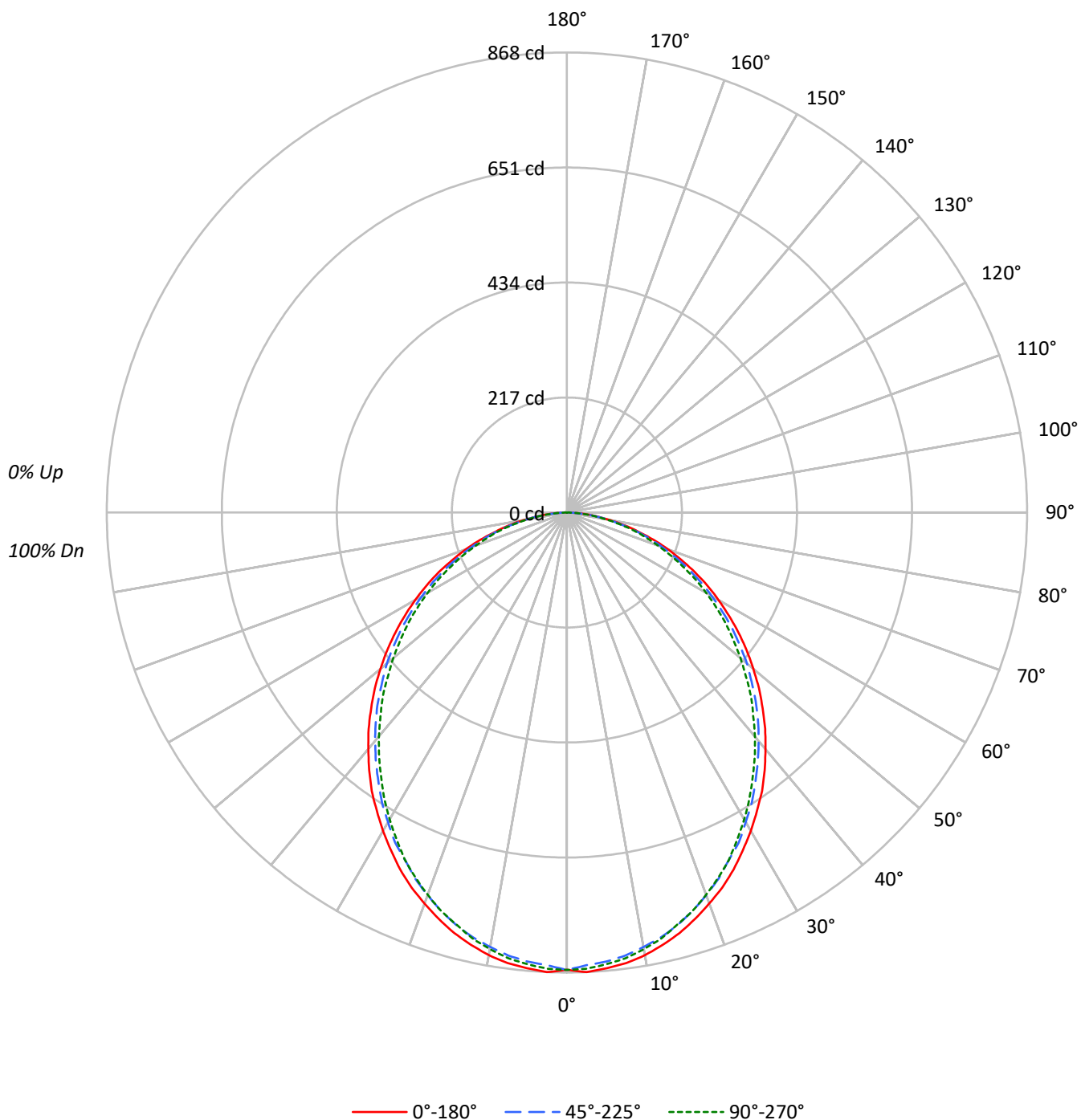
Lumens per Lamp: N/A
Luminaire Lumens: 2195.8 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930045

CATALOG NUMBER: DFN2DS-HX2F0-020DS850-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930045

CATALOG NUMBER: DFN2DS-HX2F0-020DS850-FLL

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°	2033	2033	2033
5°	2041	2012	2024
10°	2029	1992	2001
15°	2004	1966	1964
20°	1969	1927	1925
25°	1933	1879	1879
30°	1888	1836	1820
35°	1845	1783	1757
40°	1792	1730	1697
45°	1739	1678	1637
50°	1682	1625	1567
55°	1623	1561	1503
60°	1556	1486	1432
65°	1485	1412	1346
70°	1395	1320	1259
75°	1269	1215	1186
80°	1128	1092	1035
85°	916	876	787

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1739 cd/sqm

TEST NUMBER: P930045

CATALOG NUMBER: DFN2DS-HX2F0-020DS850-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.7
10°-20°	228.6	10.4
20°-30°	335.9	15.3
30°-40°	390.1	17.8
40°-50°	389.6	17.7
50°-60°	339.7	15.5
60°-70°	251.1	11.4
70°-80°	142.1	6.5
80°-90°	37.5	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°	645.7	29.4
0°-40°	1035.8	47.2
0°-60°	1765.1	80.4
0°-90°	2195.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2195.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	863	860	851	857	856	82
15°	822	817	806	809	805	231
25°	744	737	723	724	723	342
35°	642	633	620	615	611	401
45°	522	516	504	495	491	403
55°	395	390	380	370	366	353
65°	266	261	253	246	242	263
75°	139	138	134	129	130	149
85°	34	33	32	30	29	40
90°	0	0	0	0	0	

TEST NUMBER: P930045

CATALOG NUMBER: DFN2DS-HX2F0-020DS850-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	863.9	854.7	863.0	861.5
5°	863.0	859.8	850.6	857.3	855.6
7.5°	857.3	852.3	843.2	849.8	848.2
10°	848.2	842.4	832.4	839.0	836.5
12.5°	835.6	830.8	820.8	824.9	823.2
15°	821.5	816.7	805.8	809.1	805.0
17.5°	804.1	799.3	788.4	792.5	788.4
20°	785.1	780.1	768.4	771.0	767.6
22.5°	766.0	758.6	747.7	747.7	746.0
25°	743.6	736.9	722.8	724.4	722.8
27.5°	718.6	712.9	702.1	699.7	695.5
30°	693.8	687.1	674.7	672.3	668.8
32.5°	667.2	662.3	649.0	644.0	640.7
35°	641.6	633.2	619.9	614.9	610.7
37.5°	612.5	605.0	591.7	585.9	581.7
40°	582.6	575.9	562.6	555.3	551.8
42.5°	553.5	546.8	533.7	525.3	520.3
45°	522.0	516.2	503.7	494.6	491.3
47.5°	491.3	485.5	472.2	463.0	458.1
50°	458.9	454.8	443.2	431.5	427.4
52.5°	427.4	421.5	410.8	401.7	395.9
55°	395.0	390.0	380.1	370.2	366.0
57.5°	362.6	358.5	347.7	337.8	334.4
60°	330.3	327.0	315.4	306.2	303.8
62.5°	298.8	292.9	284.7	276.4	273.0
65°	266.4	261.4	253.2	245.6	241.5
67.5°	233.2	229.0	221.6	215.8	212.5
70°	202.5	199.2	191.6	185.9	182.7
72.5°	171.0	167.7	163.5	157.7	155.3
75°	139.4	137.8	133.5	128.6	130.3
77.5°	111.2	107.9	106.1	103.7	101.3
80°	83.1	82.2	80.5	78.0	76.3
82.5°	56.4	56.4	55.7	52.3	52.3
85°	33.9	33.2	32.4	29.8	29.1
87.5°	15.0	13.3	11.6	9.2	8.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930045

CATALOG NUMBER: DFN2DS-HX2F0-020DS850-FLL

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	13.75	15.36	14.11	15.67	15.99	13.30	14.92	13.67	15.23	15.54
	3H	15.50	16.95	15.87	17.28	17.64	15.01	16.46	15.39	16.79	17.15
	4H	16.14	17.51	16.54	17.86	18.24	15.65	17.02	16.05	17.37	17.74
	6H	16.61	17.88	17.03	18.25	18.64	16.11	17.38	16.52	17.75	18.14
	8H	16.76	17.97	17.18	18.36	18.76	16.25	17.47	16.68	17.85	18.25
	12H	16.85	18.01	17.28	18.39	18.82	16.34	17.50	16.77	17.88	18.31
4H	2H	14.31	15.68	14.71	16.03	16.40	13.96	15.33	14.36	15.67	16.05
	3H	16.28	17.43	16.69	17.83	18.23	15.88	17.02	16.29	17.42	17.82
	4H	17.06	18.10	17.49	18.51	18.95	16.64	17.67	17.07	18.09	18.52
	6H	17.66	18.56	18.11	19.00	19.46	17.23	18.13	17.68	18.57	19.03
	8H	17.85	18.69	18.31	19.14	19.60	17.41	18.26	17.87	18.70	19.16
	12H	17.98	18.74	18.46	19.21	19.68	17.53	18.29	18.01	18.76	19.23
8H	4H	17.33	18.18	17.79	18.62	19.09	16.96	17.81	17.42	18.25	18.71
	6H	18.05	18.75	18.54	19.24	19.72	17.67	18.37	18.16	18.86	19.33
	8H	18.31	18.94	18.82	19.45	19.93	17.92	18.55	18.43	19.05	19.54
	12H	18.51	19.06	19.01	19.56	20.12	18.09	18.65	18.60	19.14	19.70
12H	4H	17.36	18.12	17.84	18.60	19.06	17.00	17.76	17.48	18.23	18.70
	6H	18.09	18.73	18.60	19.23	19.72	17.72	18.36	18.23	18.86	19.35
	8H	18.41	18.97	18.91	19.46	20.02	18.03	18.59	18.54	19.08	19.64